

ABB i-bus[®] KNX
Smart Home and
Intelligent Building Control
Product Range Overview 2013

ABB i-bus® KNX Smart Home and Intelligent Building Control Product Range Overview 2013

[ABB i-bus® KNX](#)

A

[Selection Tables](#)

B

MDRC = Modular DIN-rail Component, SM = Surface Mounting, FM = Flush Mounting,
LF = Light Fitting, *PG = Price Group, **MW = Module Width 18 mm

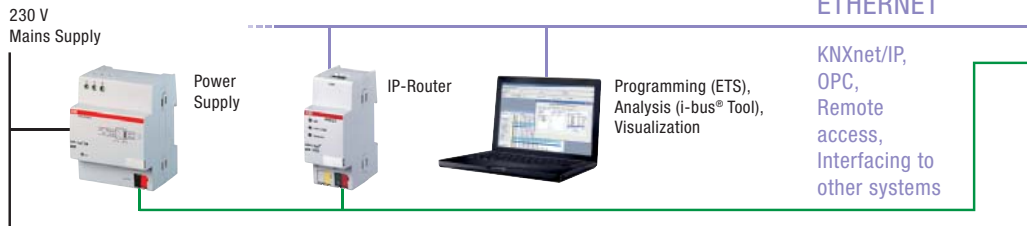
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ABB i-bus® KNX-Overview

A



Measure energy consumption



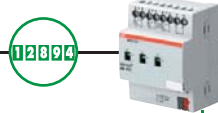
- Energy Meter with Meter Interface Module
- Energy Module

Switch energy with and without current detection



- Switch Actuator

Switch energy with energy measurement



- Energy Actuator

Switch, dim and control light



- Universal Dim Actuator
- Switch/Dim Actuator 1–10 V
- Light Controller

Digital lighting control by the use of DALI



- DALI Gateway
- DALI Light Controller
- DALI Gateway with Emergency Lighting Control

Drive control of rolling shutters, blinds and ventilation flaps with and without automatic travelling time detection



- Blind/Roller Shutter Actuator
- SMI Blind-/Roller Shutter Actuator

Heating/cooling by the control of valves



- Electronic Switch Actuator
- Valve Drive Actuator
- Electromotor Valve Drive

Ventilation/climatization



- Blower/Fan Coil Actuator
- Fan Coil Actuator and Controller

Room Controller with functional modules



Actuator functions

KNX-Main Line/TP

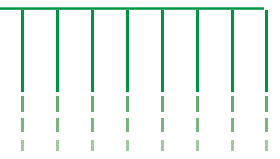
Line 1 2 3 4 ... 13 14 15

Power Supply



Line Coupler

- 64 devices/line
- 15 lines/area with superordinated main line
- max. 15 areas with superordinated area line



- Binary Input



Detect and evaluate switching commands

- Analogue Input



Capture, evaluate and monitor physical values

- Weather Station and Weather Sensor



Evaluate and monitor meteorological data (wind, temperature, rain, etc.)



Display operating conditions and control functions

- Presence Detector
- Movement Sensor
- Light Sensor



Detect presence and movement

Measure brightness level

Lighting Control

- Logic Module
- Application Unit Logic
- Application Unit Time
- Time Switch



Perform logical operations and trigger timer-controlled functions

- Room Thermostat
- Air Quality Sensor



Capture, evaluate, monitor and control room conditions, temperature, air quality, etc.

- Security Terminal
- Security Module
- Interface for Intrusion Alarm Panel
- Fault Monitoring Unit
- Monitoring Unit
- Data Logging Unit



Monitor operating conditions, signal technical faults, recognize hazards and trigger alarms

Room Master devices with different combinations of inputs and outputs and internal logical interconnection



Solutions for rooms with sensor and actuator functions

Sensor functions

ABB i-bus® KNX Power Supplies

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SV/S 30.160.5

Power Supply, 160 mA, MDRC

Power supply with integrated choke. Quick diagnostics via LED display for operational readiness and fault. Ideal for small systems or for supplying main and area lines.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	4	SV/S 30.160.5	2CDG110085R0011		1	0.25



SV/S 30.320.5

Power Supply, 320 mA, MDRC

Compact power supply with integrated choke for small systems. Quick diagnostics via LED display for operational readiness and fault.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	4	SV/S 30.320.5	GHQ6310038R0111		1	0.27



SV/S 30.640.5

Power Supply, 640 mA, MDRC

Power supply with integrated choke for supplying a bus line. Quick diagnostics via LED display for operational readiness and fault. The device has an additional 30 V DC output to supply a second line in conjunction with a separate choke.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	6	SV/S 30.640.5	GHQ6310048R0111		1	0.39



SU/S 30.640.1

Uninterruptible Power Supply, 640 mA, MDRC

Power supply with integrated choke for supplying a bus line from an uninterrupted supply. Quick diagnostics via LED display for operational readiness, fault and battery level as well as a floating contact for a fault signal indication. The accumulator module or up to 2 rechargeable batteries can be charged in normal operation by the voltage supply. The bus voltage is provided by the batteries in the event of a mains failure.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	8	SU/S 30.640.1	GHQ6310049R0111		1	0.55



AM/S 12.1

Battery Module, 12 V DC, MDRC

With lead-gel battery for use in uninterruptible power supply SU/S 30.640.1 and for maintaining the bus voltage during a mains failure for 10 minutes (at full load). Connection is made via 4-core standard cable.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	8	AM/S 12.1	GHQ6310062R0111		1	0.81

ABB i-bus® KNX Power Supplies

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1



KS/K 4.1



KS/K 2.1

Cable Sets

For connection of sealed lead gel batteries SAK7, SAK12 and SAK17 to the uninterruptible KNX power supply SU/S 30.640.1 or the uninterruptible power supply NTU/S 12.2000.1. If only one battery is connected, the basic cable set KS/K 4.1 with integrated temperature sensor is to be used. In case two batteries are connected in parallel, the basic cable set KS/K 4.1 is to be used for the first battery and the extension cable set KS/K 2.1 is to be used for the second battery. It is not permitted to connect more than two batteries in parallel.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
Basic	–	KS/K 4.1	GHQ6301910R0001		1	0.18
Extension	–	KS/K 2.1	GHQ6301910R0011		1	0.12



SAK17, SAK12, SAK7

Sealed Lead Acid Batteries, 12 V DC

For maintaining the bus voltage during a mains failure. For connection to the uninterruptible power supply SU/S 30.640.1 or the uninterruptible power supply NTU/S 12.2000.1. A maximum of two batteries of the same type can be connected in parallel. For connection, the cable sets KS/K 4.1 and KS/K 2.1 are to be used.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
7 Ah	–	SAK7	GHV9240001V0011		1	2.98
12 Ah	–	SAK12	GHV9240001V0012		1	4.66
17 Ah	–	SAK17	GHV9240001V0013		1	7.15



DR/S 4.1

Choke, MDRC

The device can be used together with the SV/S 30.640.5 to supply a second line. Integrated reset button for resetting the bus devices. Connection via connection terminals.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	DR/S 4.1	2CDG110029R0011		1	0.16



NTI/Z 28.30.1

Commissioning Power Supply, 28 V DC, 30 mA

For temporary power supply of KNX devices during commissioning. The Euroconnector and plug-in terminal provide faster connection and supply of devices with manual operation (e.g. FCA/S).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	–	NTI/Z 28.30.1	2CDG110096R0011		1	0.14

ABB i-bus® KNX Power Supplies



NT/S 12.1600

Power Supply Units, MDRC

The supply units that can be used universally as the auxiliary power supply in KNX installations or other SELV applications. The devices supply a regulated output voltage of 12 V DC or 24 V DC with a maximum output current of 1.6 A or 0.8 A. The units are protected against overload, the output being able to sustain a continuous short circuit. LED indication of the status of the supply and output voltage.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
12 V DC, 1,6 A	4	NT/S 12.1600	GHQ6050056R0002		1	0.26
24 V DC, 1,6 A	4	NT/S 24.800	GHQ6050057R0002		1	0.26



NTU/S 12.2000.1

Uninterruptible Power Supply, 640 mA, MDRC

Power supply with integrated choke for supplying a bus line from an uninterrupted supply. Quick diagnostics via LED display for operational readiness, fault and battery level as well as a floating contact for a fault signal indication. The accumulator module or up to 2 rechargeable batteries can be charged in normal operation by the voltage supply. The bus voltage is provided by the batteries in the event of a mains failure.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
12 V DC, 2 A	8	NTU/S 12.2000.1	2CDG110070R0011		1	0.43

ABB i-bus® KNX

System Components and Interfaces

A
2



LK/S 4.2

Line Coupler, MDRC

The line coupler is used in larger installations to connect KNX lines or areas. The lines or areas are galvanically isolated from one another. Telegrams can be filtered to simultaneously reduce the telegram traffic between lines or areas. With ETS 4 (V4.1.2 and higher) the complete group address range of the main groups 0...31 can be filtered. Within a line, the LK/S 4.2 can also be used as a line amplifier (repeater).

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	2	LK/S 4.2	2CDG110171R0011		1	0.1



IPR/S 2.1

IP Router, MDRC

The IP Router is the interface between the KNX installations and the IP networks. It can be used as a quick line or area coupler or utilise the local network (LAN) for quick exchange of telegrams between the lines/areas. With ETS 3.0, KNX devices can be programmed via LAN. The device uses the KNXnet/IP protocol of the KNX Association (Routing and Tunnelling). The IP address can be fixed or received from a DHCP server.

The device requires a 10 to 30 V DC power supply.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	2	IPR/S 2.1	2CDG110061R0011		1	0.11



IPS/S 2.1

IP Interface, MDRC

Interface between the KNX installations and IP networks for programming KNX devices in conjunction with ETS 3.0 or for transferring telegrams to/from the LAN (e.g. for visualisation). The device uses the EIBnet/IP protocol of the KNX Association (Tunnelling). The IP address can be fixed or received from a DHCP server.

The device requires a 10 to 30 V DC power supply.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	2	IPS/S 2.1	2CDG110098R0011		1	0.11



ISM/S 5.1

IP Switch, Master, MDRC

IP Switch Master for MDRC installation. For networking of up to 5 end devices. Can be extended to 10 end devices by side connection of the IP Switch Slave (ISS/S). One of the ports is a Gigabit Ethernet enabled and can serve as an uplink port.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	6	ISM/S 5.1	2CDG120034R0011		1	0.35

ABB i-bus® KNX System Components and Interfaces



ISS/S 5.1

IP Switch, Slave, MDRC

IP Switch Slave for MDRC installation. For networking of up to 5 end devices. Can be side connected to the IP Switch Master (ISM/S), accordingly can be extended to 10 end devices. The slave is only functional together with the master.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	6	ISS/S 5.1	2CDG120035R0011		1	0.23



8186/03-500

Patch Panel PoE 3gang, MDRC

NEW

For the setup of small and medium-sized network installations. For the power supply of up to 3 terminal devices such as IP telephone or IP webcams direct via the network cable. For all PoE applications of class 0 to 3, such as IP telephone, IP cameras, WLAN access points or PoE switches. External power supply via 8186/04 necessary.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	8186/03-500	8100-0-0344		1	



8186/04-500

Power supply PoE 48 V, DRA

NEW

For the setup of small and medium-sized network installations. For the power supply of patch panel PoE 3gang 8186/03. Nominal voltage: 100 – 240 V.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	8186/04-500	8100-0-0346		1	



IPM/S 1.1

IP Patch Module, MDRC

The IP Patch Module consists of an RJ-45 module and a mounting adapter for rail mounting.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	1	IPM/S 1.1	2CDG120036R0011		1	0.1

ABB i-bus® KNX System Components and Interfaces

A
2



USB/S 1.1

USB Interface, MDRC

For connection of a PC via the USB port for programming and diagnostics from ETS3. Display of connection and data transfer via LED.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	2	USB/S 1.1	2CDG110008R0011		1	0.12



LL/S 1.1

Optical Fibre Interface, MDRC

The device is used to couple two sections of an bus line using an optical fibre link. Ideal for bridging longer distances or to avoid having to implement lightning and overvoltage protection when laying cables between buildings. Two devices are needed to complete a transmission link.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	LL/S 1.1	GHQ6050053R0001		1	0.28

ABB i-bus® KNX

Connection and Wiring



DSM/S 1.1

Diagnosis and Protection Module, MDRC

Enables quick diagnosis of the bus state and indicates telegram traffic via an LED. A bus fault is indicated by contacts. The DSM also suppresses transient overvoltages and interference voltage spikes on the bus and thus protects the connected devices.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	DSM/S 1.1	2CDG110060R0011		1	0.11



VB/K ...

Wiring Jumpers

For the interconnection of devices with a bus connection terminal. The vertical and horizontal versions are matched to typical wiring applications.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
horizontal, 100 mm	2	VB/K 100.1	GHQ6301908R0003		10	0.05
horizontal, 200 mm	4	VB/K 200.1	GHQ6301908R0001		10	0.06
vertical, 270 mm	-	VB/K 270.1	GHQ6301908R0002		10	0.09
vertical, 360 mm	-	VB/K 360.1	GHQ6301908R0004		10	0.12



PS 1/4/6-KNX

Busbars

For interconnection of the phase supply to multiple input terminals on devices such as SD/S, SA/S, 6197, They reduce the wiring effort and ensure safe interconnection. The PS 1/4/6 is prefabricated and can be used immediately. The PS 1/60/6 is cut to the desired length and sealed with end caps.



PS-END 1-S

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
1 phase, 4 contacts	-	PS 1/4/6-KNX*	2CDG924003R0011		10	0.012
1 phase, 60 contacts	-	PS 1/60/6-KNX*	2CDG924004R0011		1	0.11
End cap	-	PS-END 1-S	2CDL000001R0001		25	0.001



US/E 1

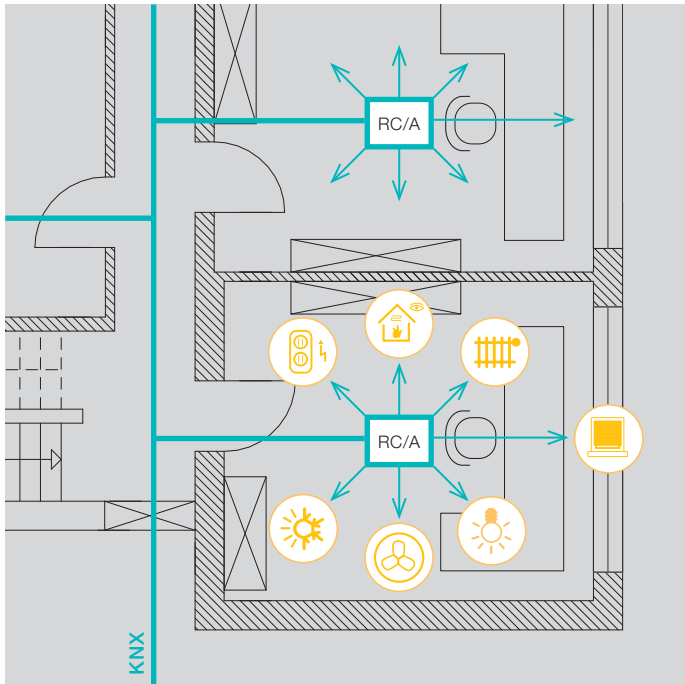
Connection Terminals

For connecting bus devices as well as for looping through or branching the bus cable. Available in black/red for use as bus connecting terminal, in blue as bus connecting terminal with surge protector and in white/yellow for use as a connecting terminal.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
black/red	-	BUSKLEMME	GHQ6301901R0001		50	0.1
white/yellow	-	KLEMME	GHQ6301902R0001		50	0.1
with surge protector	-	US/E 1	GHQ6310009R0001		1	0.02

More Security Through Flexibility during Planning, Commissioning and Operation

A
4



The fundamental principle: One device per room

A single Room Controller controls all the room functions. This “one device per room” principle economically and flexibly provides KNX functionality: With 4 or 8 modules, which are simply inserted into the basis device, all loads in this room (lights, blinds, heating, etc.) can be controlled.

Economic security from the outset

The installation concept of the Room Controller, particularly the simple plug-in module concept, provides security and reliability.

– When planning the infrastructure of a building:

It can be undertaken without exact knowledge of the subsequent user demands.

– During commissioning:

When user demands have been determined, they are implemented by simple insertion of modules.

– In operation in a building:

Modifications to the room utilisation are easy to implement. The changes to the cable routing are limited to the room concerned.

Improved fire protection included

The significant reduction in the wiring also considerably reduces the fire load and thus improves safety for persons and assets.

Save on energy and not on comfort

Each room is used differently. The different module assignments of the Room Controller can be configured accordingly. Just three examples of special building functions that can be implemented with the device.

In the lighting sector

Constant lighting control is not the only conceivable solution. A high level of comfort can be assured by the control of different light scenes.

Blinds and roller shutters

Not only do they provide pleasant shading, they also assist in responsible use of energy. Intelligent facade controls move the blinds to suit the position of the sun.

Heating/Ventilation/Air conditioning

The control of electrothermal valves on radiators is no problem for the “electronic switch actuator” module of the Room Controller. The ventilation can also be integrated into this automatic control.



ABB i-bus® KNX Room Automation

Overview of switching performance

	SA/M 2.6.1	SA/M 2.16.1	SD/M 2.6.2	LR/M 1.6.2	UD/M 1.300.1	ES/M 2.230.1	ES/M 2.24.1
Outputs							
Load circuits	2 relay outputs	2 relay outputs, floating	2 relay outputs	1 relay output	Semiconductor output, dimmed via phase interval or phase control	2 semiconductor outputs for resistive loads, inrush current: max. 1 A, continuous current: max. 700 mA	
U _n rated voltage	250/440 V AC	250/440 V AC	250/440 V AC	250/440 V AC			
I _n rated current	6 AX	16 A	6 AX	6 AX			
Control outputs			2 x 1...10 V DC (passive)	1 x 1...10 V DC (passive)			
Max. control current			30 mA	30 mA	Max. output power 300 VA at 230 V AC 150 VA at 127 V AC Min. output power: 2 VA		
Max. cable length			100 m	100 m			
Switching current per output							
AC3 operation (cos φ = 0.45) EN 60 947-4-1	6 A / 230 V	8 A / 230 V	6 A / 230 V	6 A / 230 V			
AC1 operation (cos φ = 0.45) EN 60 947-4-1	6 A / 230 V	16 A / 230 V	6 A / 230 V	6 A / 230 V			
Fluorescent lighting load AX to EN 60 669	6 A / 250 V (70 μF)	16 A / 250 V (70 μF)	6 A / 250 V (70 μF)	6 A / 250 V (70 μF)			
Minimum switching capacity	100 mA / 12 V 100 mA / 24 V	100 mA / 12 V 100 mA / 24 V	100 mA / 12 V 100 mA / 24 V	100 mA / 12 V 100 mA / 24 V			
DC current switching capacity (resistive load)	6 A / 24 V=	16 A / 24 V=	6 A / 24 V=	6 A / 24 V=			
Lamp loads at 230 V AC							
– Incandescent lamp load	1380 W	2300 W	1380 W	1380 W			
Fluorescent lamps T5 / T8							
– Uncompensated	1380 W	2300 W	1380 W	1380 W			
– Parallel compensated	1380 W	1500 W	1380 W	1380 W			
– DUO connection	1380 W	1500 W	1380 W	1380 W			
Low-volt halogen lamps							
– Inductive transformer	1200 W	1200 W	1200 W	1200 W			
– Electronic transformer	1380 W	1500 W	1380 W	1380 W			
– Halogen lamp 230 V	1380 W	2300 W	1380 W	1380 W			
Dulux lamp							
– Uncompensated	1100 W	1100 W	1100 W	1100 W			
– Parallel compensated	1100 W	1100 W	1100 W	1100 W			
Mercury-vapour lamp							
– Uncompensated	1380 W	2000 W	1380 W	1380 W			
– Parallel compensated	1380 W	2000 W	1380 W	1380 W			
Switching capacity							
– Max. peak inrush-current I _p (150 μs)	400 A	400 A	400 A	400 A			
– Max. peak inrush-current I _p (250 μs)	320 A	320 A	320 A	320 A			
– Max. peak inrush-current I _p (600 μs)	200 A	200 A	200 A	200 A			
Number of electronic ballasts (T5/T8, single element)							
– 18 W (ABB EVG 1x18 CF)	23	23	23	23			
– 24 W (ABB EVG-T5 1x24 CY)	23	23	23	23			
– 36 W (ABB EVG 1x36 CF)	14	14	14	14			
– 58 W (ABB EVG 1x58 CF)	11	11	11	11			
– 80 W (Helvar EL 1x80 SC)	10	10	10	10			

Further technical specifications can be found in the corresponding product manuals at www.abb.com/knx

ABB i-bus® KNX Room Controller Basis Devices

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4



Configuration example
RC/A 8.1

Room Controller

The Room Controller controls all the functions in the room as a central device. Due to its modular design, it can be adapted flexibly to the required functionality. On-site installation enables short assembly and commissioning times. A structured cable entry creates clarity and flexibility for changes in function – both during planning and operation.

Special features

- Height 50 mm: optimised for underfloor installation or suspended ceilings
- Room Controller counts as just one bus device
- Robust housing, IP 54 degree of protection
- Manual operation for immediate testing – even without bus voltage
- Comprehensive software functionality



RC/A 4.2

Room Controller, Basis Device for 4 Modules, SM

It accommodates up to 4 plug-in modules and controls their functions. The RC/A 4.2 communicates as a bus device. Any module type can be plugged into each module slot. A manual control for module function test is integrated.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
(H x W x D) 200 x 275 x 50	–	RC/A 4.2	2CDG110104R0011		1	0.98



RC/A 8.2

Room Controller, Basis Device for 8 Modules, SM

It accommodates up to 8 plug-in modules and controls their functions. Any module type can be plugged into each module slot. The inserted module is automatically detected. The manual operation facility enables an immediate function test even when bus voltage is not applied.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
(H x W x D) 270 x 316 x 50	–	RC/A 8.2	2CDG110106R0011		1	1.695

Please note: With the new DALI Light Controller 4-fold, SM DLR/A 4.8.1.1 the DALI Lighting Control can be integrated in a decentralised KNX installation too! Further information about DLR/A 4.8.1.1 in chapter 8.

ABB i-bus® KNX Room Controller Function Modules



BE/M 4.230.1

Binary Input Modules, 4-fold

Each of the modules provides 4 inputs. There are 3 module types available for the connection of 115/230 V, 12/24 V (AC or DC) or floating contacts to cover all demands.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
230 V	–	BE/M 4.230.1	2CDG110005R0011		1	0.13
12/24 V	–	BE/M 4.24.1	2CDG110006R0011		1	0.13
Contact scanning	–	BE/M 4.12.1	2CDG110007R0011		1	0.13



SA/M 2.6.1

Switch Actuator Module, 2-fold, 6 A

For switching loads up to 16 A at a maximum continuous current of 6 A.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	–	SA/M 2.6.1	2CDG110002R0011		1	0.17



SA/M 2.16.1

Switch Actuator Module, 2-fold, 16 A, floating contacts

For switching two loads up to 16 A. The switched voltage is independent of the basic device and is connected directly to the module.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	–	SA/M 2.16.1	2CDG110100R0011		1	0.16



JA/M 2.230.1

Shutter Actuator Modules, 2-fold

For controlling two independent blind or shutter drives. There are two module types available for 115/230 V AC or 24 V DC drives.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
230 V AC	–	JA/M 2.230.1	2CDG110003R0011		1	0.17
24 V DC	–	JA/M 2.24.1	2CDG110004R0011		1	0.17



SD/M 2.6.2

Switch/Dim Actuator Module, 2-fold, 6 AX

It enables the switching and dimming of two groups of luminaries in conjunction with electronic ballasts via a 1...10 V control voltage. Enhanced switching capacity. (Replaces the SD/M 2.6.1).

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	–	SD/M 2.6.2	2CDG110107R0011		1	0.17

ABB i-bus® KNX Room Controller Function Modules

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4



LR/M 1.6.2

Light Controller Module, 1-fold, 6 AX

Enables switching and dimming of a lighting group via 1...10 V control voltage. The device can be used for constant lighting control in conjunction with Light Sensor LF/U 2.1.

(Replaces the LR/M 1.6.1).

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	LR/M 1.6.2	2CDG110108R0011		1	0.13



UD/M 1.300.1

Universal Dim Actuator Module, 1-fold, 300 VA

For dimming incandescent lamps, 230 V or low-voltage halogen lamps up to 300 W/VA. The automatic load detection detects the connected load and optimises the control. The minimum load is just 2 W.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	UD/M 1.300.1	2CDG110012R0011		1	0.18



ES/M 2.230.1

Electronic Switch Actuator Module, 2-fold

With 2 overload-proof outputs for noiseless control of heating systems and chilled ceilings via thermoelectric valve drives. Two module types for voltages from 115/230 V or 24 V (AC or DC) are available.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
115/230 V	-	ES/M 2.230.1	2CDG110013R0011		1	0.15
24 V	-	ES/M 2.24.1	2CDG110014R0011		1	0.15

ABB i-bus® KNX Room Master



RM/S 1.1



RM/S 2.1



RM/S 3.1



RM/S 4.1

Room Master

The Room Master is a KNX device with a combination of inputs and outputs. The quantities, technical data and the functions of these inputs and outputs are compiled, so that overall control of all the functions in rooms of a live-in character or apartments, are implemented via a device. Typical areas of application of the Room Master are hotel rooms, hospital rooms as well as apartments in institutions for residential care or in student residential homes. The Room Master with its compact design covers all the basic requirements for

- Lighting control
- Heating/Air conditioning
- Shading control (shutters, blinds or curtains - with the RM/S 2.1)
- Control of further loads via switched electrical sockets

Function extensions are possible at any time, e.g. devices for dimming via ABB i-bus® KNX.

Overview of the inputs and outputs

	RM/S 1.1	RM/S 2.1	RM/S 3.1	RM/S 4.1	Application possibilities
Binary inputs via contact scanning	8	18	12	8	For connection of switches or push-buttons (light on/off, shutter up/down, etc.) or sensors (window contacts, door contacts, water sensors, condensation water sensors, hotel acrd readers, etc.)
Outputs 20 A (16 AX)	1	3	4	–	Bathroom fan, switching of electrical sockets
Outputs 16 A (10 AX)	2	1	–	–	Auxiliary electrical heating of fan-coil units (at RM/S 1.1 and 2.1), lighting
Outputs 6 A	3	12	–	8	3-speed fan control (at RM/S 1.1 and 2.1), lighting
Outputs 0.5 A electronic	4	4	–	–	Valve control (heating, cooling)
Outputs 6 A changeover contact	–	1	4 (configurable as switch outputs too)	–	Blind or roller blind control

- RM/S 1.1 and RM/S 2.1 are preprogrammed ex factory
- RM/S 3.1 and RM/S 4.1 are programmable with predefined and tested example projects (ETS 4) for different fields of application (office, schools, hotel rooms, ...)
- Commissioning of the preprogrammed devices on the construction site without notebook and ETS programming. With the electrical connection all room functions are available.
- Optional functional extensions via integration into KNX networks with ETS software.

[Further information about Room Master on www.abb.com/knx](http://www.abb.com/knx)

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
Inputs, Outputs, Fan Coil	8	RM/S 1.1	2CDG110094R0011		1	0.45
Inputs, Outputs, Blind Control, Fan Coil	12	RM/S 2.1	2CDG110095R0011		1	0.76
Inputs, Outputs, Blind Control or Outputs	12	RM/S 3.1 NEW	2CDG110165R0011		1	0.55
Inputs, Outputs	8	RM/S 4.1 NEW	2CDG110170R0011		1	0.3

ABB i-bus® KNX Flush-mounted Combined Devices

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6173/11 U-500

Flush-mounted combined actuator

NEW

For controlling blind or awning motors. For connecting thermoelectric actuating drives. 1 electronic output (noiseless) The bus can be connected via enclosed terminal block.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6173/11 U-500	6151-0-0249		1	0.07



6151/11 U-500

Switch actuator, 16 A

NEW

For switching 230 V~ consumers. The bus can be connected via enclosed terminal block.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6151/11 U-500	6151-0-0245		1	0.07



6152/11 U-500

Blind actuator

NEW

For controlling blind or awning motors. The bus can be connected via enclosed terminal block.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6152/11 U-500	6152-0-0040		1	0.06



6164/11 U-500

Heating actuator

NEW

1 electronic output (noiseless) For connecting thermoelectric actuating drives. The bus can be connected via enclosed terminal block.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6164/11 U-500	6151-0-0247		1	0.05

ABB i-bus® KNX Binary Inputs



Application

Operation of KNX systems via conventional push buttons and switches
Processing of binary signals (signalling contacts)

Benefits

Flexible application due to wide-range inputs
Reduced stock requirement due to streamlined product range
Simplified commissioning using the copy function

Product

BE/S 4.20.2.1 with 4 inputs for contact scanning and manual operation
BE/S 4.230.2.1 with 4 wide-range inputs and manual operation
BE/S 8.20.2.1 with 8 inputs for contact scanning and manual operation
BE/S 8.230.2.1 with 8 wide-range inputs and manual operation

Wide-range inputs and a streamlined range – The new ABB i-bus® KNX Binary Inputs.

ABB i-bus® KNX Binary Inputs serve as an interface for operation of KNX systems via conventional push buttons and switches as well as for processing binary signals (signalling contacts).

In contrast to the existing solutions, where the input voltages of 24 V and 230 V required separate devices, the new Binary Inputs now feature **wide-range inputs**, which can process voltage signals ranging from 10 to 230 V AC/DC. This offers the **installer significantly greater flexibility**.

In addition to two devices with 4 and 8 wide-range inputs, the new ABB i-bus® KNX Binary Input product range is rounded off by two devices with 4 and 8 inputs with scanning voltage. On these types, a pulsed scanning voltage is provided for connection of floating contacts from the device.

With an identical range of applications, the number of ABB i-bus® KNX Binary Inputs is now reduced from 6 types to 4.

All Binary Inputs feature a **high-quality membrane keypad for comfortable manual operation and display of the device functions**. Input states can be simulated at the device, so that the conventional push buttons, switches or floating contacts do not need to be connected for commissioning purposes. The device functions can be easily tested during commissioning in this way.

The Binary Inputs are powered via the KNX and do not require an additional power supply.

The software functionality of the Binary Inputs has also been extended. It is now possible to send **several switching telegrams with just a single push of a button**.

Especially useful, just as in the case of the Switch Actuators, it is also possible to **copy the channels of the device in the ETS**. The parameters and group addresses of a channel can be simply transferred to other channels in this way. This simplifies project engineering and helps reduce sources of error.

ABB i-bus® KNX Inputs

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Binary Inputs Selection Table

	BE/S 4.20.2.1	BE/S 4.230.2.1	BE/S 8.20.2.1	BE/S 8.230.2.1	US/U 2.2	US/U 4.2	US/U 12.2
General							
Voltage range	–	10...230 V	–	10...230 V	–	–	–
Voltage type	–	AC/DC	–	AC/DC	–	–	–
Contact scanning	■	–	■	–	■	■	■
Inputs	4	4	8	8	2	4	12
Type of installation	MDRC	MDRC	MDRC	MDRC	FM	FM	FM
Module width (space unit)	2	2	4	4	–	–	–
Switch sensor							
Send switch value after any edge	■	■	■	■	■	■	■
Send switch value after signal length and/or cyclically	■	■	■	■	■	■	■
Send switch value 1 cyclically	■	■	■	■	■	■	■
Send switch value 2	■	■	■	■	–	–	–
Send switch value 3	■	■	■	■	–	–	–
Difference between short and long operation	■	■	■	■	■	■	■
Dim sensor							
Start-stop dimming, step-by-step dimming	■	■	■	■	■	■	■
One-touch dimming	■	■	■	■	■	■	■
Shutter Sensor							
Shutter operation via a push button/switch	■	■	■	■	■	■	■
Shutter operation via two push buttons/switches	■	■	■	■	■	■	■
Value/Forced operation							
1 bit [0/1], 2 bit forced operation	■	■	■	■	■	■	■
1/2/4 bytes	■	■	■	■	■	■	■
Signed	■	■	■	■	–	–	–
3 byte, time, weekday	■	■	■	■	–	–	–
Control scene							
8 bit scene	■	■	■	■	■	■	■
Store scene	■	■	■	■	■	■	■
Switching sequence							
Several preset sequences can be set	■	■	■	■	■	■	■
Link several push buttons in a switching sequence (actuating number)	■	■	■	■	■	■	■
Multiple operation							
Telegram for long operation	■	■	■	■	■	■	■
Multiple operation can be set	■	■	■	■	■	■	■
Pulse counter							
Adjustable data type and threshold values	■	■	■	■	■	■	–
Temporary counter activation	■	■	■	■	■	■	–
Send counter level cyclically	■	■	■	■	■	■	–
Manual operation							
Energy-saving mode	■	■	■	■	–	–	–
Enable/release manual operation	■	■	■	■	–	–	–
Manual operating status	■	■	■	■	–	–	–
Enable/release manual operation button per input	■	■	■	■	–	–	–
Input LED can be inverted	■	■	■	■	–	–	–
Special functions							
Copying and exchanging parameter settings	■	■	■	■	–	–	–
Enable/disable input	■	■	■	■	■	■	■
Adjustable debounce time and minimum signal time	■	■	■	■	■	■	■
Limit the number of telegrams	■	■	■	■	■	■	■
Device sends an "In operation" telegram	■	■	■	■	–	–	–
Heating valve control (electric relay)	–	–	–	–	■	■	■
Switch LEDs	–	–	–	–	■	■	■

■ = Function is supported

ABB i-bus® KNX Inputs



BE/S 8.230.2.1

Binary Inputs, 10 – 230 V AC/DC, MDRC

Detects AC/DC signals in the voltage range from 12...230 V. The state of the input is displayed via yellow LEDs. The binary inputs enable detection of independent input signals. The devices feature a manual operation pushbutton for each channel. The devices are powered via the ABB i-bus® and do not require an additional power supply.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit	Weight 1 pc. kg
4-fold	2	BE/S 4.230.2.1	2CDG110091R0011		1	0.12
8-fold	4	BE/S 8.230.2.1	2CDG110093R0011		1	0.23



BE/S 4.20.2.1

Binary Inputs, Contact Scanning, MDRC

Scans floating contacts with internally generated scanning voltage. The state of the input is displayed via yellow LEDs. The binary inputs enable detection of independent input signals. The devices feature a manual operation pushbutton for each channel. The devices are powered via the ABB i-bus® and do not require an additional power supply.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit	Weight 1 pc. kg
4-fold	2	BE/S 4.20.2.1	2CDG110090R0011		1	0.12
8-fold	4	BE/S 8.20.2.1	2CDG110092R0011		1	0.23



US/U 4.2

Universal Interface, FM

The universal interface has 2, 4 or 12 channels which can be parametrised as inputs or outputs with the ETS software. Conventional push-buttons, auxiliary contacts, LEDs and the electronic relay ER/U can be connected. The connecting cables can be extended up to 10 m. The contact scanning voltage and the supply voltage for the LEDs are made available by the device, the series resistors for the LEDs are integrated.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit	Weight 1 pc. kg
2-fold	–	US/U 2.2	GHQ6310074R0111		1	0.06
4-fold	–	US/U 4.2	GHQ6310070R0111		1	0.06
12-fold	–	US/U 12.2	2CDG110065R0011		1	0.08

ABB i-bus® KNX Inputs

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AE/A 2.1

Analogue Input, 2-fold, SM

It is used wherever analogue variables should be detected on a distributed basis. The sophisticated housing concept enables quick and clear wiring and improves the speed for connection of the sensors. Comprehensive range of adjustment for many typical sensors (1 – 10 V, 0(4) – 20 mA, 0 – 1 V, PT 100, PT 1000,...) for detection of temperature, brightness, fill levels, etc. A separate auxiliary voltage supply is required for active sensors.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
2-fold	-	AE/A 2.1	2CDG110086R0011		1	0.3



AE/S 4.2

Analogue Input, 4-fold, MDRC

It is used to detect and process 4 independent analogue input signals according to IEC 60381 (0 – 1 V, 0 – 5 V, 0 – 10 V, 1 – 10 V, 0 – 20 mA, 4 – 20 mA, 0 – 1000 Ohm, PT 100 in 2-wire technology and floating contacts). The 24 V DC voltage for the sensors (max. 300 mA) is also supplied by the device. The mains voltage supply is 115 ... 230 V AC, 50/60 Hz.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	AE/S 4.2	2CDG110030R0011		1	0.23

ABB i-bus® KNX Inputs



WZ/S 1.1

Weather Unit, MDRC

It is used to detect and process weather data from weather sensor. It supplies data for twilight and brightness levels in 3 directions, rain, temperature, information on day/night, wind speed, date and time (DCF radio receiver). Four value memories which can store up to 24 values each are available. The Weather Unit WZ/S 1.1 is has been configured for the Weather Sensor WES/A and supplies it with power. The device can be operated optionally with a operating voltage of 115 to 230 V AC, 50/60 Hz.



WES/A 2.1

Weather Sensor, SM

The Weather Sensor WES/A 1.1 detects twilight, brightness in three directions, rain, temperature, day/night, wind speed and the date and time using the radio receiver. An additional heating transformer is not required.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	4	WZ/S 1.1	2CDG110034R0011		1	0.23
	-	WES/A 2.1	2CDG120033R0011		1	0.39



WS/S 4.1

Weather Station, 4-fold, MDRC

All common weather sensors for wind speed, wind direction, rain, amount of rain, brightness, light intensity, pyranometers, twilight, air pressure, humidity or temperature can be connected to the device. The power supply generates the 24 V DC voltage for external sensors (max. 300 mA). The device can be operated with 115 to 230 V AC, 50/60 Hz.

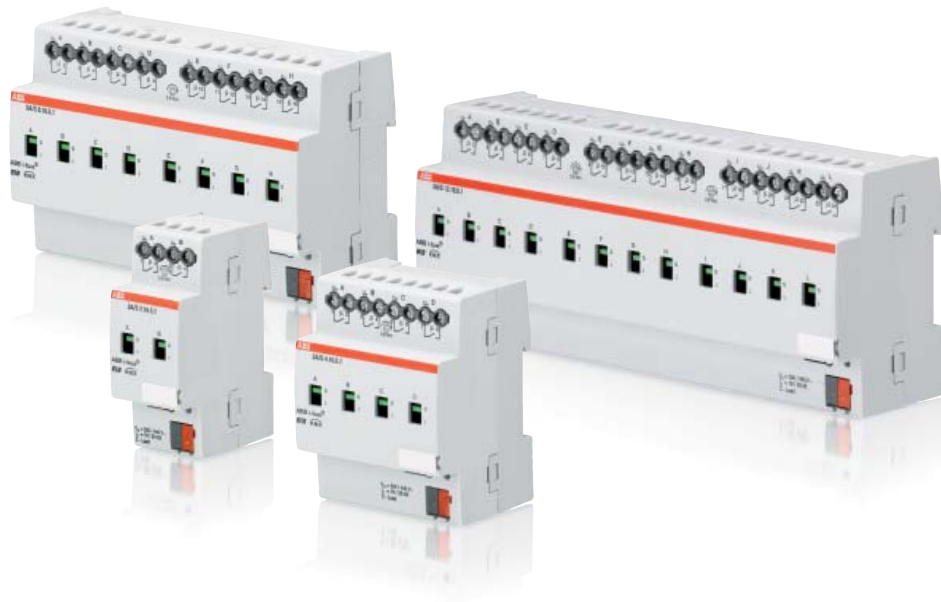
The application software is configured for the detection of weather based data and enables quick sensor programming.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	4	WS/S 4.1	2CDG110032R0011		1	0.23

ABB i-bus® KNX Switch Actuators

A Complete Range

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Switch Actuators are responsible for reliable switching of different electrical loads in the KNX system. Many different load situations are possible. ABB offers a suitable Switch Actuator for all application areas. The range has been rounded off with a new series. Now 16/20 AX C-Load Switch Actuators with and without a current detection feature are available; each featuring 2, 4, 8 or 12 outputs.

In the following table, you will find an overview of the ABB i-bus® Switch Actuators and their type designations:

16/20 AX C-Load with or without Current Detection				
–	SA/S 2.10.2.1	SA/S 2.16.2.1	SA/S 2.16.5.1	SA/S 2.16.6.1
SA/S 4.6.1.1	SA/S 4.10.2.1	SA/S 4.16.2.1	SA/S 4.16.5.1	SA/S 4.16.6.1
SA/S 8.6.1.1	SA/S 8.10.2.1	SA/S 8.16.2.1	SA/S 8.16.5.1	SA/S 8.16.6.1
SA/S 12.6.1.1	SA/S 12.10.2.1	SA/S 12.16.2.1	SA/S 12.16.5.1	SA/S 12.16.6.1

Note:

The codes represent the following:

SA/S	=	Switch Actuator, DIN Rail mounting
SA/S x.	x =	Number of outputs
SA/S 8.y.	y =	Rated current in Ampere A
SA/S 8.16.1	1 =	Standard without manual operation
SA/S 8.16.2	2 =	With manual operation
SA/S 8.16.5	5 =	C-Load (200 µF)
SA/S 8.16.6	6 =	C-Load with current detection
SA/S 8.16.6.z	z =	Version

ABB i-bus® KNX Switch Actuators

Switching Capacity Overview

The following table provides an overview of the rated values, switching performance, lamp loads or the number of lamps, which can be connected to a contact:

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	SA/S 4.6.1.1 SA/S 8.6.1.1 SA/S 12.6.1.1	SA/S 2.10.2.1 SA/S 4.10.2.1 SA/S 8.10.2.1 SA/S 12.10.2.1	SA/S 2.16.2.1 SA/S 4.16.2.1 SA/S 8.16.2.1 SA/S 12.16.2.1	SA/S 2.16.5.1 SA/S 4.16.5.1 SA/S 8.16.5.1 SA/S 12.16.5.1	SA/S 2.16.6.1 SA/S 4.16.6.1 SA/S 8.16.6.1 SA/S 12.16.6.1
I_n rated current (A)	6 A	10 AX	16 A	16/20 AX C-Load	16/20 AX C-Load
U_n rated voltage (V)	250/440 V AC	250/440 V AC	250/440 V AC	250/440 V AC	250/440 V AC
AC1 operation (cos φ = 0.8) DIN EN 60947-4-1	6 A	10 A	16 A	20 A	20 A
AC3 operation (cos φ = 0.45) DIN EN 60947-4-1	6 A	8 A	– ⁴⁾	16 A	16 A
C-Load switching capacity	–	–	–	20 A	20 A
Fluorescent lighting load AX to EN 60669-1	6 A (35 μF) ³⁾	10 AX (140 μF) ³⁾	16 A (70 μF) ³⁾	20 AX (200 μF) ³⁾	20A X (200 μF) ³⁾
Minimum switching capacity	10 mA/12 V	100 mA/12 V	100 mA/12 V	100 mA/12 V	100 mA/12 V
DC current switching capacity (resistive load)	7 A/24 V =	10 A/24 V =	16 A/24 V =	20 A/24 V =	20 A/24 V =
Mechanical service life	> 10 ⁷	> 3 x 10 ⁶	> 3 x 10 ⁶	> 10 ⁶	> 10 ⁶
Electronic endurance to IEC 60947-4-1:					
– Rated current AC1 (240 V/0.8)	100,000	100,000	100,000	100,000	100,000
– Rated current AC3 (240 V/0.45)	15,000	30,000	30,000	30,000	30,000
– Rated current AC5a (240 V/0.45)	15,000	30,000	30,000	30,000	30,000
Incandescent lamp load at 230 V AC	1,200 W	2,500 W	2,500 W	3,680 W	3,680 W
Fluorescent lamp T5 / T8:					
– Uncorrected	800 W	2,500 W	2,500 W	3,680 W	3,680 W
– Parallel compensated	300 W	1,500 W	1,500 W	2,500 W	2,500 W
– DUO circuit	350 W	1,500 W	1,500 W	3,680 W	3,680 W
Low-voltage halogen lamps:					
– Inductive transformer	800 W	1,200 W	1,200 W	2,000 W	2,000 W
– Electronic transformer	1,000 W	1,500 W	1,500 W	2,500 W	2,500 W
Halogen lamp 230 V	1,000 W	2,500 W	2,500 W	3,680 W	3,680 W
Dulux lamps:					
– Uncorrected	800 W	1,100 W	1,100 W	3,680 W	3,680 W
– Parallel compensated	800 W	1,100 W	1,100 W	3,000 W	3,000 W
Mercury-vapour lamps:					
– Uncorrected	1,000 W	2,000 W	2,000 W	3,680 W	3,680 W
– Parallel compensated	800 W	2,000 W	2,000 W	3,000 W	3,000 W
Sodium-vapour lamps:					
– Uncorrected	1,000 W	2,000 W	2,000 W	3,680 W	3,680 W
– Parallel compensated	800 W	2,000 W	2,000 W	3,000 W	3,000 W
Max. peak inrush-current I_p (150 μs)	200 A	400 A	400 A	600 A	600 A
Max. peak inrush-current I_p (250 μs)	160 A	320 A	320 A	480 A	480 A
Max. peak inrush-current I_p (600 μs)	100 A	200 A	200 A	300 A	300 A
Number of electronic ballasts					
(T5/T8, single element):²⁾					
18 W (ABB ballasts 1 x 18 SF)	10 ballasts	23 ballasts	23 ballasts	26 ¹⁾ ballasts	26 ¹⁾ ballasts
24 W (ABB ballasts 1 x 24 CY)	10 ballasts	23 ballasts	23 ballasts	26 ¹⁾ ballasts	26 ¹⁾ ballasts
36 W (ABB ballasts 1 x 36 CF)	7 ballasts	14 ballasts	14 ballasts	22 ballasts	22 ballasts
58 W (ABB ballasts 1 x 58 CF)	5 ballasts	11 ballasts	11 ballasts	12 ¹⁾ ballasts	12 ¹⁾ ballasts
80 W (Helvar EL 1 x 80 SC)	3 ballasts	10 ballasts	10 ballasts	12 ¹⁾ ballasts	12 ¹⁾ ballasts

¹⁾ The number of ballasts is limited by the protection with B16/B20 circuit-breakers.

²⁾ For multiple element lamps or other types, the number of electronic ballasts must be determined using the peak inrush current of the electronic ballasts.

³⁾ The maximum peak inrush current may not be exceeded.

⁴⁾ Not intended for AC3 operation, see Technical Data for maximum AC3 current.

ABB i-bus® KNX Switch Actuators

An Overview of all Software Functions

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The following table provides an overview of the functions possible with the Switch Actuators and their application programs:

	SA/S 4.6.1.1 SA/S 8.6.1.1 SA/S 12.6.1.1	SA/S 2.10.2.1 SA/S 4.10.2.1 SA/S 8.10.2.1 SA/S 12.10.2.1	SA/S 2.16.2.1 SA/S 4.16.2.1 SA/S 8.16.2.1 SA/S 12.16.2.1	SA/S 2.16.5.1 SA/S 4.16.5.1 SA/S 8.16.5.1 SA/S 12.16.5.1	SA/S 2.16.6.1 SA/S 4.16.6.1 SA/S 8.16.6.1 SA/S 12.16.6.1
Type of installation	MDRC	MDRC	MDRC	MDRC	MDRC
Number of outputs	4/8/12	2/4/8/12	2/4/8/12	2/4/8/12	2/4/8/12
Module width (space unit)	4/6/8	2/4/8/12	2/4/8/12	2/4/8/12	2/4/8/12
Manual operation	–	■	■	■	■
Contact position display	–	■	■	■	■
I _n rated current (A)	6 A	10 AX	16 A	16/20 AX C-Load	16/20 AX C-Load
Current detection	–	–	–	–	■
Switch function					
– ON/OFF delay	■	■	■	■	■
– Staircase light	■	■	■	■	■
– Warning before end of staircase lighting	■	■	■	■	■
– Staircase lighting time set via object	■	■	■	■	■
– Flashing	■	■	■	■	■
– Switch response can be set (N.O./N.C.)	■	■	■	■	■
– Thresholds	■	■	■	■	■
Current detection	–	–	–	–	■
– Threshold value monitoring	–	–	–	–	■
– Measured value detection	–	–	–	–	■
Function Scene	■	■	■	■	■
Function Logic					
– Logic AND function	■	■	■	■	■
– Logic OR function	■	■	■	■	■
– Logic XOR function	■	■	■	■	■
– Gate function	■	■	■	■	■
Priority object/forced operation	■	■	■	■	■
Heating/fan control					
– Switch ON/OFF (2 point control)	■	■	■	■	■
– Cyclical fault monitoring	■	■	■	■	■
– Automatic purging	■	■	■	■	■
Fan Coil control ¹⁾	■	■	■	■	■
Special functions					
– Default position on bus voltage failure/recovery	■	■	■	■	■
– Status messages	■	■	■	■	■

¹⁾ See special ABB i-bus® KNX devices of the HVAC area, e.g. Fan/Fan Coil actuator LFA/S or Fan Coil actuator FCA/S.

■ = possible functions

ABB i-bus® KNX Outputs



SA/S 8.6.1.1

Switch Actuators, 6 A, MDRC

NEW

Using floating contacts it switches 4, 8 or 12 independent electrical loads. The 6 A-AC3 devices are suited for switching resistive, inductive and capacitive loads. Please note: Increased module width compared to previous generation.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
4-fold	4	SA/S 4.6.1.1	2CDG110152R0011		1	0.15
8-fold	6	SA/S 8.6.1.1	2CDG110153R0011		1	0.22
12-fold	8	SA/S 12.6.1.1	2CDG110154R0011		1	0.30



SA/S 4.10.2.1

Switch Actuators, 10 AX, MDRC

NEW

Switches 2, 4, 8 and 12 independent electrical loads using floating contacts. Every output can be operated manually and features display of the switching state. The 10AX-AC1 devices are especially suited for switching resistive, inductive and capacitive loads such as fluorescent lighting (AX) compliant to EN 60669.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
2-fold	2	SA/S 2.10.2.1	2CDG110155R0011		1	0.18
4-fold	4	SA/S 4.10.2.1	2CDG110156R0011		1	0.29
8-fold	8	SA/S 8.10.2.1	2CDG110157R0011		1	0.51
12-fold	12	SA/S 12.10.2.1	2CDG110158R0011		1	0.74



SA/S 8.16.2.1

Switch Actuators, 16 AC1, MDRC

NEW

Switches 2, 4, 8 and 12 independent electrical loads using floating contacts. Every output can be operated manually and features display of the switching state. The 16A-AC1 devices are suited for switching resistive, inductive and capacitive loads.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
2-fold	2	SA/S 2.16.2.1	2CDG110159R0011		1	0.17
4-fold	4	SA/S 4.16.2.1	2CDG110160R0011		1	0.29
8-fold	8	SA/S 8.16.2.1	2CDG110161R0011		1	0.51
12-fold	12	SA/S 12.16.2.1	2CDG110162R0011		1	0.67



SA/S 12.16.5.1

Switch Actuator, 16/20 AX, C-Load, MDRC

Uses floating contacts to switch independent electrical loads via ABB i-bus® KNX. Every output can be operated manually and features display of the switching state. The 16AX-AC3, C-Load devices are especially suited for switching loads with high surge currents such as luminaries with ballasts or fluorescent lighting (AX) according to EN 60669.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
2-fold	2	SA/S 2.16.5.1	2CDG110132R0011		1	0.21
4-fold	4	SA/S 4.16.5.1	2CDG110133R0011		1	0.38
8-fold	8	SA/S 8.16.5.1	2CDG110134R0011		1	0.69
12-fold	12	SA/S 12.16.5.1	2CDG110137R0011		1	0.90

ABB i-bus® KNX Outputs

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SA/S 8.16.6.1

Switch Actuator with Current Detection, 16/20 AX, C-Load

Switches with floating contacts, 2, 4, 8 or 12 independent electrical loads with high surge currents. The Switch Actuators feature a circuit for high precision current detection for each output that is used to monitor the connected circuits. Every output can be operated manually and features display of the switching state. The 16/20A, C-Load devices are especially suited for switching loads with high surge currents such as luminaires with ballasts or fluorescent lighting (AX) according to EN 60669.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
2-fold	2	SA/S 2.16.6.1	2CDG110112R0011		1	0.21
4-fold	4	SA/S 4.16.6.1	2CDG110113R0011		1	0.38
8-fold	8	SA/S 8.16.6.1	2CDG110114R0011		1	0.69
12-fold	12	SA/S 12.16.6.1	2CDG110138R0011		1	0.90



IO/S 4.6.1.1

I/O Actuator, 6 A, MDRC

NEW

For the control of loads in residential areas, typically in hotel rooms and apartments. The I/O Actuators provide binary inputs for the connection of conventional push-buttons and outputs for switching loads. Inputs and outputs can be internally connected by ETS. By integrating the devices into KNX networks further functions can be realised: e.g. central control or room based emergency calls to a control centre.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
4-fold	4	IO/S 4.6.1.1	2CDG110168R0011		1	0.17
8-fold	8	IO/S 8.6.1.1	2CDG110169R0011		1	0.3



AA/S 4.1

Analogue Actuator, 4-fold, MDRC

The device outputs receives telegrams as analogue signals via four analogue outputs, which can be used independently from one another as current or voltage outputs. With the analogue actuator module AAM/S, the number of analogue outputs can be increased to 8 outputs. The device requires an external 24 V power supply for operation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	AA/S 4.1	2CDG120005R0011		1	0.21



AAM/S 4.1

Analogue Actuator Module, 4-fold, MDRC

The analogue actuator module extends the analogue actuator AA/S 4.1 to 8 analogue outputs. The outputs can be used independently from one another as current or voltage outputs. The device requires an external 24 V power supply for operation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	AAM/S 4.1	2CDG120006R0011		1	0.18

Blind/Roller Shutter Actuators For Sun Protection and Temperature Control

Modern building installation enables a high degree of functionality and simultaneously complies with increased security requirements. Due to the structured installation of the electrical components, it is possible to carry out rapid planning, installation and setup as well as achieve cost benefits during operation.

Modern sun protection devices have a significant role, as they must fulfil many demands:

- Anti-glare protection (e.g. PC workstations)
- Utilization of daylight by tracking the sun's position and directing available daylight
- Protecting furniture and carpets from fading
- Regulating the room temperature (overheating protection in summer; harvesting the available energy on cold days)
- Providing protection from people looking in from the outside
- Protection against intruders.

With the new Blind/Roller Shutter Actuators JRA/S, the complex requirements on a sustainable and energy efficient automatic sun protection control can be implemented in offices, residential and functional buildings via ABB i-bus® KNX.

The Blind/Roller Shutter Actuators are ideal for the control of drives in the area of sun protection:

- Blinds, exterior blinds, slat blinds and panel curtains
- Roller shutters, roller blinds, screens, vertical blinds
- Awnings, pleated blinds, pleated curtains, etc.



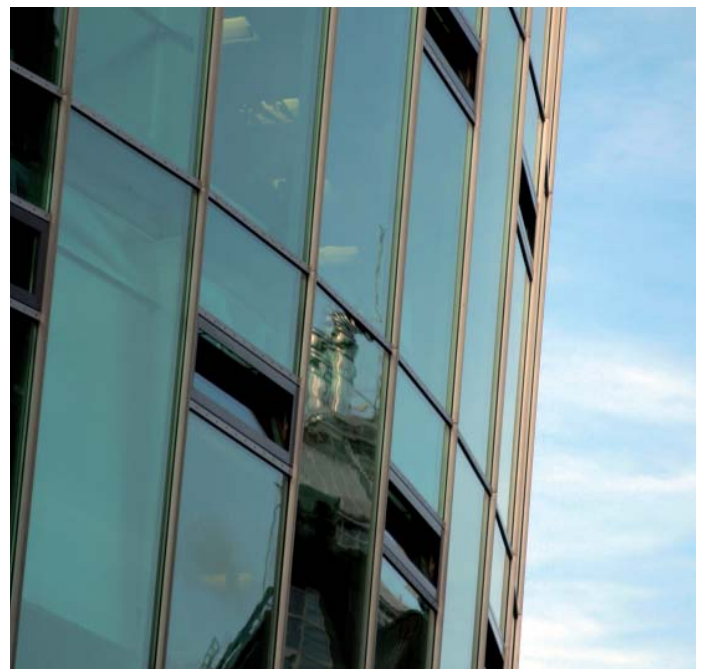
Optimum room air quality via automatic ventilation

The demands for the reduction of energy consumption often results in poor ventilation in today's heavily insulated buildings. The quality of the room air does not comply with the desired and required level.

Natural ventilation is often an effective and efficient method for exchanging the "used" room air and improving the air quality in the room. If the air quality in the room is monitored with sensors (temperature, humidity, CO₂ concentration), the ventilation flaps can be opened automatically and in good time ensuring that the air quality is kept in a comfortable range.

Blind/Roller Shutter Actuators are ideal for control of ventilation elements such as

- Ventilation flaps
- Roof hatches, skylights
- Windows, doors and gates



Blind/Roller Shutter Actuators Innovations

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Automatic travel detection

Travel times for the connected drives can be easily determined during operation with the automatic travel detection feature. It saves time during setup. Furthermore, compensation of age and weather-related length changes to blinds or roller shutters is assured. It facilitates precise positioning of the blinds/shutter when using sun position-dependent control.

Diagnostics

Enhanced diagnostic messages can be issued with the new Blind/Roller Shutter Actuators. They are particularly useful during setup or in the event of faults. It is possible, for example, to detect and signal if the power supply to a drive is interrupted.

Copy and exchange

This function allows parameter settings of an output to be copied or exchanged with other freely selectable outputs. This is possible within a device or in conjunction with several devices. Copy and exchange is useful particularly on projects, where all drives of a facade are controlled identically. It shortens the setup process and reduces the possible sources of error with parameterization.

Integration in the room temperature control

The intelligent and networked blind and roller shutter control plays an important role in the energy efficient usage of a building. The level of sunlight in the room and heating up due to the sun's energy can be controlled in conjunction with the room climate control. The new software function "overheat control" prevents unintentional overheating of a room. The blinds are closed in good time. The shutter control can be actively involved in the room temperature control – a requirement for implementing high-efficient buildings compliant to EN 15232.



ABB i-bus® KNX Shutters and Sun Protection

The following table provides an overview of technical data and software functions for the shutter actuator range:

	STANDARD				SMI	
	JRA/S X.230.5.1	JRA/S 4.24.5.1	JRA/S X.230.2.1	JRA/S X.230.1.1	SJR/S 4.24.2.1	JA/S 4.SMI.1M
General						
Number of outputs	X = 2, 4, 8	4	X = 2, 4, 8	X = 2, 4, 8	4 x 4 SMI LoVo (broadcast)	4 x 4 SMI (broadcast)
Nominal voltage	230 V AC	24 V DC	230 V AC	230 V AC	LoVo 24 V	230 V
Auxiliary voltage 230 V	-	-	-	-	■	■
Type of installation	MDRC	MDRC	MDRC	MDRC	MDRC	MDRC
Module width (space unit)	2-fold: 4 4-fold: 4 8-fold: 8	4	2-fold: 4 4-fold: 4 8-fold: 8	2-fold: 4 4-fold: 4 8-fold: 8	4	4
Manual functions						
Disable/enable man. operation and status man. operation	■	■	■	-	■	■
Operating modes						
Control with slat adjustment (blinds, etc.)	■	■	■	■	■	■
Control without slat adjustment (roller shutters, awnings, etc.)	■	■	■	■	■	■
Ventilation flaps, switch mode including stair case lighting function	■	■	■	■	-	-
General device functions						
Automatic travel detection	■	■	-	-	-	-
Time-delayed switching of drives	■	■	■	■	■	■
Sending and switching delay time	■	■	■	■	-	-
In operation function	■	■	■	■	-	-
Request status values	■	■	■	■	-	-
Extended setting options for drives and blind/shutter	■	■	■	■	■	■
Direct functions						
UP/DOWN, STOP/Slat adjustment	■	■	■	■	■	■
Position height/slat 0...255	■	■	■	■	■	■
Preset Move to position/Set position	■	■	■	■	■	■
Enable limitation	■	■	■	■	■	■
Trigger travel detection	■	■	-	-	-	-
Trigger reference movement	■	■	■	■	-	-
8 bit scene	■	■	■	■	■	■
Safety functions						
Wind, Rain, Frost alarm	■	■	■	■	■	■
Block	■	■	■	■	■	■
Forced operation (1-Bit and 2-Bit)	■	■	■	■	■	■
Automatic functions						
Activation of automatic control	■	■	■	■	■	■
Position height/slat on sun	■	■	■	■	■	■
Presence	■	■	■	■	■	■
Heating/Cooling	■	■	■	■	■	■
Overheat control	■	■	■	■	-	-
Enable/block automatic	■	■	■	■	■	■
Enable/block direct control	■	■	■	■	■	■
Status messages						
Status height/slat 0...255	■	■	■	■	■	■
Status upper/lower end position	■	■	■	■	■	■
Status of operation	■	■	■	■	■	■
Status automatic control	■	■	■	■	■	■
Status information (2 byte)	■	■	■	■	-	-
Status SMI	-	-	-	-	■	■
Status of positions/limit position	-	-	-	-	■	■
Status auxiliary voltage	-	-	-	-	■	■
SMI diagnostic byte	-	-	-	-	■	■
Sonstiges						
Extended settings for drives and blinds/shutters	■	■	■	■	-	-
Total turning of slats after move down command	■	■	■	■	-	-
Position of slat after arriving on lower end position	■	■	■	■	■	■
Control and diagnosis via i-bus Tool	■	■	■	■	-	-

ABB i-bus® KNX Shutters and Sun Protection

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JRA/S 8.230.5.1

Blind/Roller Shutter Actuator with Travel Detection and Manual Operation, 230 V AC, MDRC

For the control of independent 230 V AC drives via ABB i-bus® KNX. The devices are designed for positioning blinds, roller shutters, awnings and other shading products as well as for controlling doors, windows and ventilation flaps. Additional auxiliary voltage is not needed. The travel times of the drive are detected automatically via current detection. To protect the drives, the output contacts are electromechanically locked against each other. Push buttons are located at the front of the device to control the outputs e.g. during commissioning. The current status of the output is displayed via LEDs.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
2-fold	4	JRA/S 2.230.5.1	2CDG110124R0011		1	0.21
4-fold	4	JRA/S 4.230.5.1	2CDG110125R0011		1	0.25
8-fold	8	JRA/S 8.230.5.1	2CDG110126R0011		1	0.46



JRA/S 4.24.5.1

Blind/Roller Shutter Actuator with Travel Detection and Manual Operation, 4-fold, 24 V DC, MDRC

For the control of up to 4 independent 24 V DC drives via ABB i-bus® KNX. The device is designed for positioning blinds, roller shutters, awnings and other shading products as well as for controlling doors, windows and ventilation flaps. Additional auxiliary voltage is not needed. The travel times of the drive are detected automatically via current detection. Push buttons are located at the front of the device to control the outputs e.g. during commissioning. The current status of the output is displayed via LEDs.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
4-fold	4	JRA/S 4.24.5.1	2CDG110128R0011		1	0.21



JRA/S 2.230.2.1

Blind/Roller Shutter Actuator with Manual Operation, 230 V AC, MDRC

For the control of independent 230 V AC drives via ABB i-bus® KNX. The devices are designed for positioning blinds, roller shutters, awnings and other shading products as well as for controlling doors, windows and ventilation flaps. Additional auxiliary voltage is not needed. To protect the drives, the output contacts are electromechanically locked against each other. Push buttons are located at the front of the device to control the outputs e.g. during commissioning. The current status of the output is displayed via LEDs.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
2-fold	4	JRA/S 2.230.2.1	2CDG110120R0011		1	0.21
4-fold	4	JRA/S 4.230.2.1	2CDG110121R0011		1	0.25
8-fold	8	JRA/S 8.230.2.1	2CDG110122R0011		1	0.46

ABB i-bus® KNX Shutters and Sun Protection



JRA/S 2.230.1.1

Blind/Roller Shutter Actuator, 230 V AC, MDRC

For the control of independent 230 V AC drives via ABB i-bus® KNX. The devices are designed for positioning blinds, roller shutters, awnings and other shading products as well as for controlling doors, windows and ventilation flaps. Additional auxiliary voltage is not needed. To protect the drives, the output contacts are electromechanically locked against each other.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
2-fold	4	JRA/S 2.230.1.1	2CDG110129R0011		1	0.21
4-fold	4	JRA/S 4.230.1.1	2CDG110130R0011		1	0.25
8-fold	8	JRA/S 8.230.1.1	2CDG110131R0011		1	0.46



JA/S 4.SMI.1M

SMI Shutter Actuator with Manual Operation, 4-fold, MDRC

It controls four independent groups (broadcast) with up to four SMI (Standard Motor Interface) drives (230 V) for positioning blinds, roller shutters, awnings and other shading products. Status signals (motor fault, direction of movement) can also be sent from the SMI drive on the bus. Push buttons are located at the front of the device to control the outputs e.g. during commissioning. The current status of the output is displayed via LEDs.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	JA/S 4.SMI.1M	2CDG110028R0011		1	0.25



SJR/S 4.24.2.1

SMI Blind/Roller Shutter Actuator, 4-fold, LoVo, MDRC

It controls four independent groups (broadcast) with up to four SMI (Standard Motor Interface) LoVo drives for positioning blinds, roller shutters, awnings and other shading products. Status signals (motor fault, direction of movement) can also be sent from the SMI drive on the bus. Push buttons are located at the front of the device to control the outputs e.g. during commissioning. The current status of the output is displayed via LEDs.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
LoVo	4	SJR/S4.24.2.1	2CDG110143R0011		1	0.25

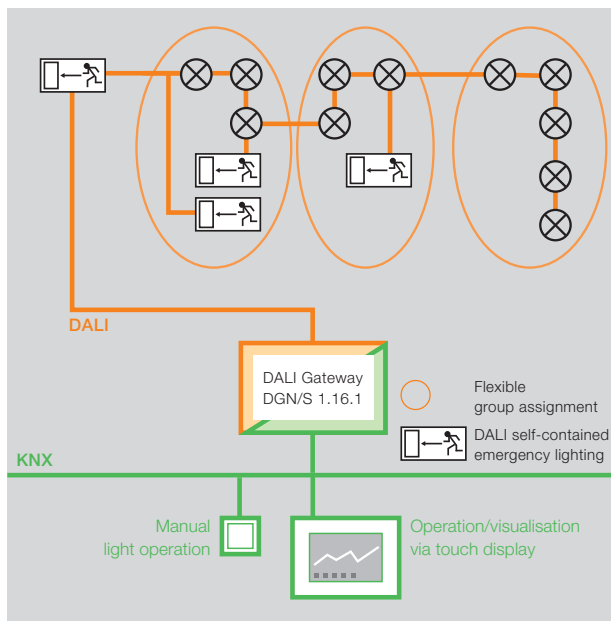


JSB/S 1.1

Shutter Control Unit, MDRC

Controls shutter and blind actuators according to the position of the sun. The shutter control unit contains the functions of anti-glare protection and daylight redirection for up to 4 facades. Automatic shading can be implemented for every building and climatic control can be supported by the comprehensive range of parameter settings in the ETS.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	2	JSB/S 1.1	GHQ6310084R0111		1	0.12



DALI Gateway DGN/S 1.16.1 Lighting control and emergency lighting functions combined



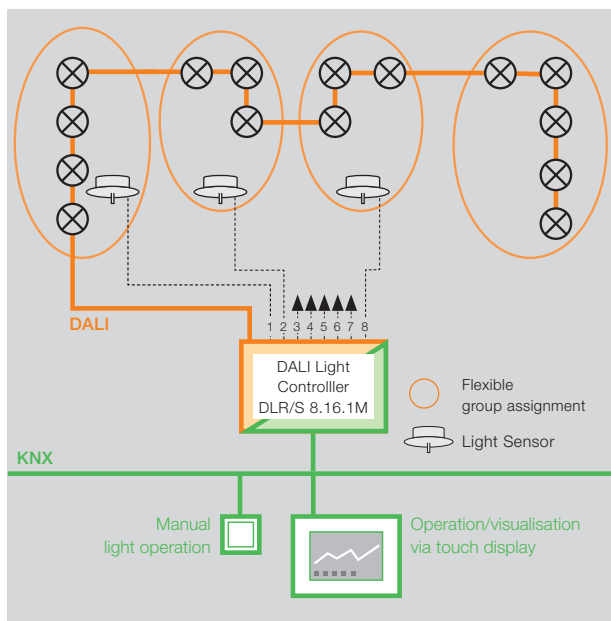
Control via 16 lighting groups
Conventional lighting and individual emergency lighting battery
combined

The new ABB i-bus® KNX DALI Gateway with emergency lighting function combines modern flexible lighting control in intelligent building control systems with DALI emergency lighting.

Up to 64 DALI devices can be flexibly installed via 16 lighting groups and controlled and monitored by KNX.

Normal DALI lighting and DALI emergency lighting can be combined as required.

Furthermore, the DALI gateway with emergency lighting function supports the DALI standard EN 62386-202 that specifies DALI emergency lighting with individual batteries.



DALI Light Controller DLR/S 8.16.1M Energy through constant lighting control



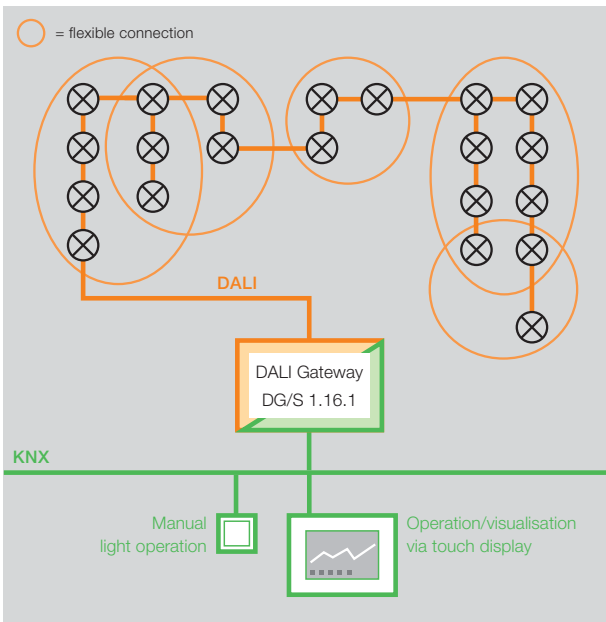
Control via 16 lighting groups. Up to 8 lighting groups can be controlled with 8 light sensors. Master-slave, staircase light and Scene mode round off the functions.

The new DALI Light Controller DLR/A 4.8.1.1 is a surface mounting device for switching and dimming of 8 independent lighting groups. A maximum of 64 DALI devices can be connected. The device can be used for 4 - fold constant lighting control in connection with 4 Light Sensors LF/U 2.1. Furthermore staircase lighting and master / slave functions are provided. Fault feedback messages, e.g. concerning ballast or lamp failures, can be programmed and activated via KNX. The compact surface-mounted housing allows the decentralized installation in the underfloor or in false ceilings – optimal for the use with Room Controller RC/A.

DALI Light Controller DLR/A 4.8.1.1 Decentralized Constant Lighting Control

NEW

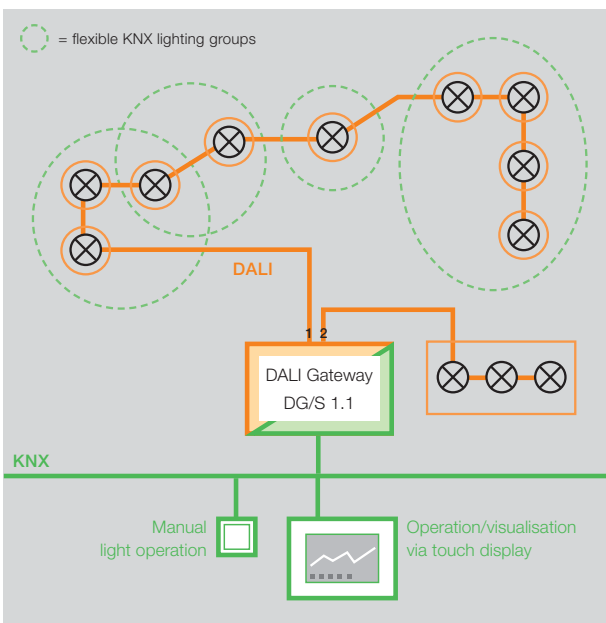




DALI Gateway DG/S 1.16.1 Flexibility in a good light



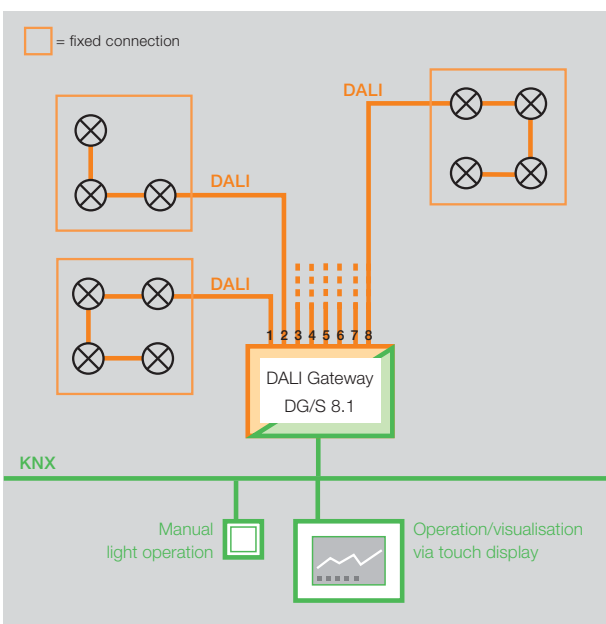
Large lighting groups can be controlled via flexible DALI groups.
1 x 64 DALI devices in 16 lighting groups.
Overlapping groups are possible.



DALI Gateway DG/S 1.1 Individual lighting control



Lighting groups are formed in KNX. Individual lamps are indicated on the KNX. 1 x 64 DALI devices in unlimited lighting groups.



DALI Gateway DG/S 8.1 The proven technology



Lighting groups are formed via "rigid" hardware wiring.
Fast commissioning as no addressing is necessary.
No readdressing when a ballast is exchanged. 8 x 16 DALI devices.

ABB i-bus® KNX Illumination and Light Sensors

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DG/S 8.1

DALI Gateway, 8-fold, MDRC

For controlling up to 128 DALI devices. There are 8 separate, independent DALI outputs/channels available. Up to 16 DALI devices can be connected per channel. The DALI power supply is integrated in the gateway. The functions of switching, dimming, set values and fault indication for lamps and electronic ballasts are available for each output. It is possible to set the lamp burn-in time and 16 light scenes. Commissioning is simplified as no addressing or commissioning of the DALI devices is necessary.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	6	DG/S 8.1	2CDG110025R0011		1	0.31



DG/S 1.1

DALI Gateway, 1-fold, MDRC

The device is used to interface between DALI and KNX installations and incorporates the DALI power supply. Up to 2 x 64 DALI devices can be connected. 64 devices can be individually switched, dimmed and controlled with a brightness value. The second 64 devices operate in broadcast mode. The DALI functions such as scene control or fault indication can be programmed and activated via the KNX.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	DG/S 1.1	2CDG110026R0011		1	0.22



DG/S 1.16.1

DALI Gateway, 1-fold, Group Control, MDRC

The device is used to interface between DALI and KNX installations and incorporates the DALI power supply. Up to 16 DALI devices can be assigned to 16 lighting groups. Each group can be switched, dimmed and controlled with a brightness value. Scenes and sequencer functions are available for lighting effects. Fault feedback messages can be programmed and activated via KNX.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	DG/S 1.16.1	2CDG110103R0011		1	0.22



DGN/S 1.16.1

DALI-Gateway with Emergency Lighting Control, 1-fold, Group Control, MDRC **NEW**

For controlling DALI devices via the ABB i-bus®. Up to 64 DALI Slaves can be connected. Self contained emergency converter acc. EN 62386-202 will be supported. Control and status feedback is carried out via KNX with 16 lighting groups. By means of KNX and emergency converter different emergency tests (e.g. function and duration test) can be triggered. Feedback is sent. Slave-, staircase- and sequencer- function are integrated. For an individual change of the DALI address or group assignment a separate DGS-Software-Tool is available.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	DGN/S 1.16.1	2CDG110142R0011		1	0.22

ABB i-bus® KNX Illumination and Light Sensors



DLR/S 8.16.1M

DALI Light Controller, 8-fold, MDRC

For switching and dimming of 16 independent lighting groups. A maximum of 64 DALI devices can be connected. The device can be used for 8-fold constant lighting control in connection with eight Light Sensors LF/U 2.1. Fault feedback messages can be programmed and activated via KNX. With comfortable manual operation and status display.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	6	DLR/S 8.16.1M	2CDG110101R0011		1	0.26



DLR/A 4.8.1.1

DALI Light Controller, 4-fold, SM

NEW

Surface mounting device for switching and dimming of 16 independent groups of luminaires. Up to 64 DALI participants can be connected to one DALI control line. When combined with the light sensor LF/U 2.1 the device can be used as a 8-fold light controller for constant light control. Additionally a staircase and master/slave function is integrated. A great number of status feedback e.g. lamp and ballast fault can be transferred from DALI to KNX. With this functions the DALI light controller is a key factor in every energy efficient building automation. With his surface mounting housing it is possible to insert the device central in false ceiling or underfloor installation.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	DLR/A 4.8.1.1 *	2CDG110172R0011		1	0.66



DSA/S 2.16.1

DALI Switch Actuator, 2-fold, 16 AX, C-load, MDRC

Uses floating contacts (N.O.) to switch 2 independent electrical loads. The devices are especially suited for switching resistive, inductive or capacitive loads with high surge currents. The device features a DALI interface to IEC 60929. The control is implemented via the DALI control signal. Both channels operate as two independent DALI devices.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	DSA/S 2.16.1	2CDG110009R0011		1	

ABB i-bus® KNX Illumination and Light Sensors

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LR/S 4.16.1

Light Controller, 16 A, MDRC

The device enables the switching and dimming of 2 or 4 independent lighting circuits in conjunction with electronic ballasts. In combination with the Light Sensor LF/U 2.1, the device can be used for constant lighting control. 2 or 4 light sensors can be connected to the controller for precise detection of the lighting conditions.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
2-fold	4	LR/S 2.16.1	2CDG110087R0011		1	0.25
4-fold	6	LR/S 4.16.1	2CDG110088R0011		1	0.40



LF/U 2.1

Light Sensor, FM

Used for implementing constant lighting control applications in conjunction with light controllers LR/S, LR/M, DLR/S 8.16.1M or DLR/A 4.8.1.1. The scope of delivery includes different optical rods, the connection terminals and the cover for discrete fitting in a room.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	LF/U 2.1	2CDG110089R0011		1	0.07



SD/S x.16.1

Switch/Dim Actuator, 16 A, MDRC

Used for switching and dimming of 2, 4 or 8 independent groups of luminaries with electronic ballasts with 1 – 10 V control interfaces. On each channel the power supply of the ballasts is switched by a floating load relay (16 A – AC1). Every output can be operated manually and features display of the switching state. The device can assume a range of applications thanks to the programming options. The switching load is identical to the SA/S x.16.2.1 range (see capital 6).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
2-fold	4	SD/S 2.16.1	2CDG110079R0011		1	0.21
4-fold	6	SD/S 4.16.1	2CDG110080R0011		1	0.32
8-fold	8	SD/S 8.16.1	2CDG110081R0011		1	0.56



UD/S 2.300.2

Universal Dim Actuator, 2-fold, 300 VA, MDRC

For switching and dimming of incandescent lamps, 230 V halogen lamps or low-voltage halogen lamps which are powered by wound or electronic transformers (automatic load detection). Output power 2 x 300 VA or 1 x 500 VA up to 45°C ambient temperature at a minimum load of just 2 W. Both outputs are independent of one another and can be supplied by different phases. Comprehensive application program with scene and time functions.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
2-fold	4	UD/S 2.300.2	2CDG110074R0011		1	0.24

ABB i-bus® KNX Illumination and Light Sensors



6197/13-101-500

Universal Dim Actuator, MDRC

NEW

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Multi-channel universal dimming actuator for control of incandescent lamps, 230 V halogen lamps, lowvoltage halogen lamps with conventional or electronic transformers and dimmable energy-efficient lamps. Parallel connection of channels to increase load capacity via wire jumpers possible. Status/state indication of the outputs via LED. Local operation even without bus voltage or in non-programmed state possible.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
4-fold, 210 VA	8	6197/12-101-500	6197-0-0036		1	0.42
4-fold, 315 VA	8	6197/13-101-500	6197-0-0037		1	0.42
6-fold, 315 VA	12	6197/14-101-500	6197-0-0038		1	0.91
4-fold, 600 VA	12	6197/15-101-500	6197-0-0039		1	0.91
1-fold, 1.260 VA	12	6197/52-101-500	6197-0-0040		1	
1-fold, 2.400 VA	12	6197/53-101-500	6197-0-0041		1	



HS/S 3.1

Brightness Sensor, 3-channel, MDRC

To be Discontinued

For switching lighting dependent on the daylight intensity. The device can be used as a twilight switch (1...10 lux) or a light level switch (100...20.000 lux) to switch on the lighting only with low levels of external brightness. The light sensor is supplied with the device.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	HS/S 3.1	GHQ6050063R0001		1	0.2

Interface for Outside Light Sensor, MDRC

NEW

The device is used for the connection and evaluation of up to 3 Outside Light Sensors LFO/A 1.1. The Outside Light Sensors can be analysed individually or combined. Amongst others 10 logical switching channels for the evaluation of threshold values are provided. Threshold values can be adjusted directly on the device. The device can be used as a twilight switch (1 ... 100 lux) or as a light value switch (100 ... 20.000 lux). One Outside Light Sensor LFO/A 1.1 is supplied with the device.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	HS/S 4.2.1	2CDG120044R0011		1	

Outside Light Sensor

NEW

Outside Light Sensor for the connection with the Interface HS/S 4.2.1.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	LFO/A 1.1	2CDG120045R0011		1	

ABB i-bus® KNX Illumination and Light Sensors

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6131/10-24-500

Presence Detector, FM

with intergrated bus coupling unit.

Standard version for switching illumination in conjunction with brightness and movement. With two switching channels and two constant brightness switching channels (control of switch actuators via adjusted brightness level). Detection zone (installation height = 2,5 m) circular Detection zone (installation height = 2,5 m) circular Ø 8 m. Detection angle: 360°. Brightness limit value: 1 – 1000 Lux. Mounting height: 2,5 m recommended. Protection class (device): IP 20.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpine white	–	6131/10-24-500	6132-0-0295		1	0.17
aluminium silver	–	6131/10-183-500	6132-0-0297		1	



6131/11-24-500

Presence Detector, DualLine, FM

with intergrated bus coupling unit.

DualLine version for switching illumination in conjunction with brightness and movement. With two switching channels and two channels for constant brightness control (control of dim-actuators via adjusted brightness level). With two HVAC channels. With logic functions and IR receiver. Detection zone (installation height = 2,5 m) circular Detection zone (installation height = 2,5 m) circular Ø 8 m. Detection angle: 360°. Brightness limit value: 1 – 1000 Lux. Mounting height: 2,5 m recommended. Protection class (device): IP 20.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpine white	–	6131/11-24-500	6132-0-0299		1	0.17
aluminium silver	–	6131/11-183-500	6132-0-0301		1	



6885-500

Surface Mounting Base for Presence Detector

Surface mounting base for for installation of flush-mounted inserts in combination with presence detector 6131/10 and 6131/11.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpine white	–	6885-500	6899-0-0282		1	0.15
aluminium silver	–	6885-183-500	6899-0-0297		1	



6868-204-500

Corner Adapter for Busch Watchdog Sensor

Surface mounting adapter for Busch-Watchdog® Professional 220 KNX for installation on corners of buildings.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpine white	–	6868-204-500	6800-0-2562		1	
aluminium silver	–	6868-208-500	6800-0-2563		1	

ABB i-bus® KNX Illumination and Light Sensors



6122/01



6122/02

Movement detector with up to 4 channels.
For ABB i-bus® KNX 6120/12-101, 6120/13.

Busch-Watchdog 180 flush-mounted standard sensor

Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.)

Busch-Watchdog 180 flush-mounted comfort sensor II

Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.)

Pack unit pc.	Weight 1 pc. kg	Description	Type	Order code	Price 1 pc. €	Type	Order code	Price 1 pc. €
		future® linear						
1		anthracite	6122/01-81-500	6132-0-0272		6122/02-81-500	6132-0-0283	
1		savanne/ivory	6122/01-82-500	6132-0-0273		6122/02-82-500	6132-0-0284	
1		aluminium silver	6122/01-83-500	6132-0-0274		6122/02-83-500	6132-0-0285	
1		davos/studio white	6122/01-84-500	6132-0-0250		6122/02-84-500	6132-0-0263	
1		studio white, matt	6122/01-884-500	6132-0-0281		6122/02-884-500	6132-0-0292	
1		black, matt	6122/01-885-500	6132-0-0282		6122/02-885-500	6132-0-0293	
		solo®						
1		savanne/ivory	6122/01-82-500	6132-0-0273		6122/02-82-500	6132-0-0284	
1		davos/studio white	6122/01-84-500	6132-0-0250		6122/02-84-500	6132-0-0263	
1		toscana/purple	6122/01-87-500	6132-0-0276		6122/02-87-500	6132-0-0287	
1		meteor/grey metallic	6122/01-803-500	6132-0-0279		6122/02-803-500	6132-0-0290	
1		sahara/yellow	6122/01-815-500	6132-0-0280		6122/02-815-500	6132-0-0291	
		carat						
1		anthracite	6122/01-81-500	6132-0-0272		6122/02-81-500	6132-0-0283	
1		savanne/ivory	6122/01-82-500	6132-0-0273		6122/02-82-500	6132-0-0284	
1		davos/studio white	6122/01-84-500	6132-0-0250		6122/02-84-500	6132-0-0263	
		pure stainless steel						
1		pure stainless steel	6122/01-866-500	6132-0-0278		6122/02-866-500	6132-0-0289	
		Busch-axcent®						
1		davos/studio white	6122/01-84-500	6132-0-0250		6122/02-84-500	6132-0-0263	
1		chalet-white	6122/01-896-500	6132-0-0322		6122/02-896-500	6132-0-0324	

ABB i-bus® KNX Illumination and Light Sensors

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6179/01-204-500

Busch-Watchdog 220 MasterLINE KNX

With 2 movement channels. With 1 twilight channel with 3 switching thresholds. No remote control possible via IR remote control KNX. With integrated KNX bus coupler. No additional power supply necessary. Surveillance density: 92 sectors with 368 switching segments. Twilight sensor: approx. 1 – 1000 lux Switch-off delay: approx. 10 sec to 1092 min; Sensor angle: 220° Range: approx. 16 m.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
white	–	6179/01-204-500	6132-0-0313		1	
silver metallic	–	6179/01-208-500	6132-0-0314		1	



6179/02-204-500

Busch-Watchdog 220 MasterLINE KNX premium

With 4 movement channels. With 1 twilight / brightness channel with 3 switching thresholds. With 1 temperature channel with three switching thresholds. With 7-channel IR remote control. Remote control possible via IR remote control KNX 6179 (included in scope of delivery). With integrated KNX bus coupler. No additional power supply necessary. Surveillance density: 92 sectors with 368 switching segments. Twilight sensor: approx. 1 – 1000 lux; Brightness sensor: approx. 1 – 80 klux; Temperature sensor: approx. – 25 to + 55 °C; Switch-off delay: approx. 10 sec to 1092 min; Sensor angle: 220° Range: approx. 16 m.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
white	–	6179/02-204-500	6132-0-0317		1	
silver metallic	–	6179/02-208-500	6132-0-0318		1	



6179-500

IR Remote Control KNX

For Busch-Watchdog 220 MasterLINE KNX premium. The functions can be freely assigned. With coded transmission signal. Power supply: lithium button cell battery. Type CR2025 (included in delivery). Battery life: typically 2 years. Rated voltage: 3 V, Protection class (Device): IP 40, Temperature range (Device): 0 °C – 45 °C, Dimensions: (L x W x D): 86 mm x 40 mm x 7 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
grey / anthracite	–	6179-500	6132-0-0320		1	

ABB i-bus® KNX Heating and Cooling



ES/S 4.1.2.1

Electronic Switch Actuator, 4-fold, 1 A, MDRC

Controls thermoelectric valve drives (e.g. TSA/K) in heating and cooling systems. Each output (24...230 V AC/DC) is protected against short-circuit and overload. With manual operation and status display for each output.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
4-fold	4	ES/S 4.1.2.1	2CDG110058R0011		1	0.25
8-fold	8	ES/S 8.1.2.1 NEW	2CDG110059R0011		1	0.38



ER/U 1.1

Electronic Relay, 1-fold, FM

The device combination with the Universal Interface US/U and a room thermostat noiselessly controls the heating system and chilled ceiling temperature via thermo-electric valve drives e.g. TSA/K, 24 V...230 V AC/DC).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	ER/U 1.1	GHQ6310044R0111		1	0.08
2-fold	-	US/U 2.2	GHQ6310074R0111		1	0.06
4-fold	-	US/U 4.2	GHQ6310070R0111		1	0.06



VAA/S 6.230.2.1

Valve Drive Actuator, 230 V, MDRC

Controls thermoelectric valve drives (e.g. TSA/K) in heating or cooling systems. Each three outputs are protected against short-circuit and overload. With manual operation and status display.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
6-fold	4	VAA/S 6.230.2.1	2CDG110116R0011		1	0.17
12-fold	8	VAA/S 12.230.2.1	2CDG110117R0011		1	0.3



VAA/A 6.24.1

Valve Drive Actuator, 6-fold, 24 V, SM

In conjunction with the thermostat it controls up to 13 thermoelectric valve drives (24 V), max. 4 per channel. The device is suitable for the installation in heating circuit distribution systems where the application of a triac ensures noiseless switching of the drives. Mains plug on the transformer (230 V) for ease of installation.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	VAA/A 6.24.1	2CDG120032R0011		1	1.8

ABB i-bus® KNX Heating and Cooling

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LFA/S 2.1

Blower / Fan Coil Actuator, MDRC

Developed especially for the application of fans and ventilators on the KNX. They can activate 3 – 5 ventilation levels and 2 thermo-electric valve drives directly or via ES/S. Combined with a room thermostat they offer a cost effective solution for HVAC applications.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1-fold	2	LFA/S 1.1	2CDG110077R0011		1	0.16
2-fold	4	LFA/S 2.1	2CDG110078R0011		1	0.26



6138/11-84-500

Room Thermostat Fan Coil with Display, SM

Sends control values for the room to the Fan Coil Actuators or devices with the respective outputs (e.g. Room Master). The intuitive control operation allows each user to individually set the room temperature and the fan speed. The large LC display can display the actual and target temperatures, the current operating mode as well as the fan speeds. **With integrated Bus Coupler.**

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpine white	-	6138/11-84-500	6138-0-0003		1	0.092
aluminium silver	-	6138/11-83-500	6138-0-0005		1	0.092



FCA/S 1.1M

Fan Coil Actuator, MDRC

For the control of typical blower convectors via two electronic outputs for thermoelectric or motor-driven valve drives (FCA/S 1.1M) or via two analogue outputs for 0...10 V valve drives (FCA/S 1.2.2.1). Furthermore 3 outputs for individual fan speeds are provided. An additional load output switches an additional load (up to 16 A), such as auxiliary heating. A window contact and a condensed water signal can be read via two binary inputs and transferred on the KNX. The easy to understand manual operation enables quick commissioning.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	FCA/S 1.1M	2CDG110084R0011		1	0.12
	6	FCA/S 1.2.2.1	2CDG110141R0011		1	

ABB i-bus® KNX Heating and Cooling



FC/S 1.1

Fan Coil Controller, MDRC

It controls motor-driven and thermoelectric valve drives as well as multi-speed fans. Control without further additional components can be undertaken in combination with the optional Temperature Sensor TS/K. There are two binary inputs available for 24 V AC signal contacts for window contact or dew point signals. A 230 V power supply is required.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	6	FC/S 1.1	2CDG120001R0011		1	0.5
Temperature Sensor for FC/S 1.1	-	TS/K 1.1	2CDG120002R0011		1	0.055



LGS/A 1.1

Air Quality Sensor, SM

Accurately measures the CO₂ concentration, humidity and temperature in a room. Three independent thresholds can be set for the CO₂ concentration and the relative humidity in addition to a threshold for the temperature. Exceeding or underrunning the thresholds can trigger a response. Disable object for every threshold. Measured variables can be transmitted directly on the bus. Communication object "Ventilation" is used for RPM control or as a position indicator for the ventilation flaps. Maintenance free sensor. The sensor is powered via the bus. **With integrated Bus Coupler.**

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	LGS/A 1.1	2CDG120038R0011		1	0.136



ST/K 1.1

Electromotor Valve Drive

The drive is a proportional valve drive for controlling heating valves and is mounted on thermostat valve bases. Valve Adapters VA10, VA78 for conventional valves are supplied. The control is carried out via a continuous KNX room thermostat. The actual valve position is indicated by 5 LEDs. The valve drive has two binary inputs for a presence contact and/or window contact and for further signal indication.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	ST/K 1.1	2CDG120004R0011		1	0.32

ABB i-bus® KNX Heating and Cooling

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TSA/K 230.1

Thermoelectric Valve Drives

For opening and closing valves in heating, ventilation and air-conditioning systems. Both variants (230 V and 24 V) feature a plug-in connection cable (1 m) and a splash-proof housing. The mounting on the valve is easily implemented using the Valve Adapter VA/Z xx.1.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
230 V	-	TSA/K 230.1	2CDG120007R0011		1	0.16
24 V	-	TSA/K 24.1	2CDG120008R0011		1	0.16
Valve Adapter for valves from Dumser, Chronatherm, Vescal, KaMo	-	VA/Z 10.1	2CDG120009R0011		1	0.06
Valve Adapter for valves from Honeywell, Reich, Cazzaniga, Landis & Gyr, MNG	-	VA/Z 50.1	2CDG120010R0011		1	0.05
Valve Adapter for valves from Danfoss RA	-	VA/Z 78.1	2CDG120011R0011		1	0.03
Valve Adapter for valves from Heimeier, Herb, Onda, Schlösser (ab 93), Oventrop	-	VA/Z 80.1	2CDG120012R0011		1	0.06

ABB i-bus® KNX Heating and Cooling



6124/01



6128/01

<p>suitable for KNX bus coupler 6120/12-101-500 and 6120/13-500. For heating and cooling (PI, PWM or 2-point). Constant room temperature controller for fan-coil applications (up to 5-speed level ventilation actuators in 2- and 4-pipe systems) and conventional heating and cooling systems. With manual and automatic adjustment of fan levels.</p>	<p>Room Thermostat with Display, FM</p> <p>Switch contacts left/right to adjust set-points and operating mode manually. Two freely programmable RGB LEDs per rocker. With RGB colour code concept or red/green/OFF-operation. LCD displaying operation mode, temperature, time and date. With labeling field. Transparent labeling sheet with standard symbols included in delivery.</p>	<p>Room Thermostat with Display and 2/4-fold Switch Sensor, FM</p> <p>Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. Two freely programmable RGB LEDs per rocker. With RGB colour code concept or red/green/OFF-operation. LCD displaying operation mode, temperature, time and date. With labeling field. Transparent labeling sheet with standard symbols included in delivery.</p>
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Pack unit pc.	Weight 1 pc. kg	Description	Type	Order code	Price 1 pc. €	Type	Order code	Price 1 pc. €
		future® linear						
1		anthracite	6124/01-81-500	6134-0-0295		6128/01-81-500	6134-0-0284	
1		savanne/ivory	6124/01-82-500	6134-0-0274		6128/01-82-500	6134-0-0285	
1		aluminium silver	6124/01-83-500	6134-0-0275		6128/01-83-500	6134-0-0286	
1		davos/studio white	6124/01-84-500	6134-0-0248		6128/01-84-500	6134-0-0261	
1		studio white, matt	6124/01-884-500	6134-0-0282		6128/01-884-500	6134-0-0293	
1		black, matt	6124/01-885-500	6134-0-0283		6128/01-885-500	6134-0-0294	
		solo®						
1		savanne/ivory	6124/01-82-500	6134-0-0274		6128/01-82-500	6134-0-0285	
1		davos/studio white	6124/01-84-500	6134-0-0248		6128/01-84-500	6134-0-0261	
1		toscana/purple	6124/01-87-500	6134-0-0277		6128/01-87-500	6134-0-0288	
1		meteor/grey metallic	6124/01-803-500	6134-0-0280		6128/01-803-500	6134-0-0291	
1		sahara/yellow	6124/01-815-500	6134-0-0281		6128/01-815-500	6134-0-0292	
		carat						
1		anthracite	6124/01-81-500	6134-0-0295		6128/01-81-500	6134-0-0284	
1		savanne/ivory	6124/01-82-500	6134-0-0274		6128/01-82-500	6134-0-0285	
1		davos/studio white	6124/01-84-500	6134-0-0248		6128/01-84-500	6134-0-0261	
		pure stainless steel						
1		pure stainless steel	6124/01-866-500	6134-0-0279		6128/01-866-500	6134-0-0290	
		Busch-axcent®						
1		davos/studio white	6124/01-84-500	6134-0-0248		6128/01-84-500	6134-0-0261	
1		chalet-white	6124/01-896-500	6134-0-0304		6128/01-896-500	6134-0-0306	

ABB i-bus® KNX Heating and Cooling

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6320/38-24G-500

Busch-triton® Control Element with Room Thermostat and 3/6-fold Switch Sensor, FM

With intergrated bus coupling unit. With IR interface for Busch-remote controllers. For heating and cooling (PI, PWM or 2-point). Constant room temperature controller for fan-coil applications (up to 5-speed level ventilation actuators in 2- and 4-pipe systems) and conventional heating and cooling systems. With manual and automatic adjustment of fan levels. Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). LCD displaying operation mode and temperature. With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	-	6320/38-20-500	6320-0-0022		1	
studio white,high gloss	-	6320/38-24G-500	6320-0-0024		1	
palladium	-	6320/38-260-500	6320-0-0030		1	
impuls						
champagne metallic	-	6320/38-79-500	6320-0-0026		1	
future® linear						
aluminium silver	-	6320/38-83-500	6320-0-0028		1	



6320/58-24G-500

Busch-triton® Control Element with Room Thermostat and 5/10-fold Switch Sensor, FM

With intergrated bus coupling unit. With IR interface for Busch-remote controllers. For heating and cooling (PI, PWM or 2-point). Constant room temperature controller for fan-coil applications (up to 5-speed level ventilation actuators in 2- and 4-pipe systems) and conventional heating and cooling systems. With manual and automatic adjustment of fan levels. Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). LCD displaying operation mode and temperature. With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	-	6320/58-20-500	6320-0-0042		1	
studio white,high gloss	-	6320/58-24G-500	6320-0-0044		1	
palladium	-	6320/58-260-500	6320-0-0050		1	
impuls						
champagne metallic	-	6320/58-79-500	6320-0-0046		1	
future® linear						
aluminium silver	-	6320/58-83-500	6320-0-0048		1	

ABB i-bus® KNX Heating and Cooling



6108/03-500

Room Temperature Controller, Commercial, FM

Room temperature controller without „local operation“. With intergrated bus coupling unit. For heating and cooling. Constant room temperature controller for fan-coil applications (up to 5-speed level ventilation actuators in 2- and 4-pipe systems) and conventional heating and cooling systems. Suitable for cover plates 2114-xxx or 6541-xxx but not suitable for cover plates like 6541-20, -21,-260 and -266.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6108/03-500	6134-0-0271		1	



6541-84

Cover Plate for Room Thermostat, Commercial

For room thermostat, commercial.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
future® linear						
anthracite	-	6541-81	6599-0-2882		1	
savanna/ivory	-	6541-82	6599-0-2832		1	
aluminium silver	-	6541-83	6599-0-2885		1	
davos/studio white	-	6541-84	6599-0-2835		1	
studio white, matt	-	6541-884	6599-0-2962		1	
black matt	-	6541-885	6599-0-2967		1	
solo®						
savanna/ivory	-	6541-82	6599-0-2832		1	
davos/studio white	-	6541-84	6599-0-2835		1	
toscana/purple	-	6541-87	6599-0-2844		1	
meteor/grey metallic	-	6541-803	6599-0-2940		1	
sahara/yellow	-	6541-815	6599-0-2936		1	
carat						
anthracite	-	6541-81	6599-0-2882		1	
savanna/ivory	-	6541-82	6599-0-2832		1	
davos/studio white	-	6541-84	6599-0-2835		1	
pure stainless steel						
pure stainless steel	-	6541-866	6599-0-2924		1	
Busch-axcent®						
davos/studio white	-	6541-84	6599-0-2835		1	
chalet-white	-	6541-896	6599-0-2998		1	

ABB i-bus® KNX Heating and Cooling

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6541-24

Cover Plate for Room Thermostat, Commercial

For room thermostat, commercial.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
ivory	-	6541-22G	6599-0-2795		1	
studio white, matt	-	6541-24	6599-0-1557		1	
studio white, high gloss	-	6541-24G	6599-0-2332		1	
impuls						
alpine white	-	6541-74	6599-0-2076		1	
champagne metallic	-	6541-79	6599-0-2142		1	



2114-212

Cover Plate for Room Thermostat, Commercial

For room thermostat, commercial.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
Busch-Duro 2000 SI						
white (SI-Series)	-	2114-212	6599-0-1193		1	
Reflex SI						
alpine white (SI-Series)	-	2114-214	6599-0-0195		1	

ABB i-bus® KNX

Control, Logic and Time



LM/S 1.1

Logic Module, MDRC

Used to solve a varied range of project-specific control tasks and can implement 3 functions simultaneously. The following functions are available for selection: logic gate, filter, time delay, multiplier, min/max value detector, temperature comparator, toggle values, threshold detection, format converter, scenes, increment/decrement values, staircase lighting.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit	Weight 1 pc. kg
	2	LM/S 1.1	GHQ6310080R0111		1	0.1



ABL/S 2.1

Application Unit, Logic, MDRC

Allows the compilation of complex logical functions by simply combining different logic elements and gates using a graphical user interface as an ETS plug-in and does not require additional software. 50 logical elements, 50 gates, 30 timer modules and 10 comparators are available.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit	Weight 1 pc. kg
	2	ABL/S 2.1	2CDG110073R0011		1	0.12



ABZ/S 2.1

Application Unit, Time, MDRC

It provides a yearly time clock program with 15 daily routines (800 switching events), a weekly schedule and allowance for 100 special days. Additionally, the unit can control up to 300 participants in 30 macro groups, that can be triggered using a single command. In this way, each time controlled switching event can cause a series of actions. The switching times can be modified with the free PZM software without using ETS. PZM Software and additional information on www.abb.com/knx.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit	Weight 1 pc. kg
	2	ABZ/S 2.1	2CDG110072R0011		1	0.12

ABB i-bus® KNX Control, Logic and Time

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Radio Time Switch , 8-channel, MDRC

NEW

The Radio Time Switch sends current time and date on the bus. The time can be optionally received via a DCF or GPS antenna. Furthermore the device can be used to easily adjust the time programs.

The device provides 8 channels. Every channel supplies an independent daily, time and/or yearly program. Additionally, special programs (e.g. for vacation or public holiday days) are possible.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	3	FW/S 8.2.1	2CDG120039R0011		1	

DCF Antenna for Radio Time Switch

NEW

For the connection to the Radio Time Switch FW/S 8.2.1. The time signal from the DCF 77 transmitter can be received within a radius of approx. 1000 km around Frankfurt.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	FAD/A 1.1	2CDG120040R0011		1	

GPS Antenna for Radio Time Switch

NEW

For the connection to the Radio Time Switch FW/S 8.2.1. The device receives time and date via GPS signal which is available worldwide.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	FAG/A 1.1	2CDG120041R0011		1	

Programming Set OBELISK top2 for Radio Time Switch

NEW

The programming set contains a CD ROM with the Obelisk top2 for the creation of switching programs for the Radio Time Switch FW/S 8.2.1, a memory card PK/E 2.1 for transferring switching programs to the Radio Time Switch and a USB programming adapter for the memory card.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	PS/E 2.1	2CDG120042R0011		1	

Memory Card OBELISK top2

NEW

The memory card can be used for transferring switching programs to Radio Time Switch.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	PK/E 2.1	2CDG120043R0011		1	

ABB i-bus® KNX

Visualisation, Display and Signalling



TG/S 3.2

Telephone Gateway, Analogue, MDRC

It sends configurable voice messages via the telephone network to up to 10 users. 100 objects are available in the ETS program as inputs and outputs. As well as voice messages, emails or SMS messages can be sent. If the device is called, states can be polled and commands executed. The device has an integrated web server which enables simple operation and parametrisation using a conventional browser.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	8	TG/S 3.2	2CDG110135R0011		1	0.3
Accessory Set contains a crossover cable (RJ45), a telephone cable (RJ11) and a TAE adapter for the telephone cable.	-	TG/Z 1.1	2CDG110119R0011		1	0.055



UK/S 32.2

Universal I/O Concentrator, 32-fold, MDRC

Used to connect push buttons or signal lamps, e.g. to an operating/display tableau. It has 32 channels which can be freely parameterised as inputs/outputs using the ETS software. The device requires an external 12 or 24 V DC auxiliary power supply, (e. g. NT/S 24.800).

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	UK/S 32.2	2CDG110071R0011		1	0.18



MT 701.2, WS
with T-RAHM, WS

Control and Display Tableau, LCD

For indication of switching status, fault reports and measurement values. Using the robust push buttons, electrical consumers can be manually switched, values can be set in addition to timer programs and light scenes. The alarms can also issue an acoustic warning. The FM wall box simplifies mounting.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
white	-	MT 701.2, WS	GHQ6050059R0005		1	1.16
silver	-	MT 701.2, SR	GHQ6050059R0006		1	1.24
Coverframe, white	-	T-RAHM, WS	GHQ6050059R0011		1	0.16
Coverframe, silver	-	T-RAHM, SR	GHQ6050059R0012		1	0.17
Wall box	-	UP-KAST 2	GHQ6050059R0014		1	0.44

ABB i-bus® KNX

Visualisation, Display and Signalling

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8136/09-811-500

Busch-ComfortTouch® 9"

NEW

Free programmable IP/KNX touch display can be used as a control, infotainment and entertainment centre for the whole house With a closed capacitive glass surface and a design strip made of stainless steel (brushed). With integrated camera and proximity sensor. Easy control using intuitive navigation concept. House control: switching, dimming, blinds, RTR, scene/sequences, timed controls Entertainment: Multimedia, remote control RC5 and B&O. Infotainment: IP telephony, RSS reader, intercom with picture, e-mail, voice and graphic memo, consumption data monitoring. Door communication: Indoor station for the ABB-Welcome system in combination with IP gateway 83341. Safety: video surveillance with IP cameras, alarm function, message function, presence simulation. Representation from individual floor plans, room images and operation pages. 23 cm (9") Touch-display with 800 x 480 pixel Compatible with ABB i-bus® KNX Maintenance via remote control over IP. Control with smartphones and tablets via the ComfortTouch App (Apple iOS /Google Android from Version 4).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
white glass	-	8136/09-811-500	8136-0-0024		1	
black	-	8136/09-825-500	8136-0-0026		1	



8136/12-811-500

Busch-ComfortTouch® 12.1"

NEW

Free programmable IP/KNX touch display can be used as a control, infotainment and entertainment centre for the whole house With a closed capacitive glass surface and a design strip made of stainless steel (brushed). With integrated camera and proximity sensor. Easy control using intuitive navigation concept. House control: switching, dimming, blinds, RTR, scene/sequences, timed controls Entertainment: Multimedia, remote control RC5 and B&O. Infotainment: IP telephony, RSS reader, intercom with picture, e-mail, voice and graphic memo, consumption data monitoring. Door communication: Indoor station for the ABB-Welcome system in combination with IP gateway 83341. Safety: video surveillance with IP cameras, alarm function, message function, presence simulation. Representation from individual floor plans, room images and operation pages. 31 cm (12.1") touchdisplay with 1280 x 800 pixel. Compatible with ABB i-bus® KNX Maintenance via remote control over IP. Control with smartphones and tablets via the ComfortTouch App (Apple iOS /Google Android from Version 4).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
white glass	-	8136/12-811-500	8136-0-0028		1	
black	-	8136/12-825-500	8136-0-0030		1	

ABB i-bus® KNX

Visualisation, Display and Signalling



6186/01 UP-500

Power adapter module ABB i-bus® KNX

NEW

Power adapter for the power supply of Comfort-Touch 8136/09-... and 8136/12-.... With integrated KNX bus coupler for the establishment of the local bus connection to the ABB i-bus® KNX. With integrated audio outputs (LineOut).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	6186/01 UP-500	6186-0-0023		1	



8136/01 UP-500

Flush-mounted installation box

NEW

For flush-mounted und hollow-wall installation of the Busch-ComfortTouch® 8136/09-..., 8136/12-... or the SMARTtouch. Windproof.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	8136/01 UP-500	8136-0-0032		1	



8136-500

Busch-ComfortTouch®

To be discontinued

Free programmable IP/KNX touch display as a spatially integrated control, infotainment and entertainment center. Simple to use with intuitive navigation concept. Can be combined with different design frames and design strips made of real material. Representation of individual floor layouts, living space graphics and operating pages. 22.86 cm (9") touch display with 800 x 480 pixels.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	8136-500	8136-0-0002		1	

ABB i-bus® KNX Visualisation, Display and Signalling

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6186 UP-500

Module ABB i-bus® KNX for Busch-ComfortTouch®

To be discontinued

For creation of the local bus connection terminal for the Busch ComfortPanel.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6186 UP-500	6186-0-0021		1	



8136/20-500

Design Frame for Busch-ComfortTouch®

To be discontinued

Made of real metal.

Dimensions (H x W x D): 200 mm x 300 mm x 14 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
glass, black	-	8136/20-500	8136-0-0004		1	



8136/23-500

Design Frame for Busch-ComfortTouch®

To be discontinued

Made of real metal.

Dimensions (H x W x D): 200 mm x 300 mm x 14 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
glass, white	-	8136/23-500	8136-0-0006		1	



8136/40-500

Design Strip for Busch-ComfortTouch®

To be discontinued

Made of real metal.

Dimensions (H x W x D): 200 mm x 300 mm x 14 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
chrome	-	8136/40-500	8136-0-0016		1	



8136/41-500

Design Strip for Busch-ComfortTouch®

To be discontinued

Made of real metal for 8136.

Dimensions (H x W x D): 22 mm x 300 mm x 26 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
aluminium	-	8136/41-500	8136-0-0018		1	

ABB i-bus® KNX

Visualisation, Display and Signalling



8136/30-500

Camera Module for Busch-ComfortTouch®

To be discontinued

Camera module made of real chrome for 8136. For expansion of the applications with live image recording. For mounting on the upper edge of the Busch-ComfortPanel®. The camera module includes a mechanically moveable, captive cap before the lens. The acquisition angle of the camera can be adjusted externally by a corresponding mechanism. Acquisition angle +/-70°. With anti-theft feature. Dimensions (HxWxD): 22 mm x 300 mm x 26 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
chrome	-	8136/30-500	8136-0-0012		1	
aluminum	-	8136/31-500	8136-0-0014		1	



8136/UP-500

Flush Mounted Wall Box for Busch-ComfortTouch®

To be discontinued

For flush mounted and hollow wall mounting of the Busch ComfortPanel.
Dimensions (W x H x D): 166 mm x 254 mm x 60 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
black	-	8136/UP-500	8136-0-0020		1	

ABB i-bus® KNX

Visualisation, Display and Signalling

A
11



6136/100 C-102-500

Controlpanel SMARTtouch

The SMARTtouch (210 functions) offers a colour touch display. The panels clearly display switch states, error messages and measured values, and allow comfortable operation and setting of timing programs and light scenes. Acoustic warnings or alarm functions can be programmed. The integrated room thermostat can be integrated into room climate control. Commissioning is via the bus or multimedia card/SD card. For flush mounting in walls and hollow panels the wall box 6136/UP can be used.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
SMARTtouch, colour (210 functions)	-	6136/100 C-102-500	6136-0-0185		1	
Bang & Olufsen, colour (210 functions)	-	6136/100 CB-102	6136-0-0186		1	

ABB i-bus® KNX

Visualisation, Display and Signalling



6136/15-500

Design Frame for SMARTtouch

Design frame made of real metal for 6136/100C xxx, 6136/100CB xxx, 6936/100C xxx, 6936/100CB xxx. Real metals: Dark glass with flap in chrome, dark glass with flap in aluminium, white glass satin finish with flap in aluminium.

Dimensions (H x W x D): 184.6 mm x 218 mm x 9 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
Dark glass with flap in chrome	-	6136/10-500	6136-0-0139		1	
Dark glass with flap in aluminium	-	6136/11-500	6136-0-0141		1	
White glass, satin finish with flap in aluminium	-	6136/15-500	6136-0-0196		1	



6136/UP

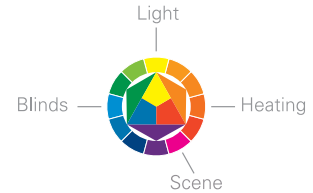
Flush Mounted Wall Box for Busch-Controlpanel

For flush mounting and hollow panel mounting of the Room and Control Panels.

Dimensions (H x W x D): 163.5 mm x 199 mm x 60 mm. Mounting depth: 60 mm.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6136/UP	6136-0-0124		1	

Multifunction control elements with LED colour code concept. And the utmost in comfort.



The new multifunction control elements with LED colour code concept meet the highest demands for comfort and technology. They each come with two RGB LEDs per rocker switch, which conform to a consistent colour concept. This makes the function obvious at a glance, and the surfaces can be additionally fitted with pictograms. Each side of a rocker switch can be occupied with its own function – each for calling up one light scene, for instance. This turns a 4gang control element into an 8gang control element.

Wide range. Different shapes, colours and materials fulfil every requirement. KNX control elements are available in the carat®, pure stainless steel, solo®, Busch-axcent® and future® linear programmes. The complete range of conventional switches from these series is available, so there are no limits to the options for combining KNX components.



01



01 Multifunction control element 1/2gang

Function

Switching | Dimming | Blinds | Push-button | Value transmitter | Light scene extension unit | Step-type | Multiple operation | Logic function (including light scenes)

Features

Labellable switch rockers | Anti-theft protection | Freely programmable switches | LED colour code concept

02



02 Multifunction control element 2/4gang

Function

Switching | Dimming | Blinds | Push-button | Value transmitter | Light scene extension unit | Step-type | Multiple operation | Logic function (including light scenes)

Features

Labellable switch rockers | Anti-theft protection | Freely programmable switches | LED colour code concept

03



03 Multifunction control element 4/8gang

Function

Switching | Dimming | Blinds | Push-button | Value transmitter | Light scene extension unit | Step-type | Multiple operation | Logic function (including light scenes)

Features

Labellable switch rockers | Anti-theft protection | Freely programmable switches | LED colour code concept

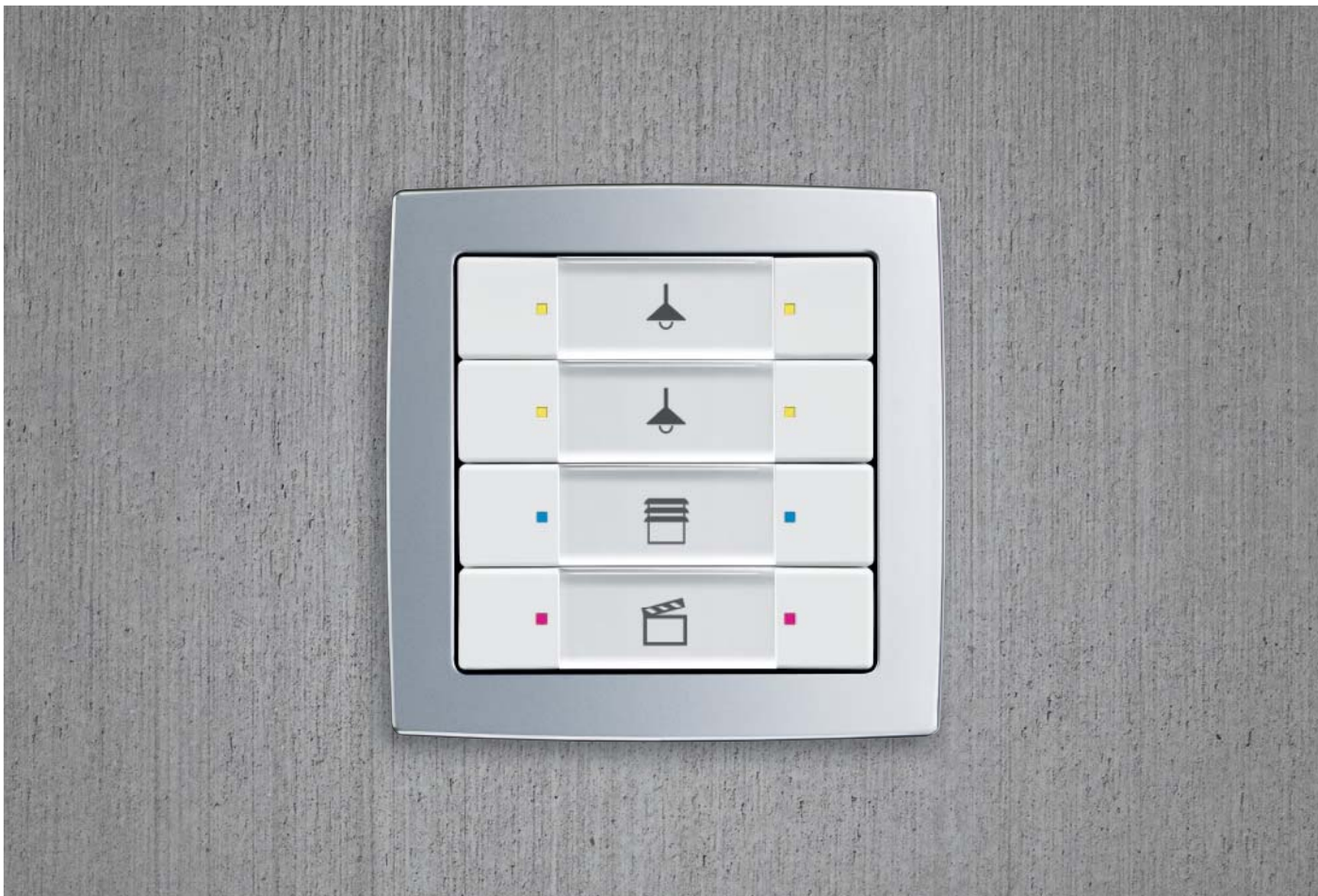
04 Room temperature controller

05 Multifunction control element 2/4gang, integrated room thermostat

06 Multifunction control element 3/6gang with IR reception

07 FM movement detector standard

08 FM movement detector comfort



04



05



Function
 Comfort | Stand-by | Night mode | Frost protection | Specified temperature | Time | Date | Heating | Cooling | Fan Coil operation for heating and cooling | Light scenes | Light scene extension unit | Value | Logic function (including light scenes)

Features
 Labellable switch rockers | Anti-theft protection | Display illumination | LED colour code concept



Function
 Comfort | Stand-by | Night mode | Frost protection | Specified temperature | Time | Date | Heating | Cooling | Fan Coil operation for heating and cooling | Light scenes | Light scene extension unit | Value | Logic function (including light scenes)

Features
 Labellable switch rockers | Anti-theft protection | Display illumination | Colour concept



06

Function
 10 freely programmable IR channels | Switching | Dimming | Blinds | Button | Light scenes | Light scene extension unit | Value | Logic function (including light scenes)

Features
 Labellable switch rockers | Antitheft protection | Display illumination | Colour concept



07



08

Function
 4 channels | Logic function (including light scenes)

Unique diversity of the range

A
12

01



02



03



04



05



Inner qualities and external beauty.

Busch-Jaeger switch ranges turn into a reality what their names promise. The allround high-quality carat® series, for example. From the classic Reflex SI/SI Linear via impressive high-quality pure stainless steel and up to the shining modern highlights of Busch-axcent®. Busch-Jaeger design is impressive in its promotion of style.

Unique diversity of the range

06



07



Frame design: nea or exclusive

08



09



10



- 01** carat®
- 02** pure *stainless steel*
- 03** solo®
- 04** Busch-*axcent*®
- 05** future® linear

- 06** *alpha*
- 07** Reflex SI / SI linear
- 08** Busch-Duro 2000® SI
- 09** Busch-triton®
- 10** Busch-*priOn*®

ABB i-bus® KNX Operation

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6120/12-101-500

Bus Coupler, FM

for Busch-priOn® support frame 1-fold 6346/10-10x and control elements 6122/0x-xxx, 6124/0x-xxx, 6125/0x-xxx, 6126/0x-xxx, 6127/0x-xxx, 6128/0x-xxx and 6129/0x-xxx.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6120/12-101-500	6120-0-0075		1	
swiss version	-	6120/12-101-508	6120-0-0076		1	



6120/13-500

Power Bus Coupler, FM, Busch-priOn®

For Busch-priOn® base frame 1-fold, 2-fold and 3-fold.

Separate power supply required. The KNX connection is used exclusively for bus communication.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6120/13-500	6120-0-0072		1	
swiss version	-	6120/13-508	6120-0-0073		1	



6354 U-500

Switch Actuator/Sensor, 1-fold, FM, Busch-priOn®

For switching incandescent lamps, 230 V halogen lamps, fluorescent lamps and low-voltage halogen lamps operated using transformers 3-wire technology (Neutral conductor required). Only in conjunction with a 2-fold and 3-fold base frame Cannot be combined with the lower finishing strip with temperature sensor.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6354 U-500	6310-0-0097		1	



6356 U-500

Shutter/2-fold Actuator, FM, Busch-priOn®

Only in conjunction with a 2-fold and 3-fold base frame. Not suitable for switching fluorescent lamps, HQI lamps and HQL lamps. Cannot be combined with the lower finishing strip with temperature sensor.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6356 U-500	6310-0-0099		1	



6355 U-500

Shutter/2-fold Actuator, FM, Busch-priOn®

Only in conjunction with a 2-fold and 3-fold base frame Not suitable for switching fluorescent lamps, HQI lamps and HQL lamps. Cannot be combined with the lower finishing strip with temperature sensor.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6355 U-500	6310-0-0098		1	

ABB i-bus® KNX Operation



6346/10-101-500

Base Frame, 1-fold, Busch-priOn®

For Busch-priOn® for seating and contact connection of rotary control elements, operating element 1-fold and 3-fold as well as the top/bottom finishing strip. For contacting with the Bus Coupler priOn or Power Bus Coupler priOn.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	6346/10-101-500	6310-0-0135		1	



6346/11-101-500

Base Frame, 2-fold, Busch-priOn®

For Busch-priOn® for seating and contact connection of 8.89 cm (3.5") TFT colour display with rotary control element, rotary control element 1-fold and 3-fold as well as the top/bottom finishing strip. For contacting with the Power Bus Coupler priOn.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	6346/11-101-500	6310-0-0137		1	



6346/12-101-500

Base Frame, 3-fold, Busch-priOn®

For Busch-priOn® for seating and contact connection of 8.89 cm (3.5") TFT colour display with rotary control element, rotary control element 1-fold and 3-fold as well as the top/bottom finishing strip. For contacting with the Power Bus Coupler priOn.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	6346/12-101-500	6310-0-0139		1	



6340-825-101-500

Control Element, 1-fold, Busch-priOn®

Freely programmable multi-function operation element for installation in the Base Frame 1-fold, 2-fold or 3-fold. Supports the KNX functions with innovative colour concept on the labelling symbols or standard lighting in red/green. The accompanying symbol can be substituted by other alternative labelling symbols.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	-	6340-24G-101-500	6310-0-0109		1	
glass white	-	6340-810-101-500	6310-0-0107		1	
white glass	-	6340-811-101-500	6310-0-0168		1	
glass black	-	6340-825-101-500	6310-0-0108		1	
stainless steel	-	6340-866-101-500	6310-0-0106		1	

ABB i-bus® KNX Operation

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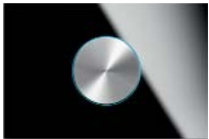


6342-825-101-500

Control Element, 3-fold, Busch-priOn®

Freely programmable multi-function operation element for installation in the Base Frame 1-fold, 2-fold or 3-fold. Supports the KNX functions with innovative colour concept on the labelling symbols or standard lighting in red/green. The accompanying symbol can be substituted by other alternative labelling symbols.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	–	6342-24G-101-500	6310-0-0125		1	
glass white	–	6342-810-101-500	6310-0-0123		1	
white glass	–	6342-811-101-500	6310-0-0172		1	
glass black	–	6342-825-101-500	6310-0-0124		1	
stainless steel	–	6342-866-101-500	6310-0-0122		1	



6341-825-101-500

Rotary Control Element, 1-fold, Busch-priOn®

Freely programmable multi-function rotary control element for installation in the Base Frame 1-fold, 2-fold or 3-fold. Supports the KNX functions with innovative colour concept on the rotary knob or standard lighting in red/green. Rotary knob stainless steel.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	–	6341-24G-101-500	6310-0-0117		1	
glass white	–	6341-810-101-500	6310-0-0115		1	
white glass	–	6341-811-101-500	6310-0-0170		1	
glass black	–	6341-825-101-500	6310-0-0116		1	
stainless steel	–	6341-866-101-500	6310-0-0114		1	



6344-825-101-500

8.89 cm (3.5") TFT Colour Display with Rotary Control Element, Busch-priOn®

Freely programmable 8.89 cm (3.5") TFT colour display with rotary control element for installation in the Base Frame, 2-fold or 3-fold. For representation of up to 120 functions.

With integrated weekly time switch, alarm, timer, with light scene function, screensaver and control of multimedia devices (in conjunction with additional device). Free function inscription with user-defined texts and symbols. Supports the KNX functions with innovative colour concept on the rotary knob. Rotary knob stainless steel.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	–	6344-24G-101-500	6310-0-0133		1	
glass white	–	6344-810-101-500	6310-0-0131		1	
white glass	–	6344-811-101-500	6310-0-0174		1	
glass black	–	6344-825-101-500	6310-0-0132		1	
stainless steel	–	6344-866-101-500	6310-0-0130		1	



6345-825-101-500

Busch Watchdog® 180 FM Sensor, Busch-priOn®

Sends switching commands with motion detection in combination with the bus coupler Busch-priOn®. Programmable via ETS for automatic and semi-automatic operation.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	–	6345-24G-101-500	6310-0-0081		1	
glass white	–	6345-810-101-500	6310-0-0079		1	
white glass	–	6345-811-101-500	6310-0-0176		1	
glass black	–	6345-825-101-500	6310-0-0080		1	
stainless steel	–	6345-866-101-500	6310-0-0078		1	



6348-825-101-500

Top End Strip, Busch-priOn®

For mounting on Base Frame 1-fold to 3-fold.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	–	6348-24G-101-500	6310-0-0147		1	
glass white	–	6348-810-101-500	6310-0-0145		1	
white glass	–	6348-811-101-500	6310-0-0178		1	
glass black	–	6348-825-101-500	6310-0-0146		1	
stainless steel	–	6348-866-101-500	6310-0-0144		1	



6350-825-101-500

Top End Strip with IR Receiver and Proximity Sensor, Busch-priOn®

For mounting on Base Frame 1-fold to 3-fold. With integrated IR receiver for control by IR handheld control as well as integrated proximity function.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
glass black	–	6350-825-101-500	6310-0-0157		1	



6349-825-101-500

Bottom End Strip without logo, Busch-priOn®

For mounting on Base Frame 1-fold to 3-fold.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	–	6349-24G-101-500	6310-0-0155		1	
glass white	–	6349-810-101-500	6310-0-0153		1	
white glass	–	6349-811-101-500	6310-0-0180		1	
glass black	–	6349-825-101-500	6310-0-0154		1	
stainless steel	–	6349-866-101-500	6310-0-0152		1	

ABB i-bus® KNX Operation

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6352-825-101-500

Bottom End Strip with Temperature Sensor, Busch-priOn®

For mounting on Base Frame 1-fold to 3-fold. Provides the value measured by the temperature sensor to the 8.89 cm (3.5") TFT colour display or the room thermostat.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
studio white, high gloss	-	6352-24G-101-500	6310-0-0165		1	
glass white	-	6352-810-101-500	6310-0-0163		1	
white glass	-	6352-811-101-500	6310-0-0182		1	
glass black	-	6352-825-101-500	6310-0-0164		1	
stainless steel	-	6352-866-101-500	6310-0-0162		1	



6351-825-101-500

Top End Strip with Display, Room Thermostat, IR Receiver and Proximity Sensor, Busch-priOn®

In combination with control element 3-fold, Busch-priOn®. With integrated room thermostat, display, proximity sensor and IR receiver. Room thermostat for heating and cooling (PI, PWM or 2-point) and control of up to 5-speed Fan Coil Actuators. Display for indication of 1 bit; 1, 2, 3, 4 or 14 byte values as text or symbols.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
glass black	-	6351-825-101-500	6310-0-0092		1	



6353/20-860-500

Inscription Symbols, Busch-priOn®

For Busch-priOn® operating element 1-fold to 3-fold with different symbols.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
lighting	-	6353/20-860-500	6310-0-0093		1	
blind	-	6353/30-860-500	6310-0-0094		1	
Room Temperature	-	6353/40-860-500	6310-0-0095		1	
scene	-	6353/50-860-500	6310-0-0096		1	



6149/21-500

Commissioning Interface / Adapter

6120/12-101-500 and 6120/13-500 via USB port or via SD card slot.

With integrated battery for independent operation for up to 8 h.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6149/21-500	6133-0-0201		1	

ABB i-bus® KNX Operation



CP-D 24/2.5

Power Supply, 24 V, 2.5 A, MDRC

For Busch-priOn® Power Bus Coupler 6120/13-500.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	CP-D 24/2.5	2CDG120037R0011		1	



6108/01-500

KNX Switch Connection Unit, FM

with intergrated bus coupling unit. With neutral position. Suitable for conventional switch rockers of the following Busch-Jaeger design ranges: Busch-Duro 2000® SI/SI Linear, Reflex SI/SI Linear, future® linear, alpha, solo®, Busch-axcent®, carat® and pure stainless steel. One freely programmable red/green LED (only 6108/01-500).

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1/2-fold	-	6108/01-500	6133-0-0207		1	
2/4-fold	-	6108/02-500	6133-0-0209		1	



6108/04-500

KNX Switch Connection Unit for design ocean® (IP44), FM

with intergrated bus coupling unit. For integration into SM-housing of ocean® range.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1/2-fold	-	6108/04-500	6133-0-0211		1	
2/4-fold	-	6108/05-500	6133-0-0213		1	

ABB i-bus® KNX Operation

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6125/01



6126/01



6127/01

			Standard control element, 1-fold with bus coupler enclosed			Standard control element, 2-fold with bus coupler enclosed			Standard control element, 4-fold with bus coupler enclosed		
With labelling field. Transparent labelling sheet with standard symbols included in delivery. Display elements: Two LED per rocker via separate communication object for status (Red/Green/OFF) or orientation light. Protection class (Device): IP 20. Temperature range (Device): - 5 °C to 45 °C. Dimensions: (L x W x D): 63 mm x 63 mm			With 1 Control element: rocker switch left/right			With 2 Control elements: rocker switch left/right			With 4 Control elements: rocker switch left/right		
Pack unit pc.	Weight 1 pc. kg	Description	Type	Order code	Price 1 pc. €	Type	Order code	Price 1 pc. €	Type	Order code	Price 1 pc. €
		future® linear									
1		anthracite	6125/01-81-500	6115-0-0205		6126/01-81-500	6116-0-0195		6127/01-81-500	6117-0-0221	
1		savanne/ivory	6125/01-82-500	6115-0-0206		6126/01-82-500	6116-0-0196		6127/01-82-500	6117-0-0222	
1		aluminium silver	6125/01-83-500	6115-0-0207		6126/01-83-500	6116-0-0197		6127/01-83-500	6117-0-0223	
1		davos/studio white	6125/01-84-500	6115-0-0183		6126/01-84-500	6116-0-0174		6127/01-84-500	6117-0-0200	
1		studio white, matt	6125/01-884-500	6115-0-0214		6126/01-884-500	6116-0-0204		6127/01-884-500	6117-0-0230	
1		black, matt	6125/01-885-500	6115-0-0215		6126/01-885-500	6116-0-0205		6127/01-885-500	6117-0-0231	
		solo®									
1		savanne/ivory	6125/01-82-500	6115-0-0206		6126/01-82-500	6116-0-0196		6127/01-82-500	6117-0-0222	
1		davos/studio white	6125/01-84-500	6115-0-0183		6126/01-84-500	6116-0-0174		6127/01-84-500	6117-0-0200	
1		tosacana/purple	6125/01-87-500	6115-0-0209		6126/01-87-500	6116-0-0199		6127/01-87-500	6117-0-0225	
1		meteor/grey metallic	6125/01-803-500	6115-0-0212		6126/01-803-500	6116-0-0202		6127/01-803-500	6117-0-0228	
1		sahara/yellow	6125/01-815-500	6115-0-0213		6126/01-815-500	6116-0-0203		6127/01-815-500	6117-0-0229	
		carat									
1		anthracite	6125/01-81-500	6115-0-0205		6126/01-81-500	6116-0-0195		6127/01-81-500	6117-0-0221	
1		savanne/ivory	6125/01-82-500	6115-0-0206		6126/01-82-500	6116-0-0196		6127/01-82-500	6117-0-0222	
1		davos/studio white	6125/01-84-500	6115-0-0183		6126/01-84-500	6116-0-0174		6127/01-84-500	6117-0-0200	
		pure stainless steel									
1		pure stainless steel	6125/01-866-500	6115-0-0211		6126/01-866-500	6116-0-0201		6127/01-866-500	6117-0-0227	
		Busch-axcent®									
1		davos/studio white	6125/01-84-500	6115-0-0183		6126/01-84-500	6116-0-0174		6127/01-84-500	6117-0-0200	
1		chalet-white	6125/01-896-500	6115-0-0449		6126/01-896-500	6116-0-0224		6127/01-896-500	6117-0-0249	

ABB i-bus® KNX Operation



6125/02



6126/02



6127/02

<p>For BCU 6120/12-101-500 or 6120/13-500. With labelling field. Support of KNX functions through innovative colour concept or standard illumination red/green. Push switch function: switching/dimming/blind/sending values/scenes etc. Transparent labelling sheet with standard symbols included in delivery. Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.). Display elements: Two LED per rocker via separate communication object for status (Red/Green/OFF) or orientation light. Protection class (Device): IP 20. Temperature range (Device): – 5 °C to 45 °C. Dimensions: (L x W x D): 63 mm x 63 mm</p>	<p>Control element, 1/2-fold Multi-function/colour concept</p> <p>With 1 Control element: rocker switch left/right</p>	<p>Control element, 2/4-fold Multi-function/colour concept</p> <p>With 2 Control elements: rocker switch left/right</p>	<p>Control element, 4/8-fold Multi-function/colour concept</p> <p>With 4 Control elements: rocker switch left/right</p>

Pack unit	Weight 1 pc.	Description	Type	Order code	Price 1 pc.	Type	Order code	Price 1 pc.	Type	Order code	Price 1 pc.
pc.	kg				€			€			€
		future® linear									
1		anthracite	6125/02-81-500	6115-0-0216		6126/02-81-500	6116-0-0206		6127/02-81-500	6117-0-0232	
1		savanne/ivory	6125/02-82-500	6115-0-0217		6126/02-82-500	6116-0-0207		6127/02-82-500	6117-0-0233	
1		aluminium silver	6125/02-83-500	6115-0-0218		6126/02-83-500	6116-0-0208		6127/02-83-500	6117-0-0234	
1		davos/studio white	6125/02-84-500	6115-0-0219		6126/02-84-500	6116-0-0209		6127/02-84-500	6117-0-0235	
1		studio white, matt	6125/02-884-500	6115-0-0226		6126/02-884-500	6116-0-0216		6127/02-884-500	6117-0-0242	
1		black, matt	6125/02-885-500	6115-0-0227		6126/02-885-500	6116-0-0217		6127/02-885-500	6117-0-0243	
		solo®									
1		savanne/ivory	6125/02-82-500	6115-0-0217		6126/02-82-500	6116-0-0207		6127/02-82-500	6117-0-0233	
1		davos/studio white	6125/02-84-500	6115-0-0219		6126/02-84-500	6116-0-0209		6127/02-84-500	6117-0-0235	
1		toscana/purple	6125/02-87-500	6115-0-0221		6126/02-87-500	6116-0-0211		6127/02-87-500	6117-0-0237	
1		meteor/grey metallic	6125/02-803-500	6115-0-0224		6126/02-803-500	6116-0-0214		6127/02-803-500	6117-0-0240	
1		sahara/yellow	6125/02-815-500	6115-0-0225		6126/02-815-500	6116-0-0215		6127/02-815-500	6117-0-0241	
		carat									
1		anthracite	6125/02-81-500	6115-0-0216		6126/02-81-500	6116-0-0206		6127/02-81-500	6117-0-0232	
1		savanne/ivory	6125/02-82-500	6115-0-0217		6126/02-82-500	6116-0-0207		6127/02-82-500	6117-0-0233	
1		davos/studio white	6125/02-84-500	6115-0-0219		6126/02-84-500	6116-0-0209		6127/02-84-500	6117-0-0235	
		pure stainless steel									
1		pure stainless steel	6125/02-866-500	6115-0-0223		6126/02-866-500	6116-0-0213		6127/02-866-500	6117-0-0239	
		Busch-axcent®									
1		davos/studio white	6125/02-84-500	6115-0-0219		6126/02-84-500	6116-0-0209		6127/02-84-500	6117-0-0235	
1		chalet-white	6125/02-896-500	6115-0-0451		6126/02-896-500	6116-0-0226		6127/02-896-500	6117-0-0251	

ABB i-bus® KNX Operation

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6129/01

Control Element, 3/6-fold, multifunction, with IR-Interface, FM

suitable for KNX bus coupler 6120/12-101-500 and 6120/13-500. With IR interface for Busch-remote controllers 6010-25 or 6020-.../6021-... . Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. Two freely programmable RGB LEDs per rocker. With RGB colour code concept or red/green/OFF-operation. With labeling field. Transparent labeling sheet with standard symbols included in delivery.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
future® linear						
anthracite	-	6129/01-81-500	6135-0-0156		1	
savanne/ivory	-	6129/01-82-500	6135-0-0157		1	
aluminium silver	-	6129/01-83-500	6135-0-0158		1	
davos/studio white	-	6129/01-84-500	6135-0-0146		1	
studio white, matt	-	6129/01-884-500	6135-0-0165		1	
black, matt	-	6129/01-885-500	6135-0-0166		1	
solo®						
savanne/ivory	-	6129/01-82-500	6135-0-0157		1	
davos/studio white	-	6129/01-84-500	6135-0-0146		1	
tosacana/purple	-	6129/01-87-500	6135-0-0160		1	
meteor/grey metallic	-	6129/01-803-500	6135-0-0163		1	
sahara/yellow	-	6129/01-815-500	6135-0-0164		1	
carat						
anthracite	-	6129/01-81-500	6135-0-0156		1	
savanne/ivory	-	6129/01-82-500	6135-0-0157		1	
davos/studio white	-	6129/01-84-500	6135-0-0146		1	
pure stainless steel						
pure stainless steel	-	6129/01-866-500	6135-0-0162		1	
Busch-axcent®						
davos/studio white	-	6129/01-84-500	6135-0-0146		1	
chalet-white	-	6129/01-896-500	6135-0-0170		1	

ABB i-bus® KNX Operation



1721-184K

Frames, future® linear

For vertical and horizontal installation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1-fold, anthracite	-	1721-181K	1754-0-4240		1	
1-fold, savanna/ivory	-	1721-182K	1754-0-4230		1	
1-fold, aluminium silver	-	1721-183K	1754-0-4301		1	
1-fold, davos/studio white	-	1721-184K	1754-0-4235		1	
1-fold, studio white, matt	-	1721-884K	1754-0-4414		1	
1-fold, black matt	-	1721-885K	1754-0-4419		1	
2-fold, anthracite	-	1722-181K	1754-0-4241		1	
2-fold, savanna/ivory	-	1722-182K	1754-0-4231		1	
2-fold, aluminium silver	-	1722-183K	1754-0-4302		1	
2-fold, davos/studio white	-	1722-184K	1754-0-4236		1	
2-fold, studio white, matt	-	1722-884K	1754-0-4415		1	
2-fold, black matt	-	1722-885K	1754-0-4420		1	
3-fold, anthracite	-	1723-181K	1754-0-4242		1	
3-fold, savanna/ivory	-	1723-182K	1754-0-4232		1	
3-fold, aluminium silver	-	1723-183K	1754-0-4308		1	
3-fold, davos/studio white	-	1723-184K	1754-0-4237		1	
3-fold, studio white, matt	-	1723-884K	1754-0-4416		1	
3-fold, black matt	-	1723-885K	1754-0-4421		1	
4-fold, anthracite	-	1724-181K	1754-0-4243		1	
4-fold, savanna/ivory	-	1724-182K	1754-0-4233		1	
4-fold, aluminium silver	-	1724-183K	1754-0-4309		1	
4-fold, davos/studio white	-	1724-184K	1754-0-4238		1	
4-fold, studio white, matt	-	1724-884K	1754-0-4417		1	
4-fold, black matt	-	1724-885K	1754-0-4422		1	
5-fold, anthracite	-	1725-181K	1754-0-4244		1	
5-fold, savanna/ivory	-	1725-182K	1754-0-4234		1	
5-fold, aluminium silver	-	1725-183K	1754-0-4310		1	
5-fold, davos/studio white	-	1725-184K	1754-0-4239		1	
5-fold, studio white, matt	-	1725-884K	1754-0-4418		1	
5-fold, black matt	-	1725-885K	1754-0-4423		1	

ABB i-bus® KNX Operation

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1721-80

Frames, solo®

For vertical and horizontal installation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1-fold, chrome, matt	-	1721-80	1754-0-4104		1	
1-fold, chrome, glossy	-	1721-80G	1754-0-4326		1	
1-fold, davos/studio white	-	1721-84	1754-0-4109		1	
2-fold, chrome, matt	-	1722-80	1754-0-4105		1	
2-fold, chrome, glossy	-	1722-80G	1754-0-4327		1	
2-fold, davos/studio white	-	1722-84	1754-0-4110		1	
3-fold, chrome, matt	-	1723-80	1754-0-4106		1	
3-fold, chrome, glossy	-	1723-80G	1754-0-4328		1	
3-fold, davos/studio white	-	1723-84	1754-0-4111		1	
4-fold, chrome, matt	-	1724-80	1754-0-4107		1	
4-fold, chrome, glossy	-	1724-80G	1754-0-4329		1	
4-fold, davos/studio white	-	1724-84	1754-0-4112		1	
5-fold, chrome, matt	-	1725-80	1754-0-4108		1	
5-fold, chrome, glossy	-	1725-80G	1754-0-4330		1	
5-fold, davos/studio white	-	1725-84	1754-0-4113		1	



1721-860

Frames, carat®

For vertical and horizontal installation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1-fold, glass	-	1721-810	1754-0-4250		1	
1-fold, bronze	-	1721-821	1754-0-4258		1	
1-fold, gold	-	1721-823-101	1754-0-4356		1	
1-fold, glass dark	-	1721-825	1754-0-4322		1	
1-fold, chrome	-	1721-826-101	1754-0-4360		1	
1-fold, stainless steel	-	1721-860	1754-0-4254		1	
2-fold, glass	-	1722-810	1754-0-4251		1	
2-fold, bronze	-	1722-821	1754-0-4259		1	
2-fold, gold, horizontal only	-	1722-823-101	1754-0-4357		1	
2-fold, glass dark	-	1722-825	1754-0-4323		1	
2-fold, chrome, horizontal only	-	1722-826-101	1754-0-4361		1	
2-fold, stainless steel	-	1722-860	1754-0-4255		1	
3-fold, glass	-	1723-810	1754-0-4252		1	
3-fold, bronze	-	1723-821	1754-0-4260		1	
3-fold, gold, horizontal only	-	1723-823-101	1754-0-4358		1	
2-fold, glass dark	-	1722-825	1754-0-4323		1	
3-fold, chrome, horizontal only	-	1723-826-101	1754-0-4362		1	
3-fold, stainless steel	-	1723-860	1754-0-4256		1	
4-fold, glass	-	1724-810	1754-0-4253		1	
4-fold, bronze	-	1724-821	1754-0-4261		1	
4-fold, gold, horizontal only	-	1724-823-101	1754-0-4359		1	
4-fold, glass dark	-	1724-825	1754-0-4325		1	
4-fold, chrome, horizontal only	-	1724-826-101	1754-0-4363		1	
4-fold, stainless steel	-	1724-860	1754-0-4257		1	

ABB i-bus® KNX Operation



1721-866K

Frames, pure stainless steel

For vertical and horizontal installation. Stainless steel material.

Anti-fingerprint (does not leave any visible fingerprints on the material).

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1-fold, stainless steel	-	1721-866K	1754-0-4317		1	
2-fold, stainless steel	-	1722-866K	1754-0-4318		1	
3-fold, stainless steel	-	1723-866K	1754-0-4319		1	
4-fold, stainless steel	-	1724-866K	1754-0-4320		1	
5-fold, stainless steel	-	1725-866K	1754-0-4321		1	



1722-286

Frames, accent

For vertical and horizontal installation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
1-fold, black	-	1721-281	1754-0-4409		1	
1-fold, davos/studio white	-	1721-284	1754-0-4331		1	
1-fold, yellow	-	1721-285	1754-0-4334		1	
1-fold, green	-	1721-286	1754-0-4337		1	
1-fold, red	-	1721-287	1754-0-4340		1	
1-fold, blue	-	1721-288	1754-0-4343		1	
1-fold, white glass	-	1721-280	1754-0-4437		1	
1-fold, entrée-grey	-	1721-291-500	1754-0-4471		1	
1-fold, château-black	-	1721-295-500	1754-0-4491		1	
1-fold, chalet-white	-	1721-296-500	1754-0-4486		1	
1-fold, foyer-red	-	1721-297-500	1754-0-4476		1	
1-fold, maison-beige	-	1721-299-500	1754-0-4481		1	
2-fold, black	-	1722-281	1754-0-4410		1	
2-fold, davos/studio white	-	1722-284	1754-0-4332		1	
2-fold, yellow	-	1722-285	1754-0-4335		1	
2-fold, green	-	1722-286	1754-0-4338		1	
2-fold, red	-	1722-287	1754-0-4341		1	
2-fold, blue	-	1722-288	1754-0-4344		1	
2-fold, white glass	-	1722-280	1754-0-4438		1	
2-fold, entrée-grey	-	1722-291-500	1754-0-4472		1	
2-fold, château-black	-	1722-295-500	1754-0-4492		1	
2-fold, chalet-white	-	1722-296-500	1754-0-4487		1	
2-fold, foyer-red	-	1722-297-500	1754-0-4477		1	
2-fold, maison-beige	-	1722-299-500	1754-0-4482		1	

Continuation of table „Frames, accent“ on next page

Continuation of table „Frames, axcent“

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
3-fold, black	-	1723-281	1754-0-4411		1	
3-fold, davos/studio white	-	1723-284	1754-0-4333		1	
3-fold, yellow	-	1723-285	1754-0-4336		1	
3-fold, green	-	1723-286	1754-0-4339		1	
3-fold, red	-	1723-287	1754-0-4342		1	
3-fold, blue	-	1723-288	1754-0-4345		1	
3-fold, white glass	-	1723-280	1754-0-4439		1	
3-fold, entrée-grey	-	1723-291-500	1754-0-4473		1	
3-fold, château-black	-	1723-295-500	1754-0-4493		1	
3-fold, chalet-white	-	1723-296-500	1754-0-4488		1	
3-fold, foyer-red	-	1723-297-500	1754-0-4478		1	
3-fold, maison-beige	-	1723-299-500	1754-0-4483		1	
4-fold, black	-	1724-281	1754-0-4412		1	
4-fold, davos/studio white	-	1724-284	1754-0-4346		1	
4-fold, yellow	-	1724-285	1754-0-4348		1	
4-fold, green	-	1724-286	1754-0-4350		1	
4-fold, red	-	1724-287	1754-0-4352		1	
4-fold, blue	-	1724-288	1754-0-4354		1	
4-fold, white glass	-	1724-280	1754-0-4440		1	
4-fold, entrée-grey	-	1724-291-500	1754-0-4474		1	
4-fold, château-black	-	1724-295-500	1754-0-4494		1	
4-fold, chalet-white	-	1724-296-500	1754-0-4489		1	
4-fold, foyer-red	-	1724-297-500	1754-0-4479		1	
4-fold, maison-beige	-	1724-299-500	1754-0-4484		1	
5-fold, black	-	1725-281	1754-0-4413		1	
5-fold, davos/studio white	-	1725-284	1754-0-4347		1	
5-fold, yellow	-	1725-285	1754-0-4349		1	
5-fold, green	-	1725-286	1754-0-4351		1	
5-fold, red	-	1725-287	1754-0-4353		1	
5-fold, blue	-	1725-288	1754-0-4355		1	
5-fold, white glass	-	1725-280	1754-0-4441		1	
5-fold, entrée-grey	-	1725-291-500	1754-0-4475		1	
5-fold, château-black	-	1725-295-500	1754-0-4495		1	
5-fold, chalet-white	-	1725-296-500	1754-0-4490		1	
5-fold, foyer-red	-	1725-297-500	1754-0-4480		1	
5-fold, maison-beige	-	1725-299-500	1754-0-4485		1	

ABB i-bus® KNX Operation



6320/10-24G-500

Busch-triton® Control Element, 1/2-fold, FM

With integrated bus coupling unit. With IR interface for Busch-remote controllers. Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	-	6320/10-20-500	6320-0-0002		1	
studio white,high gloss	-	6320/10-24G-500	6320-0-0004		1	
palladium	-	6320/10-260-500	6320-0-0010		1	
impuls						
champagne metallic	-	6320/10-79-500	6320-0-0006		1	
future® linear						
aluminium silver	-	6320/10-83-500	6320-0-0008		1	



6320/30-24G-500

Busch-triton® Control Element, 3/6-fold, FM

With integrated bus coupling unit. With IR interface for Busch-remote controllers. Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	-	6320/30-20-500	6320-0-0012		1	
studio white,high gloss	-	6320/30-24G-500	6320-0-0014		1	
palladium	-	6320/30-260-500	6320-0-0020		1	
impuls						
champagne metallic	-	6320/30-79-500	6320-0-0016		1	
future® linear						
aluminium silver	-	6320/30-83-500	6320-0-0018		1	

ABB i-bus® KNX Operation

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6320/50-24G-500

Busch-triton® Control Element, 5/10-fold, FM

With integrated bus coupling unit. With IR interface for Busch-remote controllers. Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	–	6320/50-20-500	6320-0-0032		1	
studio white,high gloss	–	6320/50-24G-500	6320-0-0034		1	
palladium	–	6320/50-260-500	6320-0-0040		1	
impuls						
champagne metallic	–	6320/50-79-500	6320-0-0036		1	
future® linear						
aluminium silver	–	6320/50-83-500	6320-0-0038		1	



6320/38-24G-500

Busch-triton® Control Element with Room Thermostat and 3/6-fold Switch Sensor, FM

With integrated bus coupling unit. With IR interface for Busch-remote controllers. For heating and cooling (PI, PWM or 2-point). Constant room temperature controller for fan-coil applications (up to 5-speed level ventilation actuators in 2- and 4-pipe systems) and conventional heating and cooling systems. With manual and automatic adjustment of fan levels. Push button function: switching/ dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). LCD displaying operation mode and temperature. With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	–	6320/38-20-500	6320-0-0022		1	
studio white,high gloss	–	6320/38-24G-500	6320-0-0024		1	
palladium	–	6320/38-260-500	6320-0-0030		1	
impuls						
champagne metallic	–	6320/38-79-500	6320-0-0026		1	
future® linear						
aluminium silver	–	6320/38-83-500	6320-0-0028		1	

ABB i-bus® KNX Operation



6320/58-24G-500

Busch-triton® Control Element with Room Thermostat and 5/10-fold Switch Sensor, FM

With integrated bus coupling unit. With IR interface for Busch-remote controllers. For heating and cooling (PI, PWM or 2-point). Constant room temperature controller for fan-coil applications (up to 5-speed level ventilation actuators in 2- and 4-pipe systems) and conventional heating and cooling systems. With manual and automatic adjustment of fan levels. Push button function: switching/dimming/blind/value sending/light scenes/step-type switch functions. Switch contacts left/right. One freely programmable LED per rocker (red/green/OFF). LCD displaying operation mode and temperature. With labeling field.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
alpha						
platinum	-	6320/58-20-500	6320-0-0042		1	
studio white,high gloss	-	6320/58-24G-500	6320-0-0044		1	
palladium	-	6320/58-260-500	6320-0-0050		1	
impuls						
champagne metallic	-	6320/58-79-500	6320-0-0046		1	
future® linear						
aluminium silver	-	6320/58-83-500	6320-0-0048		1	



6010-25-500

Infra-Red Hand Held Transmitter

For infra-red receiver and KNX flush-mounted infra-red interface. Switching and dimming of up to 10 consumers in 2 groups (1-5/6-10). Programming and selection of 2 MEMO memories per group is possible. Power supply: 4 alkaline manganese batteries, IEC LR03 (microcell) not included in scope of supply Detection range: frontal 15 m.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6010-25-500	6020-0-1133		1	

Everything under control

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The Millennium collection is the first metal range to incorporate the KNX system, the most intelligent way of managing spaces and optimizing performance in terms of energy savings.

Optimizing comfort, safety and efficiency of buildings:

- Providing with complete comfort solutions to satisfy all type of needs and projects.
- Ensuring safety and protection of persons and goods.
- Saving energy by using only the amount of energy required.

- 01 KNX 6 fold sensor
- 02 KNX 6 fold with IR sensor
- 03 KNX 180° watchdog
- 04 KNX room temperature controller



Applications

Millenium is based on a combinable concept which creates a very comprehensive range, suitable for any type of needs. This makes it the ideal collection for all types of homes, hotels, offices, shops, etc.



Homes:

Its simple and minimalist design integrates in any type of architecture, regardless of the decoration. It provides a wealth of features and value, thanks to its wide range of functions and benefits.



Hotels:

Millenium is specially suitable for Hotel projects thanks to its modern design, fashion materials and functionalities that provide high comfort level to the hotel guests. Its KNX functions make a special contribution to the Guest Room System in the daily management of the hotel, achieving energy savings and high tech comfort.



Commercials:

The Millenium collection offers elegance and distinction to commercial spaces designed for different purposes; restaurants, coffee shops, stores, offices, etc. Millenium is the perfect match to improve living space.

Millenium KNX

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The Millenium collection has not only been designed to fulfill aesthetic desires but also to improve life. Millenium offers KNX sensors to make easier our comfort, safety, security and energy efficiency of our living spaces enabling the management with one touch.

Millenium series offers special metal mounting plate for KNX sensors to reduce the height and improve the aesthetics for ultra slim design.

Support of KNX functions through innovative colour concept yellow=lighting, blue=blind, orange=RTC, magenta=scene and white=neutral / no function assigned) or standard illumination red / green.

The KNX sensors allow to replace the buttons with the desired symbols in order to adjust the sensor to specific design and needs (light, blind, scene, RTC, Fan coil and lighting).

Push switch function: switching / dimming / blind / sending values / scenes etc.

	Type	Technical data	Description
	AMD72053-AN (6125/20-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function	Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm
	Type	Technical data	Description
	AMD74053-AN (6126/20-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function	Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm
	Type	Technical data	Description
	AMD76053-AN (6129/20-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function	Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm
	Type	Technical data	Description
	AMD76153-AN (6129/21-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function	6-Fold sensor with IR
	Type	Technical data	Description
	AMD70153-AN (6122/20-981-500)	Movement sensor with up to four channels. Detection range: frontal: 6 m, lateral: 6 m Detection angle: 180 ° Brightness limit value: 5 Lux - 150 Lux Mounting height: 1.1 m	Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm Position for installation: vertical
	Type	Technical data	Description
	AMD70053-AN (6124/20-981-500)	Control element with room thermostat function for triggering the heating, ventilation and fan-coil actuators. The controller is a thermostat for Fan Coil units in 2 - and 4-pipe systems and conventional heating or cooling systems. The fan stage can be switched manually or in automatic mode.	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Switch contacts for operating mode selection and dial for setpoint or fan speed adjustment. Display elements: LCD showing operation modes. Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm

Symbols



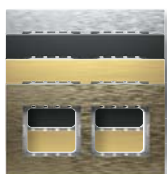
Type	Technical data	Description
AM50701-GR (6123/20-500)	Labelling insert for Millenium control covers 1/2-gang, 2/4-gang, 3/6-gang and 3/6-gang with infrared	Ceiling light symbol
AM50702-GR (6123/21-500)		Blinds symbol
AM50703-GR (6123/22-500)		Scene symbol
AM50704-GR (6123/23-500)		Temperature symbol
AM50705-GR (6123/24-500)		Light symbol
AM50706-GR (6123/26-500)		Fan Coil symbol

Millenium KNX

Triple rocker / KNX frame



Type	Type	Type	Type	Technical data	Description
AMD5153-ST	AMD5153-SB	AMD5153-MG	AMD5153-AG	Frame includes metal mounting plate. Dimensions 86x86 mm	Triple rocker / KNX frame 1 gang



Type	Type	Type	Type	Technical data	Description
AMD5253-ST	AMD5253-SB	AMD5253-MG	AMD5253-AG	Frame includes metal mounting plate. Dimensions 86x147 mm	Triple rocker / KNX frame 2 gang

Special metal mounting plate for KNX sensors



Type	Technical data	Description
AMD5053	Allows reduction height of KNX sensors to 1mm. Only for following items: AMD72053-AN, AMD74053-AN, AMD76053-AN, AMD76153-AN	Special metal mounting plate for KNX sensors 1 gang

The frames and the special metal mounting plate for KNX sensors have to be ordered by:

Asea Brown Boveri, S.A.
Low Voltage Products - Niessen
Pol. Ind. de Aranguren, 6
20180 Oiartzun
Spain
Tel.: +34 943 260 101
Fax: +34 943 260 240
www.abb.es/niessen

The Millenium Series is available in the following countries:

Kuwait
ABB Engineering Technologies Co. (KSCC)
Al Ghunaim Building, 3rd Floor, Commercial Area No. 1
13043 Safat
Tel. 009652428626

Oman
ABB LLC
218, Hatat House, P.O. Box 778,
131 Al Hamriya
OM Muscat
Tel. 00968 24 567 410

UAE
ABB Industries LLC
Al Quoz Industrial Area 3
4th Interchange, St. No: 4

Dubai
Tel. 0097 143147500
E-Mail general.accounts@du.abb.com
Homepage www.abb.com/ae

Qatar
ABB L.L.C.
HSBC Building, Building 150
7th Floor Left
Al Matar Street (Airport Road)
QA Umm Ghuwailina, Doha
Tel. 00974 44253888

Singapore
ABB Pte. Ltd.
2, Ayer Rajah Crescent
SGP-139935 Singapore
Tel: +65 6 7765711
Fax: +65 6 7780222

India
ABB Limited
Plot N°. 1, Sector- 1 B, I.I.E. SIDCUL,
Haridwar-249403. India
Tel: +91 1334235447
Fax: +91 1334 235449
Helpline number: 1800 425 0707
Toll Free (BSNL/MTNL)
E-mail: helpline.abbindia@in.abb.com

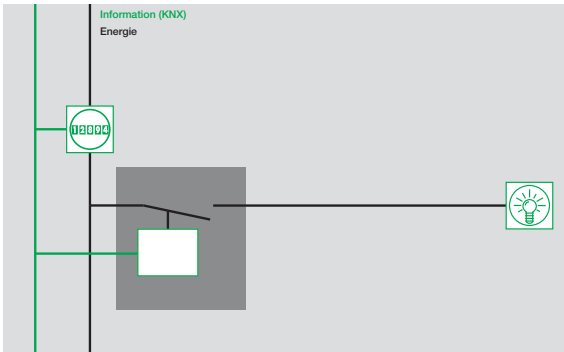
United Kingdom
ABB Ltd
Tower Court
Foleshill Enterprise Park
Courtaulds Way
Coventry CV6 5NX
Phone: +44 (0)24 7636 8500
Telefax: +44 (0)24 7636 4499
www.abb.com/uk

Energy measurement with ABB i-bus® KNX

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ABB offers various solutions for decentral energy measurement on the basis of the KNX standard.

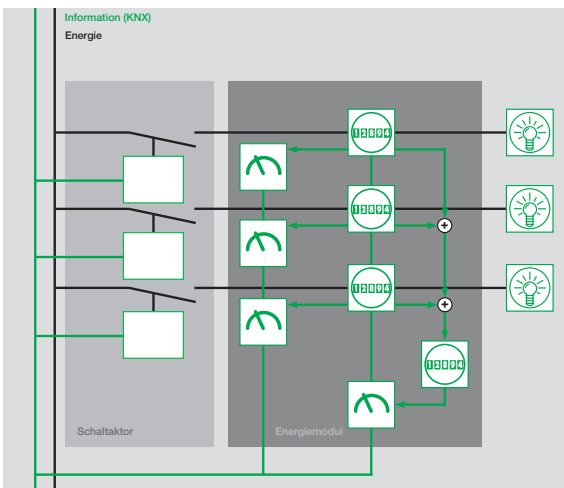
Version 1



Electronic energy meters make the current energy values available on the KNX bus system in conjunction with a KNX interface. The measured data can be intermediately stored, evaluated and visualized from here.



Version 2

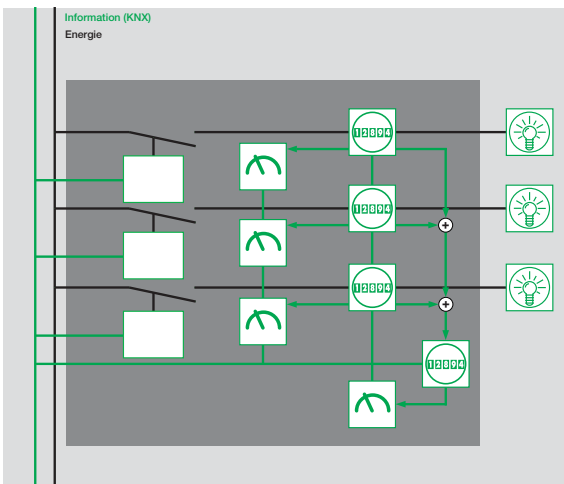


The Energy Module can record the energy consumption for the individual devices. It is used particularly when upgrading existing KNX systems and wherever energy measurement is required without switch functions. It facilitates a detailed and transparent insight into the energy consumption of a building.

The current meter values can be sent and evaluated.



Version 3



The Energy Actuator facilitates control of the connected consumer loads via the ABB i-bus® KNX. For each of the three switch channels, the individual consumption can be measured in the same way as for the Energy Module. For every channel, the proven functionality of the ABB i-bus® KNX Switch Actuators are available.



 Intermediate meter for electrical energy

 Electrical consumer (load)

 Energy meter

ABB i-bus® KNX Energy Management



SE/S 3.16.1

Energy Actuator, 3-fold, 16/20 AX, MDRC

Records the energy consumption of the connected electrical loads in the load circuit. Various electrical variables can be monitored and load peaks can be limited by simple load control. The 3 output channels can be manually operated and display the current switching state. The Energy Actuator can switch resistive, inductive and capacitive loads. The switching capacity corresponds to the SA/S X.16.6.1.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
3-fold	4	SE/S 3.16.1	2CDG110136R0011		1	0.3



EM/S 3.16.1

Energy Module, MDRC

Measures energy consumption and various electrical parameters in the terminal current. Active power, Current, Voltage and Frequency can be monitored via threshold values and peak loads can be limited through a simple load control. The measured values are provided via ABB i-bus® KNX.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	4	EM/S 3.16.1	2CDG110148R0011		1	0.2

ABB i-bus® KNX Energy Management

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ZS/S 1.1

Meter Interface Module, MDRC

It records consumption and measured values of the electrical energy consumption meters. Using an infra-red interface, the ABB energy meter types DELTAplus, DELTAsingle and ODIN are incorporated. The information and data which is read can be used, for example, for cost centre accounting, energy optimisation, monitoring of installations and visualisation.

The following values are available (depending on the meter type):

Meter reading

Active energy	Tariff 1-4, total
Reactive energy	Tariff 1-4, total

Power values

Active power	L1, L2, L3, total
Reactive power	L1, L2, L3, total
Apparent power	L1, L2, L3, total
Phase angle power	L1, L2, L3, total
Power factor	L1, L2, L3, total

Instrument values

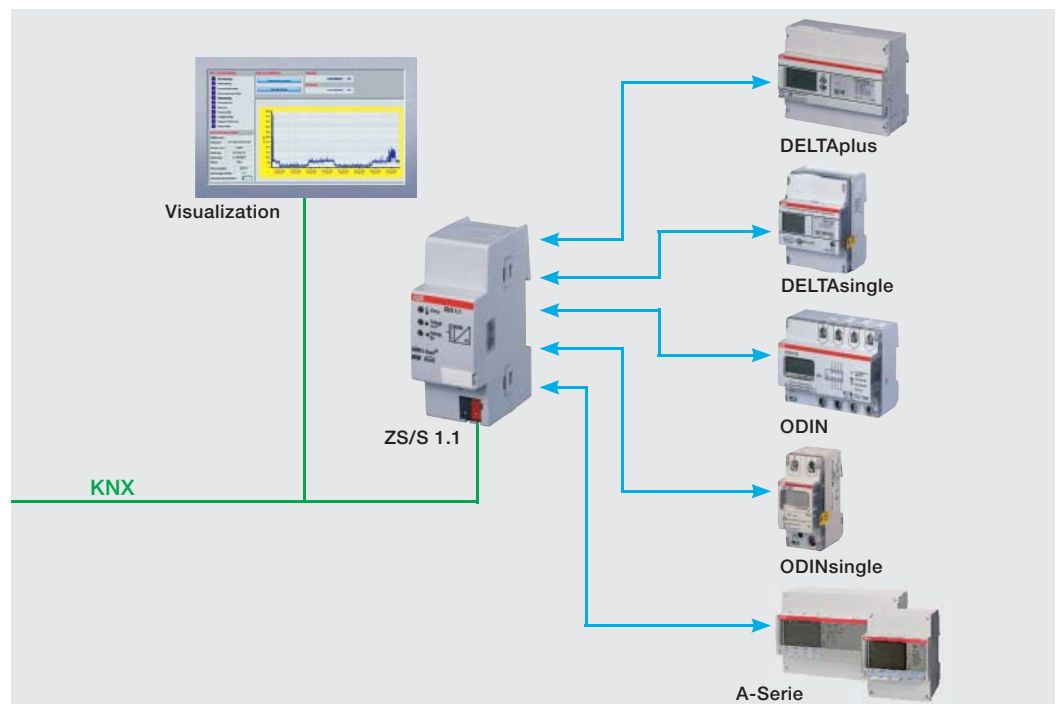
Voltages	L1-N, L2-N, L3-N, L1-L2, L2-L3, L1-L3
----------	--

Currents	L1, L2, L3, N
Phase angle voltage	L1, L2, L3, total
Phase angle current	L1, L2, L3, total
Quadrant	L1, L2, L3, total
Mains frequency	

Other

Transformer ratio	Read CT and VT
Power failures	Send and delete
Tariffs	Read and change-over
Status information	Send and read
Communication monitoring	
Intermediate meter	Read and reset

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	ZS/S 1.1	2CDG110083R0011		1	0.13



Introduction

DIN rail mounted electricity meters

Modular DIN Rail Products offer a wide range of functions to be integrated in electrical installations with significant benefits for the user. DIN rail mounted electricity meters are designed for high level performance and are safe and fast to install.

The DIN rail mounted electricity meters are available in several models: the brand new EQ meters C11, ODINsingle and the brand new EQ meters A41 and A42 for single phase metering, ODIN and the brand new EQ meters A43 and A44 for three phase metering.

The meters are designed for use in sub-metering and are available in various configurations to suite many applications.

ABB Low Voltage Products

The Low Voltage Products division manufactures low voltage circuit breakers, switches, control products, wiring accessories, enclosures and cable systems to protect people, installations and electronic equipment from electrical overload. The division further makes KNX systems that integrate and automate a building's electrical installations, ventilation systems, and security and data communication networks. All these products help customers to save energy, improve productivity and increase safety.

Global business

The Low Voltage Products division is a global business producing mainly low-voltage electrical equipment that is sold to wholesalers, original equipment manufacturers as well as system integrators, and has moderate service requirements. ABB's broad program of standardized products and components are the 'building blocks' of system solutions, incorporating functionalities that will allow seamless integration in real-time automation and information systems. At the product level, all the low voltage products can operate together perfectly.

To create a system solution, every product is equipped with the tools necessary to install, operate and maintain it efficiently throughout the product life cycle.

The range of low voltage products is supported by technical documentation. This together with compact design makes it easier than ever to incorporate our products in your system.

Our customers can find all product related documentation such as brochures, catalogues, selection program, certificates, drawings and other information directly at

www.abb.com/lowvoltage.

	Features and functionality	C-series	A-series
Platinum	Reactive energy Advanced clock functions (Load profiles) Harmonics (THD) Configurable I/O		• • • •
Gold	Basic clock functions		•
Silver	Class 0.5 on CTVT connected meters Tariffs Fixed I/O Resettable register		• • • •
Bronze	Import/export of energy		•
Steel	Active energy Class 1 Pulse output/alarm	• • •	• • •

Pulse frequency

at different loads

Direct connected meters (Imp/KWh)	Transformer-connected meters (Imp/kWh primary registering)	Max power
–	0.01	3500 MW
–	0.1	350 MW
–	1	35 MW
10	10	3.5 MW
100	100	350 kW
500	500	70 kW
640	640	54 kW
1000	1000	35 kW
5000	–	7 kW

Cable length for connection

This table is valid for copper cable

Transformer Secondary side	Cable area mm ²	Double cable (meters)					
		0.5	1	2.5	5	10	
5A	1.5	0.3	0.6	1.5	2.9	5.8	VA
5A	2.5	0.2	0.4	0.9	1.8	3.6	VA
5A	4	0	0	0.6	1.1	2.3	VA
5A	6	0	0	0.1	0.3	0.6	VA
1A	1	0.02	0.04	0.09	0.18	0.35	VA
1A	1.5	0.01	0.03	0.06	0.12	0.23	VA
1A	2.5	0.01	0.01	0.04	0.07	0.14	VA

Note: Cable length is depending on max. transformer VA.
Max. cable area is depending of max entry of the transformer.

A-series Description

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Internal clock

The internal clock, sometimes called real time clock or RTC, has a built-in calendar and keeps automatically track of leap year and daylight savings time (DST). The DST function is optional. Backup of the clock during a power failure is provided by a supercapacitor. The time is controlled from a quartz crystal based clock. Time and date is set via push buttons or via communication. The internal clock is approved according to IEC 62052-21 and IEC 62054-21. These standards specify the requirements for time switches in electricity meter related products. The accuracy is better than 5 ppm at room temperature.

Previous values

The previous value feature is available on Gold and Platinum meters and will store all energy registers and input counter values together with a date/time stamp upon change of day, week or month. All total values are stored and in meters equipped with the tariff feature all the tariff registers will also be stored.

Maximum Demand

The maximum demand function is available on Gold and Platinum meters. In the maximum demand function, the mean power in each interval is measured and the maximum mean values are stored together with a date/time stamp. For each set of maximum demand values the end date/time of the period is stored. The quantities that can be stored for each interval are active, reactive and apparent power (imported power only), and the number of pulses registered on inputs. Storage of reactive and apparent power is only possible on meters measuring combined energy and storing of pulses requires that the meter is equipped with the corresponding number of inputs. In tariff meters, the maximum demand can be stored for each tariff.

Event log

Gold and Platinum meters have an event log function. The event log will log overvoltage, undervoltage, phase voltage outage, negative power, total power outage and presence of harmonics.

Load Profile

The load profile function is available on the Platinum meters. The load profile stores the energy consumption at pre-defined intervals. The quantities that can be stored for each interval are active and reactive energy, both imported and exported energy, and the number of pulses registered on inputs. Storage of reactive energy is only possible on meters measuring combined energy and storing of pulses requires that the meter is equipped with the corresponding number of inputs. The load profile function uses the standard time setting irrespective if the daylight savings time function is activated or not.

THD

The THD and harmonics measurement is available on the Platinum meters. The voltage and current harmonics (2-16) together with the fundamental is measured sequentially one at a time. The total harmonic distortion is evaluated and displayed in percent. The separate harmonic frequencies measured are multiples of the fundamental frequency (normally around 50 or 60 Hz) up to the 16th harmonic. THD data as well as individual harmonics are shown on the display. THD data and data for individual harmonics can also be read out via serial communication.



A-series Ordering data



Single phase meter

80A, 4 DIN with IR port

Verified and approved according to MID

IEC approval

A
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Direct connected electricity meter

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	57 ... 288 V AC	B (Cl. 1)	Pulse output	A41 111 - 100	2CMA170554R1000	1	0.23
Silver	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A41 311 - 100	2CMA170502R1000	1	0.23

Direct connected electricity meter, RS-485

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	57 ... 288 V AC	B (Cl. 1)	Pulse output	A41 112 - 100	2CMA170500R1000	1	0.23
Active import and export measurement							
Bronze	57 ... 288 V AC	B (Cl. 1)	Pulse output	A41 212 - 100	2CMA170501R1000	1	0.23
Silver	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A41 312 - 100	2CMA170503R1000	1	0.23
Gold	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A41 412 - 100	2CMA170505R1000	1	0.23

Direct connected electricity meter, M-Bus

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import and export measurement							
Silver	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A41 313 - 100	2CMA170504R1000	1	0.23
Gold	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A41 413 - 100	2CMA170506R1000	1	0.23
Active and reactive import and export measurement							
Platinum	57 ... 288 V AC	B (Cl. 1) Reactive Cl 2	Configurable	A41 513 - 100	2CMA170508R1000	1	0.23

A-series Ordering data

A
13



Single phase meter

6A, 4 DIN with IR port

Verified and approved according to MID

IEC approval

CTVT connected electricity meter

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	57 ... 288 V AC	B (Cl. 1)	Pulse output	A42 111 - 100	2CMA170555R1000	1	0.20

CTVT connected electricity meter, RS-485

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	57 ... 288 V AC	B (Cl. 1)	Pulse output	A42 112 - 100	2CMA170510R1000	1	0.20
Active import and export measurement							
Bronze	57 ... 288 V AC	B (Cl. 1)	Pulse output	A42 212 - 100	2CMA170511R1000	1	0.20
Silver	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A42 312 - 100	2CMA170512R1000	1	0.20
Gold	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A42 412 - 100	2CMA170513R1000	1	0.20
Active and reactive import and export measurement, 16.7 Hz							
Platinum	57 ... 288 V AC	C (Cl. 0.5) Reactive Cl.2	Configurable	A42 552 - 120	2CMA170518R1000	1	0.20

CTVT connected electricity meter, M-Bus

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import and export measurement							
Gold	57 ... 288 V AC	B (Cl. 1)	2 output, 2 input	A42 413 - 100	2CMA170514R1000	1	0.20
Active and reactive import and export measurement, 16.7 Hz							
Platinum	57 ... 288 V AC	C (Cl. 0.5) Reactive Cl.2	Configurable	A42 553 - 120	2CMA170519R1000	1	0.20

A-series Ordering data



Three phase meter

80A, 7 DIN with IR port

Verified and approved according to MID

IEC approval

Direct connected electricity meter

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	Pulse output	A43 111 - 100	2CMA170520R1000	1	0.44
Steel	3 x 57/100 ... 288/500 V AC	A (Cl. 2)	Pulse output	A43 121 - 100	2CMA170521R1000	1	0.44
Active import and export measurement							
Silver	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	2 output, 2 input	A43 311 - 100	2CMA170524R1000	1	0.44

Direct connected electricity meter, RS-485

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import and export measurement							
Bronze	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	Pulse output	A43 212 - 100	2CMA170522R1000	1	0.44
Silver	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	2 output, 2 input	A43 312 - 100	2CMA170525R1000	1	0.44
Gold	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	2 output, 2 input	A43 412 - 100	2CMA170528R1000	1	0.44
Active and reactive import and export measurement							
Platinum	3 x 57/100 ... 288/500 V AC	B (Cl. 1) Reactive Cl.2	Configurable	A43 512 - 100	2CMA170531R1000	1	0.44

Direct connected electricity meter, M-Bus

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import and export measurement							
Bronze	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	Pulse output	A43 213 - 100	2CMA170523R1000	1	0.44
Silver	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	2 output, 2 input	A43 313 - 100	2CMA170526R1000	1	0.44
Gold	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	2 output, 2 input	A43 413 - 100	2CMA170529R1000	1	0.44
Active and reactive import and export measurement							
Platinum	3 x 57/100 ... 288/500 V AC	B (Cl. 1) Reactive Cl.2	Configurable	A43 513 - 100	2CMA170532R1000	1	0.44

A-series Ordering data

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Three phase meter

6A, 7 DIN with IR port

Verified and approved according to MID

IEC approval

CTVT connected electricity meter

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	Pulse output	A44 111 - 100	2CMA170533R1000	1	0.35
Active import and export measurement							
Silver	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	2 output, 2 input	A44 311 - 100	2CMA170536R1000	1	0.35

CTVT connected electricity meter, RS-485

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import and export measurement							
Bronze	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	Pulse output	A44 212 - 100	2CMA170534R1000	1	0.35
Silver	3 x 57/100 ... 288/500 V AC	C (Cl. 0.5)	2 output, 2 input	A44 352 - 100	2CMA170537R1000	1	0.35
Gold	3 x 57/100 ... 288/500 V AC	C (Cl. 0.5)	2 output, 2 input	A44 452 - 100	2CMA170540R1000	1	0.35
Active and reactive import and export measurement							
Platinum	3 x 57/100 ... 288/500 V AC	C (Cl. 0.5) Reactive Cl.2	Configurable	A44 552 - 100	2CMA170545R1000	1	0.35
Active and reactive import and export measurement, 690 V AC							
Platinum	3 x 100/173 ... 400/690 V AC	C (Cl. 0.5) Reactive Cl.2	2 output, 2 input	A44 552 - 110	2CMA170549R1000	1	0.35

CTVT connected electricity meter, M-Bus

Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import and export measurement							
Bronze	3 x 57/100 ... 288/500 V AC	B (Cl. 1)	Pulse output	A44 213 - 100	2CMA170535R1000	1	0.35
Silver	3 x 57/100 ... 288/500 V AC	C (Cl. 0.5)	2 output, 2 input	A44 353 - 100	2CMA170538R1000	1	0.35
Gold	3 x 57/100 ... 288/500 V AC	C (Cl. 0.5)	2 output, 2 input	A44 453 - 100	2CMA170541R1000	1	0.35
Active and reactive import and export measurement							
Platinum	3 x 57/100 ... 288/500 V AC	C (Cl. 0.5) Reactive Cl.2	Configurable	A44 553 - 100	2CMA170546R1000	1	0.35
Active and reactive import and export measurement, 690 V AC							
Platinum	3 x 100/173 ... 400/690 V AC	C (Cl. 0.5) Reactive Cl.2	2 output, 2 input	A44 553 - 110	2CMA170548R1000	1	0.35

A-series

Technical data

	A41	A42	A43	A44
Voltage/current inputs				
Nominal voltage	230 V AC		3x230/400 V AC	
Voltage range	57.7 - 288 V AC (-20% - +15%) 100 ... 288 V AC (-20% - +15%)		3x57,7/100 ... 288/500 V AC (-20% - +15%) 3x100/173 ... 400/690 V AC (-20% - +15%)	
Power dissipation voltage circuits	0.8 VA (0.8 W) total			0.8 VA (0.8 W) total
Power dissipation current circuits	0.007 VA (0.007 W) at 230 VAC and I _b	0.001 VA (0.001 W) at 230 VAC and I _b	0.007 VA (0.007 W) per phase at 230 VAC and I _b	0.001 VA (0.001 W) per phase at 230 VAC and I _b
Base current I _b	5 A	-	5 A	-
Rated current I _n	-	1 A	-	1 A
Reference current I _{ref}	5 A	-	5 A	-
Transitional current I _t	0.5 A	0.05 A	0.5 A	0.05 A
Maximum current I _{max}	80 A	6 A	80 A	6 A
Minimum current I _{min}	0.25 A	0.02 A	0.25 A	0.02 A
Starting current I _s	< 20 mA	< 1 mA	< 20 mA	< 1 mA
Terminal wire area	1 - 25 mm ²	0.5 - 10 mm ²	1 - 25 mm ²	0.5 - 10 mm ²
Recommended tightening torque	2.5 Nm	2 Nm	2.5 Nm	2 Nm
General data				
Frequency	50 or 60 Hz ± 5%	50 or 60 Hz ± 5% or 16.7 Hz (optional)	50 or 60 Hz ± 5%	
Accuracy Class	B (Cl.1) or Reactive Cl. 2	B (Cl.1), C (Cl.0.5) or Reactive Cl. 2	A (Cl.2), B (Cl.1) or Reactive Cl. 2	B (Cl.1), C (Cl.0.5) or Reactive Cl. 2
Active energy	1%	0.5%, 1%	1%, 2%	0.5%, 1%
Display of energy	pixel oriented		pixel oriented	
Mechanical				
Material	Polycarbonate in transparent front glass, bottom case, upper case and terminal cover, Glass reinforced polycarbonate in terminal block.		Polycarbonate in transparent front glass, bottom case, upper case and terminal cover, Glass reinforced polycarbonate in terminal block.	
Environmental				
Operating temperature	-40°C - +70°C		-40°C - +70°C	
Storage temperature	-40°C - +85°C		-40°C - +85°C	
Humidity	75% yearly average, 95% on 30 days/year		75% yearly average, 95% on 30 days/year	
Resistance to fire and heat	Terminal 960°C, cover 650°C (IEC 60695-2-1)		Terminal 960°C, cover 650°C (IEC 60695-2-1)	
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.		IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.	
Mechanical environment	Class M1 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).		Class M1 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).	
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).		Class E2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).	
Outputs				
Current	2 - 100 mA		2 - 100 mA	
Voltage	24 VDC - 240 VAC. For meters with only 1 output, 5 - 40 VDC.		24 VDC - 240 VAC. For meters with only 1 output, 5 - 40 VDC.	
Pulse output frequency	Prog. (1 - 9999 imp/MWh, 1 - 9999 imp/kWh, 1 - 9999 imp/Wh)		Prog. (1 - 9999 imp/MWh, 1 - 9999 imp/kWh, 1 - 9999 imp/Wh)	
Pulse length	10 - 990 ms		10 - 990 ms	
Terminal wire area	0.5 - 1 mm ²		0.5 - 1 mm ²	
Recommended tightening torque	0.25 Nm		0.25 Nm	
Inputs				
Voltage	0 - 240 V AC/DC		0 - 240 V AC/DC	
OFF	0 - 12 V AC/DC		0 - 12 V AC/DC	
ON	24 - 240 V AC/DC		24 - 240 V AC/DC	
Min. pulse length	30 ms		30 ms	
Terminal wire area	0.5 - 1 mm ²		0.5 - 1 mm ²	
Recommended tightening torque	0.25 Nm		0.25 Nm	
Communication				
Terminal wire area	0.5 - 1 mm ²	-	0.5 - 1 mm ²	-
Recommended tightening torque	0.25 Nm	-	0.25 Nm	0.25 Nm
Transformer ratios				
Configurable voltage ratio (VT)	-	1 - 9999 (Programmable)	-	1 - 9999
Configurable current ratio (CT)	-	1 - 9999 (Programmable)	-	1 - 9999
Max total transformer ratio (VT*CT)	-	999999	-	999999
Pulse indicator (LED)				
Pulse frequency	1000 imp/kWh	5000 imp/kWh	1000 imp/kWh	5000 imp/kWh
Pulse length	40 ms	40 ms	40 ms	40 ms
EMC compatibility				
Impulse voltage test	6 kV 1.2/50 µs (IEC 60060-1)		6 kV 1.2/50 µs (IEC 60060-1)	
Surge voltage test	4 kV 1.2/50 µs (IEC 61000-4-5)		4 kV 1.2/50 µs (IEC 61000-4-5)	
Fast transient burst test	4 kV (IEC 61000-4-4)		4 kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields	80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)		80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)	
Immunity to conducted disturbance	150 kHz - 80 MHz, (IEC 61000-4-6)		150 kHz - 80 MHz, (IEC 61000-4-6)	
Radio frequency emission	EN 55022, class B (CISPR22)		EN 55022, class B (CISPR22)	
Electrostatic discharge	15 kV (IEC 61000-4-2)		15 kV (IEC 61000-4-2)	
Standards	IEC 62052-11, IEC 62053-21 class 1 & 2, IEC 62053-22 class 0.5s, IEC 62053-23 class 2, IEC 62054-21, GB/T 17215.211-2006, GBT 17215.321-2008 class 1 & 2, GB/T 17215.322-2008 class 0.5s, GB 4208-2008, EN 50470-1, EN 50470-3 category A, B & C		IEC 62052-11, IEC 62053-21 class 1 & 2, IEC 62053-22 class 0.5s, IEC 62053-23 class 2, IEC 62054-21, GB/T 17215.211-2006, GBT 17215.321-2008 class 1 & 2, GB/T 17215.322-2008 class 0.5s, GB 4208-2008, EN 50470-1, EN 50470-3 category A, B & C	
Dimensions				
Width	70 mm		123 mm	
Height	97 mm		97 mm	
Depth	65 mm		65 mm	
DIN modules	4		7	

C-series Description

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The EQ meters, C11 meter is a truly compact meter for single phase metering. The C11 is mounted on a DIN rail and is suitable for installation in distribution boards and small consumer units. The C11 is suitable for many applications.

General features

The C11 is a very compact meter for single phase applications. The meter has an LCD with large digits on a vertical line and small digits on a horizontal line below. The meter has a wide temperature range which makes it possible to install the meter in many locations. Navigating the meter is easily done via the push-button below the display. The power consumption of the meter is very low, less than 0.8 VA (0.2 W).

Communication

Data from the C11 meters can be collected via pulse output. The pulse output is a solid state relay that generates pulses proportionally to the measured energy.

Instrumentation

The C11 meters support reading of instrument values. A number of electrical properties can be read:

- Power factor
- Active power
- Current
- Voltage

Outputs

The C11 meter has an output that can be used as pulse output or alarm output. The alarm quantity and levels is easily configured on the meter with the push button. The output can be used for controlling external apparatus like a contactor or an alarm indicator (connected via an external relay).

Approvals

The C11 meter is type approved according to IEC and MID. MID is the Measuring Instruments Directive 2004/22/EC from the European Commission. The type approval is according to standards that covers all relevant technical aspects of the meter. These include climate conditions, electromagnetic compatibility (EMC), electrical requirements, mechanical requirements and accuracy.

C-series

Ordering data, dimensions, wiring diagrams



Single phase meter

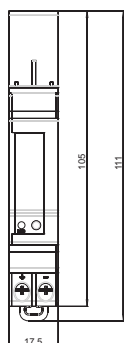
40A, 1 DIN with ProM Terminal
IEC approval

Direct connected electricity meter

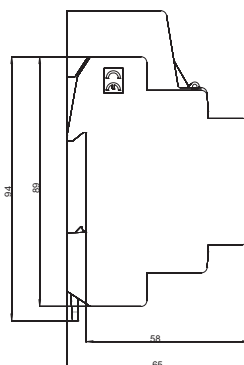
Functionality	Voltage V	Accuracy Class	I/O	Type	Order code	Pkg qty	Weight (1 pce) kg
Active import measurement							
Steel	1 x 230 V AC	B (Cl. 1)	Pulse output	C11 110 - 300	2CMA170550R1000	1	0.07

Dimension

Front view



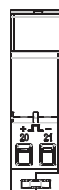
Side view



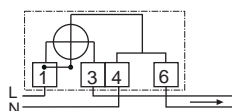
Top view, terminal area



Bottom view, pulse/alarm output



Wiring diagram



C-series

Technical data

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C11	
Voltage/current inputs	
Nominal voltage	1 x 230 V AC
Voltage range	230 V (-20% - +15%)
Power dissipation voltage circuits	< 0.8 VA (0.2 W) total
Power dissipation current circuits	0.02 W at 230 V AC and I_b
Base current I_b	5 A
Rated current I_n	-
Reference current I_{ref}	5 A
Transitional current I_T	0.5 A
Maximum current I_{max}	40 A
Minimum current I_{min}	0.25 A
Starting current I_s	< 20 mA
Terminal wire area	0.5 - 10 mm ²
Recommended tightening torque	0.8 Nm
General data	
Frequency	50 or 60 Hz ± 5%
Accuracy Class	B (Cl.1)
Accuracy	1%
Display of energy	6 digits LCD
Mechanical	
Material	Polycarbonate in transparent front glass and terminal cover. Glass reinforced polycarbonate in terminal block
Environmental	
Operating temperature	- 25°C - +70°C
Storage temperature	- 25°C - +85°C
Humidity	75% yearly average, 95% on 30 days/year
Resistance to fire and heat	Terminal 960°C, cover 650°C (IEC 60695-2-1)
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.
Mechanical environment	Class M1 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC)
Outputs	
Current	2 - 100 mA
Voltage	5 - 40 V DC
Pulse output frequency	100 (imp/kWh)
Pulse length	200 ms
Terminal wire area	0.5 - 6 mm ²
Recommended tightening torque	0.8 Nm
Inputs	
Voltage	-
OFF	-
ON	-
Min. pulse length	-
Terminal wire area	-
Recommended tightening torque	-
Communication	
Terminal wire area	-
Recommended tightening torque	-
Transformer ratios	
Configurable voltage ratio (VT)	-
Configurable current ratio (CT)	-
Max total transformer ratio (VT*CT)	-
Pulse indicator (LED)	
Pulse frequency	1000 imp/kWh
Pulse length	40 ms
EMC compatibility	
Impulse voltage test	6 kV 1.2/50 µs (IEC 60060-1)
Surge voltage test	4 kV 1.2/50 µs (IEC 61000-4-5)
Fast transient burn test	4 kV (IEC 61000-4-4)
Immunity to electromagnetic HF-fields	80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)
Immunity to conducted disturbance	150 kHz - 80 MHz, (IEC 61000-4-6)
Radio frequency emission	EN 55022, class B (CISPR22)
Electrostatic discharge	15 kV (IEC 61000-4-2)
Standards	IEC 62052-11, IEC 62053-21 class 1, GB/T 17215.211-2006, GBT 17215.321-2008 class 1, GB 4208-2008, EN 50470-1, EN 50470-3 category B
Dimensions	
Width	17,5 mm
Height	111 mm
Depth	65 mm
DIN modules	1

ABB i-bus® KNX Security and Surveillance



SMB/S 1.1

Fault Monitoring Unit, MDRC

It is used to detect and manage up to 100 fault messages which are processed within the unit and can be forwarded to a display unit. Furthermore, an optical and an acoustic collective status signal is provided. Messages can be acknowledged and data losses can be reported. The devices support message formats to DIN 19 235: messages with continuous lighting, new value messages with simple flashing light, initial value messages with simple acknowledgement, motor messages. Current values can be centrally scanned.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	SMB/S 1.1	GHQ6310085R0111		1	0.12



EUB/S 1.1

Monitoring Unit, MDRC

Monitors up to 100 bus devices in KNX systems, which can be divided into 5 groups. The devices are monitored to ensure their presence and minimum functionality (send and receive). Monitoring can be undertaken based on the physical address or the group address. A total of four different monitoring modes are available.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	EUB/S 1.1	2CDG110066R0011		1	0.12



BDB/S 1.1

Data Logging Unit, MDRC

It detects local operation cycles and operating hours to plan the maintenance or durability evaluation of the devices. For each of the 35 channels to be monitored, limit values can be set and a message sent if this limit is exceeded. The logging of operating hours can be predetermined for the total or remaining time. These values can be modified via communication objects.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	BDB/S 1.1	2CDG110067R0011		1	0.12

ABB i-bus® KNX Security and Surveillance

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Security Products

Using the following range of security products, it is possible to implement a variety of tasks from basic monitoring functions to professional security installations in conjunction with ABB i-bus®. Typical applications range from simple functions, e.g. opening surveillance or lock monitoring of doors and windows, reporting fractures in water pipes or the early detection of smoke to installations in buildings with VdS requirements (class A, B or C).



SCM/S 1.1

Security Module, MDRC

The module provides the necessary logic functions to link the various KNX devices (e.g. zone terminals) to a security system. Up to 64 different zones can be evaluated via communication objects. Arming, operation and display are also implemented using communication objects. The device has a freely programmable relay output for connection of a signal encoder. An uninterruptible KNX power supply with battery back-up is recommended for security function buffering on mains failure.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	SCM/S 1.1	2CDG110024R0011		1	0.13



MT/S 8.12.2M

Security Terminal

They are used as the interface between the security technology sensors and the KNX. The device features inputs, so-called zones. They are used for monitoring connected passive detectors, e.g. magnetic contacts and/or glass break sensors on the ABB i-bus® KNX and/or for connection of floating contacts in applications with enhanced security requirements. The device can be used as a system with autonomous alarm logic or in combination with the Security Module SCM/S or an Intrusion Alarm Panel L240 with KNX interface XS/S. The device requires an external 12 V DC SELV auxiliary power supply, (e.g. NTU/S 12.2000.1).

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
8-fold, MDRC	4	MT/S 8.12.2M	2CDG110110R0011		1	0.19
4-fold, MDRC	4	MT/S 4.12.2M	2CDG110109R0011		1	0.19
2-fold, FM	-	MT/U 2.12.2	2CDG110111R0011		1	0.08



XS/S 1.1

Interface for Intrusion Alarm Panel, MDRC

The Intrusion Alarm Panel L240 with a comprehensive range of sensors for all surveillance tasks, and the comfortable arming mechanism SafeKey, provide a universal solution for professional applications. Integration into KNX systems is possible using the Interface XS/S1.1. Accordingly there are numerous benefits: For example, a door/window opening detector can be used to switch off the heating and save energy in the unset state. When an alarm is triggered, the KNX devices can carry out actions such as switching on the light or operating the blinds. The interaction offers further benefits in terms of system integration, which comply to the demands of the VdS up to Class C.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	2	XS/S 1.1	2CDG110075R0011		1	0.11

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L240

Intrusion Alarm Panel

For the protection of small to medium residential and commercial properties against intrusion and technical faults. VdS approved as an Intrusion Alarm Panel for VdS classes A, B, C. Corresponds to DIN VDE 0833 parts 1 & 3, Stage 3 according to European standard EN 50131-1 "medium to high risk".

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L240	2CDG230004R0011		1	



L240/PT

LCD Keypad

For operation and programming of the panel. The messages are displayed on a two-line LCD display. Menu driven operation and programming of the panel. Internal and external setting on the keypad is possible. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L240/PT	2CDG230014R0011		1	



L208/V.24

Serial Interface Module

For programming of the L240 via PC with serial interface V24, incl. Software WinPC.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L208/V.24	GHQ3280220R0001		1	

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L240/IP

IP Interface Module

For programming of the L240 via PC with Ethernet interface, incl. Software WinPC.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L240/IP	2CDG230013R0011		1	



SAK7

Sealed Lead Acid Battery, 12 V DC, 7 Ah

For Intrusion Alarm Panel emergency power. 2 units can be installed. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	SAK7	GHV9240001V0011		1	



IR/XB
IR/XC

BUS-Infra-Red Motion Detector

For direct connection to the bus of the Intrusion Alarm Panel L240, whereby a maximum of 40 detectors can be addressed by the panel. The motion detectors with passive infra-red technology are registered for VdS classes B and C (anti-masking monitored). They facilitate monitoring of an area with an IR range of up to 15 m.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
VdS-No. G 110 506	-	IR/XB	2CDG230023R0011		1	
VdS-No. G 110 062	-	IR/XC	2CDG230024R0011		1	



EIM/XB
EIM/XC

BUS-Dual Motion Detector

For direct connection to the bus of the Intrusion Alarm Panel L240, whereby a maximum of 40 detectors can be addressed by the panel. The Dual-Motion Detector combines proven passive infra-red technology with temperature-independent microwave technology. The combination of both functional principles results in a detector featuring high immunity to false alarms, even with unfavourable ambient conditions, and which still has high detection security. The detectors are registered for VdS classes B and C (anti-masking monitored). They facilitate monitoring of an area with an IR range of up to 15 m.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
VdS-No. G 110 513	-	EIM/XB	2CDG230025R0011		1	
VdS-No. G 110 061	-	EIM/XC	2CDG230026R0011		1	



MW

Mounting Bracket

For motion detectors.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	MW	GHV9230039V0020		1	

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L240/MG2

Zone Bus-Module, 2-fold, FM

For expansion of the panel by 2 detector circuits. Used for connection to the exterior perimeter detectors such as magnetic reed contacts and passive glass break sensors. The module has 2 zones to which 2 detectors can be connected via LSA terminals. The module is an intelligent distributor by simple installation in a 60 mm installation box in the vicinity of the window.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L240/MG2	2CDG220003R0011		1	



L840/MG4

Zone Bus-Module, 4-fold

For expansion of the panel by 4 detector circuits. An SAD enclosure is required for installation.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L840/MG4	GHQ3280011R0001		1	



WEL/A, ES

SafeKey Wall Reader, SM

For setting/unsetting with the Evaluation Module L240/BS. The unit is actuated by inserting the electronic SafeKey chipkey. The SafeKey Wall Reader WEL is equipped with the key reader and an acknowledgement buzzer. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	WEL/A, ES	GHQ3050023R0001		1	



WELT/A, ES

SafeKey Wall Reader, SM

For setting/unsetting with the Evaluation Module L240/BS. The unit is actuated by inserting the electronic SafeKey chipkey. The SafeKey Wall Reader WEL is equipped with the key reader and an acknowledgement buzzer. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
Edelstahl	-	WELT/A, ES	GHQ3050024R0001		1	



SCS

SafeKey Chipkey

It is an electronic carrier medium for lock actuation and for setting/unsetting on a strike plate, door cylinder or wall reader. A SafeKey Chipkey can be authorized for any number of different SafeKey systems with different levels of authorization.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	SCS	GHQ3050027R0001		1	

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L240/BS

SafeKey Evaluation Module

For connection of the SafeKey components as well as all components required for a setting door (magnetic contacts, lock bolt switching contact, bolt lock, internal siren). For direct connection to the bus of the Intrusion Alarm Panel L240. The management of the electronic keys from the SafeKey range is undertaken completely on the LCD keypad of the panel.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	L240/BS	GHQ3050031R0001		1	



SSM/A

SafeKey Switching Module

is used for an easy connection and evaluation of the SafeKey Wall Reader with or without keypad (WEL or WELT). Applicable for potential-free switching of electrical components up to 5 A at a max. voltage of 12...24 V DC/AC, i.e. electrical door opener or garage doors, or to set/unset a KNX security system via the connection to a Security Terminal MT/x.

In subject to the housing type the module can be used for surface or flush mount. A 12 V power supply is required.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
Surface mounting	-	SSM/A	2CDG240019R0011		1	
Flush mounting	-	SSM/U	2CDG240020R0011		1	

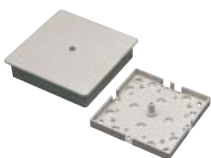


ESPE

Electromechanical Bolt Lock

Prevents access to the set zone of an Intrusion Alarm Panel. The unit is mounted in the door frame. Only a single bore or the counterpart for the locking bolt in the door panel is required. Suitable for use with WEL and WELT. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	ESPE	GHV9250010V0001		1	
Replacement Locking Bolt	-	EVSB	GHV9250010V0002		1	
Mounting kit, flat door panel and frame	-	AMSP	GHV9250010V0004		1	
Mounting kit, raised door panel	-	AMSE	GHV9250010V0003		1	



SAD/GAP

Distribution Enclosures

For installation of the Bus Modules L840/MG4 and L240/BS.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
Surface mounting	-	SAD/GAP	GHQ3280015R0001		1	
Flush mounting	-	SAD/GUP	GHQ3280013R0001		1	
Wall box for SAD/GUP	-	SAD/ED	GHQ3280014R0001		1	

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MRS/W

Magnet Reed Contact Set

For opening surveillance of windows and doors, complete for bolting or drilling Contents: 1 magnet, 1 reed contact with 4.0 m connection cable LIYY 4 x 0.14 mm², 2 housings, 2 spacer plates, 2 flanges and 4 anti-magnetic fixing screws. VdS No. G 191549. VdS class B.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
white	-	MRS/W	GHQ3201972R0001		1	
brown	-	MRS/B	GHQ3201972R0002		1	
Saver Set (20 pcs.), white	-	VMRS/W	GHQ3201972R0011		1	
Saver Set (20 pcs.), brown	-	VMRS/B	GHQ3201972R0012		1	



RTK

Rolling Door Magnet Reed Contact Set

For monitoring opening or rolling doors or other large doors in the industrial field. Contents: 1 magnet, 1 reed contact with 2 m connection cable 4 x 0.14 mm², 1 m protective tubing and 1 set of mounting accessories. Degree of protection: IP 68; Environmental class to VdS 4; VdS class B.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	RTK	GHQ3201973R0021		1	



SPGS/W

Glass Break Sensor

For surveillance of glass surfaces of windows, display windows and doors with high interference immunity and integrated memory display. For operation directly on detector circuits of intrusion alarm panels or security terminals. Extremely compact dimensions. Dimensions: H x W x D = 18 x 18 x 9 mm. Mounted onto glass using Loctite adhesive (LKS). With 5 m connection cable. VdS No. G 194524. VdS class B.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
white	-	SPGS/W	GHV9220004V0009		1	
brown	-	SPGS/B	GHV9220004V0010		1	
Mechanical Glass Break Test Device	-	GP2	GHV9220004V0004		1	
Loctite adhesive	-	LKS	GHQ4001906R0001		1	



WRK/W

Lock Bolt Switching Contact

For installation in the strike plate, for lock monitoring on doors. Water-tight IP 67, with 2.5 m connection cable LIYY 3 x 0.14 mm². VdS No. G 190008. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	WRK/W	2CDG250003R0011		1	

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VSUE

Window Lock Monitoring Contact

Lock monitoring is carried out with a special magnet and a reed contact. The magnet is mounted on the push rod of the window sash while the reed contact is mounted on the frame. The connection cable LIYY 4 x 0.14 mm² is 4 m in length. VdS No. G 190074. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	VSUE	GHV9210018V0022		1	



ADB

Window opening Plungers

Indirect lock monitoring by mechanical push opening of the window in conjunction with magnetic contacts that monitor opening. Available in 2 spring strengths.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
150 N	-	ADB	GHV9210018V0020		1	
35 N	-	ADB1	GHV9210018V0021		1	



ND/W

Emergency Call Button

For manual alarm tripping. Complies with the police regulations since it features permanent trip recognition, momentary-contact function, with cover contact. Surface mount version. Colour: white. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
Surface mounting	-	ND/W	GHQ7132443R0011		1	
Flush mounting	-	NDU/W	GHQ7132443R0021		1	
Spare Papers (10 pcs.)	-	EP	GHQ7132443R0003		1	



NDA/W

Cover plate

Used primarily in the banking sector or other institutions, where unintentional alarm triggering is possible due to public access.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	NDA/W	GHQ7132443R0004		1	



IR/KB

Passive Infra-Red Detector

For conventional wiring to zone inputs of an Intrusion Alarm Panel or a KNX Security Terminal. With a volumetric lens for interior monitoring. Can be optionally set for hall monitoring function up to 15 m. Color: RAL 9010 pure white; for use up to VdS class B.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
VdS-No. G 110 502	-	IR/KB	2CDG230027R0011		1	

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EIM/KB

Dual Motion Detector

This new dual detector is based on proven detection principles of the EIM detector AND incorporation of infrared technology and electromagnetic field detection. The detector enables a detection range of 15 m with 17 zones on 6 levels. The range of the infra-red component the electromagnetic field can be adjusted separately using a jumper. Up to VdS class C; Color RAL 9010 pure white.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
VdS-No. G 110 503	-	EIM/KB	2CDG230028R0011		1	
VdS-No. G 110 060	-	EIM/KC	2CDG230029R0011		1	



MW

Mounting Bracket

For motion detectors.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	MW	GHV9230039V0020		1	



EIM/DB

Dual Ceiling Detector

Operates according to the proven detection principle of the EIM detector (infra-red technology and electromagnetic field) over 360°. The range of the infrared component can be adapted via the mounting height while the range of the electromagnetic field can be adjusted separately using a jumper. The detector is fitted with a walk test LED. Colour: RAL 9010 pure white.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	EIM/DB	GHV9230039V0010		1	



SGL

Gas Detector

For measurement and evaluation of the concentration of natural gas or liquefied gas in the air. The detector requires a 10 – 30 V DC voltage supply and has a normally open relay output contact for connection to the intrusion alarm panels and fire alarm panels, features an LED display and a Piezo buzzer. For ceiling and wall mounting.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	SGL	GHQ3050008R0001		1	

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SWM 4

Water Detector

A resin-encapsulated water detector with gold-plated Termipoint pins, detects water ingress, e.g., pipe fractures, ingress of groundwater and sewage, water damage caused by washing machines and dishwashers etc. before the damage becomes too expensive. For operation directly on detector circuits of intrusion alarm panels or security terminals.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	SWM 4	GHQ4030001R0004		1	



SWM 4/RN

Water Detector with Relay Output

Features a potential free changeover contact output, an LED parallel output and a LED display. The detector resets itself automatically when the affected area dries out. The device draws its power from an external 10 ... 23 V DC voltage source.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	SWM4/RN	GHQ4030001R0012		1	



FC650/O

Optical Smoke Detector

Optical smoke detector in threshold alarm technology that detects smoke according to the scattered-light principle. The detectors feature an alarm indicator on the detector head that is visible from all angles, and which can be triggered with a permanent magnet for test purposes. A detector base is provided for mounting and cable connection purposes into which the detector is simply screwed in via the bayonet connection. Each detector is equipped with an alarm LED, which displays the stored alarm in the event of an alarm. Detector/base diameter: 110 mm. VdS approved.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	FC650/O	2CDG430073R0011		1	



FC650/TMAX

Heat Detector

Static Heat Detector in threshold alarm technology, – trigger temperature 78 °C. The detectors feature an alarm indicator on the detector head that is visible from all angles, and which can be triggered with a permanent magnet for test purposes. A detector base is provided for mounting and cable connection purposes into which the detector is simply screwed-in via the bayonet connection. Each detector is equipped with an alarm LED, which displays the stored alarm in the event of an alarm. Detector/base diameter: 110 mm. VdS approved.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	FC650/TMAX	2CDG430081R0011		1	

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FC600/BREL

Detector Base, 12 V

Enables system-independent connection of the FC650 series fire detector to systems or devices that are not specifically designed for this detector technology. Examples include Intrusion Alarm Panels, KNX Security Terminals, elevator controls or other signal processing equipment. The detector base must be supplied by either a 12 V or a 24 V DV voltage supply. A floating 30 V DC/1 A changeover contacting is provided for transferring an alarm.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	FC600/BREL	2CDG430051R0011		1	



FPA03

Testing Aerosol

For optical smoke detector testing, 250 ml.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	FPA03	GHV9020012V0021		1	

Reed Relay, 12 V

For connection, e.g. to transistor outputs of Intrusion Alarm Panels. Coil voltage 8.5...14 V DC. Current consumption 5 mA at 12 V DC. Contact loading 24 V/100 mA.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	RL	GHV9270013V0100		1	



SSS

Electronic Solid-State Siren

Electronic solid-state siren with intermittent tone for alarm purposes in indoor installations. External dimensions: $\varnothing \times H = 90 \times 37$ mm.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	SSS	GHV9270001V0001		1	



SSF/G

Siren in Enclosure

An aluminium protective housing with additional protective enamel coating. Protected against sabotage by a case tamper contact. The alarm inputs are wired onto a terminal strip. With fixing screw (M4) for potential equalization on the base. Dimensions: H x W x D = 200 x 205 x 88 mm; Color: RAL 9002 Environmental class III to VdS.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
	-	SSF/G	GHQ3050017R0001		1	

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SSF/GB

Combination Signalling Device

Siren in an aluminium protective housing with additional protective enamel coating and strobe light mounted on top. Protected against sabotage by a case tamper contact.

The alarm inputs are wired onto a terminal strip. Dimensions: H x W x D = 258 x 205 x 88 mm; Color RAL 9002. VdS No. G 101147. VdS class C.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	SSF/GB	GHQ3050018R0001		1	



6826-84

Busch Smoke Alarm® ProfessionalLine

For early detection of smouldering fires and open fires with smoke development indoors according to the photooptical measurement principle (Tyndall). With installed Lithium battery. Battery life min. 10 years. With test button and muting. Can be networked with up to 12 detectors using the radio module. Can be networked via 2-wire twisted pair cable with up to 12 detectors. Acoustic alarm: installed horn (85 dBA). Cyclic functional test. Including attachment material – VdS certified. Conform to EN 14604.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
studio white	-	6826-84	6800-0-2512		1	



6827-84

Busch Heat Alarm ProfessionalLine

Signal triggered at over 57 °C. With installed Lithium battery. Battery life min. 10 years. With test button and muting. Can be networked via 2-wire twisted pair cable with up to 12 detectors. Can be networked with up to 12 detectors using the radio module. Acoustic alarm: installed horn (85 dBA). Cyclic functional test. Including attachment material – VdS certified. Conform to EN 14604.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
studio white	-	6827-84	6800-0-2513		1	



6827-84

Busch Smoke Alarm® Radio Module

For wireless networking of multiple Busch smoke alarms® / heat alarms.

With installed Lithium battery. Battery life min. 10 years. Radio frequency: 868 MHz.

Range: max. 100 m outdoors, max. 30 m indoors.

Description	MW	Type	Order code	Price 1 pc. €	Pack unit pc.	Weight 1 pc. kg
	-	6828	6800-0-2514		1	

ABB i-bus® KNX Security and Surveillance



6829-84

Busch Smoke Alarm® Relay

For connecting external systems, e.g. KNX. Relay contact, floating changeover contact 230 V~ max. 5 A. Cable connection: up to 2 x 2 x 1.5 mm². With installed radio module. Rated voltage: 230 V~.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
studio white	-	6829-84	6800-0-2515		1	



6824-84

Busch Smoke Alarm® Remote Control

For service purposes. With muting, test and search function.

Description	MW	Type	Order code	Price 1 pc. € pc.	Pack unit pc.	Weight 1 pc. kg
studio white	-	6824-84	6800-0-2516		1	

Notes

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A series of horizontal dotted lines for taking notes.

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B

Selection Table According to Order Code

Order code	Type	EAN	PG	Page
1754-0-4104	1721-80	40 11395 99482 5	4	76
1754-0-4105	1722-80	40 11395 99484 9	4	76
1754-0-4106	1723-80	40 11395 99486 3	4	76
1754-0-4107	1724-80	40 11395 99488 7	4	76
1754-0-4108	1725-80	40 11395 99492 4	4	76
1754-0-4109	1721-84	40 11395 99611 9	1	76
1754-0-4110	1722-84	40 11395 99613 3	1	76
1754-0-4111	1723-84	40 11395 99615 7	1	76
1754-0-4112	1724-84	40 11395 99617 1	1	76
1754-0-4113	1725-84	40 11395 99619 5	1	76
1754-0-4230	1721-182K	40 11395 05043 9	1	75
1754-0-4231	1722-182K	40 11395 05070 5	1	75
1754-0-4232	1723-182K	40 11395 05071 2	1	75
1754-0-4233	1724-182K	40 11395 05073 6	1	75
1754-0-4234	1725-182K	40 11395 05074 3	1	75
1754-0-4235	1721-184K	40 11395 05075 0	1	75
1754-0-4236	1722-184K	40 11395 05076 7	1	75
1754-0-4237	1723-184K	40 11395 05077 4	1	75
1754-0-4238	1724-184K	40 11395 05078 1	1	75
1754-0-4239	1725-184K	40 11395 05079 8	1	75
1754-0-4240	1721-181K	40 11395 05080 4	4	75
1754-0-4241	1722-181K	40 11395 05081 1	4	75
1754-0-4242	1723-181K	40 11395 05082 8	4	75
1754-0-4243	1724-181K	40 11395 05083 5	4	75
1754-0-4244	1725-181K	40 11395 05084 2	4	75
1754-0-4250	1721-810	40 11395 05671 4	4	76
1754-0-4251	1722-810	40 11395 05673 8	4	76
1754-0-4252	1723-810	40 11395 05675 2	4	76
1754-0-4253	1724-810	40 11395 05677 6	4	76
1754-0-4254	1721-860	40 11395 05679 0	4	76
1754-0-4255	1722-860	40 11395 05681 3	4	76
1754-0-4256	1723-860	40 11395 05683 7	4	76
1754-0-4257	1724-860	40 11395 05685 1	4	76
1754-0-4258	1721-821	40 11395 05687 5	4	76
1754-0-4259	1722-821	40 11395 05689 9	4	76
1754-0-4260	1723-821	40 11395 05691 2	4	76
1754-0-4261	1724-821	40 11395 05693 6	4	76
1754-0-4301	1721-183K	40 11395 06905 9	4	75
1754-0-4302	1722-183K	40 11395 06907 3	4	75
1754-0-4308	1723-183K	40 11395 07015 4	4	75
1754-0-4309	1724-183K	40 11395 07483 1	4	75
1754-0-4310	1725-183K	40 11395 07484 8	4	75
1754-0-4317	1721-866K	40 11395 08831 9	4	77
1754-0-4318	1722-866K	40 11395 08834 0	4	77
1754-0-4319	1723-866K	40 11395 08837 1	4	77
1754-0-4320	1724-866K	40 11395 08839 5	4	77
1754-0-4321	1725-866K	40 11395 08842 5	4	77
1754-0-4322	1721-825	40 11395 08891 3	4	76
1754-0-4323	1722-825	40 11395 08892 0	4	76
1754-0-4325	1724-825	40 11395 08894 4	4	76
1754-0-4326	1721-80G	40 11395 11305 9	4	76
1754-0-4327	1722-80G	40 11395 11306 6	4	76
1754-0-4328	1723-80G	40 11395 11307 3	4	76
1754-0-4329	1724-80G	40 11395 11308 0	4	76
1754-0-4330	1725-80G	40 11395 11309 7	4	76
1754-0-4331	1721-284	40 11395 11324 0	1	77
1754-0-4332	1722-284	40 11395 11325 7	1	77
1754-0-4333	1723-284	40 11395 11326 4	1	78
1754-0-4334	1721-285	40 11395 11327 1	4	77
1754-0-4335	1722-285	40 11395 11328 8	4	77
1754-0-4336	1723-285	40 11395 11329 5	4	78
1754-0-4337	1721-286	40 11395 11331 8	4	77
1754-0-4338	1722-286	40 11395 11332 5	4	77

Selection Table According to Order Code

Order code	Type	EAN	PG	Page
1754-0-4339	1723-286	40 11395 11333 2	4	78
1754-0-4340	1721-287	40 11395 11334 9	4	77
1754-0-4341	1722-287	40 11395 11335 6	4	77
1754-0-4342	1723-287	40 11395 11336 3	4	78
1754-0-4343	1721-288	40 11395 11337 0	4	77
1754-0-4344	1722-288	40 11395 11338 7	4	77
1754-0-4345	1723-288	40 11395 11339 4	4	78
1754-0-4346	1724-284	40 11395 11341 7	1	78
1754-0-4347	1725-284	40 11395 11342 4	1	78
1754-0-4348	1724-285	40 11395 11343 1	4	78
1754-0-4349	1725-285	40 11395 11344 8	4	78
1754-0-4350	1724-286	40 11395 11345 5	4	78
1754-0-4351	1725-286	40 11395 11346 2	4	78
1754-0-4352	1724-287	40 11395 11347 9	4	78
1754-0-4353	1725-287	40 11395 11348 6	4	78
1754-0-4354	1724-288	40 11395 11349 3	4	78
1754-0-4355	1725-288	40 11395 11351 6	4	78
1754-0-4356	1721-823-101	40 11395 11522 0	4	76
1754-0-4357	1722-823-101	40 11395 11523 7	4	76
1754-0-4358	1723-823-101	40 11395 11524 4	4	76
1754-0-4359	1724-823-101	40 11395 11525 1	4	76
1754-0-4360	1721-826-101	40 11395 11526 8	4	76
1754-0-4361	1722-826-101	40 11395 11527 5	4	76
1754-0-4362	1723-826-101	40 11395 11528 2	4	76
1754-0-4363	1724-826-101	40 11395 11529 9	4	76
1754-0-4409	1721-281	40 11395 12636 3	4	77
1754-0-4410	1722-281	40 11395 12637 0	4	77
1754-0-4411	1723-281	40 11395 12638 7	4	78
1754-0-4412	1724-281	40 11395 12639 4	4	78
1754-0-4413	1725-281	40 11395 12661 5	4	78
1754-0-4414	1721-884K	40 11395 12824 4	1	75
1754-0-4415	1722-884K	40 11395 12825 1	1	75
1754-0-4416	1723-884K	40 11395 12826 8	1	75
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1754-0-4421	1723-885K	40 11395 12832 9	4	75
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1754-0-4423	1725-885K	40 11395 12834 3	4	75
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1754-0-4438	1722-280	40 11395 15696 4	4	77
1754-0-4439	1723-280	40 11395 15697 1	4	78
1754-0-4440	1724-280	40 11395 15698 8	4	78
1754-0-4441	1725-280	40 11395 15699 5	4	78
1754-0-4471	1721-291-500	40 11395 16507 2	4	77
1754-0-4472	1722-291-500	40 11395 16519 5	4	77
1754-0-4473	1723-291-500	40 11395 16531 7	4	78
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1754-0-4475	1725-291-500	40 11395 16553 9	4	78
1754-0-4476	1721-297-500	40 11395 16515 7	4	77
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1754-0-4480	1725-297-500	40 11395 16559 1	4	78
1754-0-4481	1721-299-500	40 11395 16517 1	4	77
1754-0-4482	1722-299-500	40 11395 16528 7	4	77
1754-0-4483	1723-299-500	40 11395 16539 3	4	78
1754-0-4484	1724-299-500	40 11395 16551 5	4	78
1754-0-4485	1725-299-500	40 11395 16562 1	4	78
1754-0-4486	1721-296-500	40 11395 16512 6	1	77
1754-0-4487	1722-296-500	40 11395 16524 9	1	77
1754-0-4488	1723-296-500	40 11395 16535 5	1	78

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1754-0-4489	1724-296-500	40 11395 16546 1	1	78
1754-0-4490	1725-296-500	40 11395 16557 7	1	78
1754-0-4491	1721-295-500	40 11395 16509 6	4	77
1754-0-4492	1722-295-500	40 11395 16522 5	4	77
1754-0-4493	1723-295-500	40 11395 16533 1	4	78
1754-0-4494	1724-295-500	40 11395 16544 7	4	78
1754-0-4495	1725-295-500	40 11395 16555 3	4	78
2CDG110002R0011	SA/M 2.6.1	40 16779 58314 5	26	17
2CDG110003R0011	JA/M 2.230.1	40 16779 58315 2	26	17
2CDG110004R0011	JA/M 2.24.1	40 16779 58316 9	26	17
2CDG110005R0011	BE/M 4.230.1	40 16779 58311 4	26	17
2CDG110006R0011	BE/M 4.24.1	40 16779 58312 1	26	17
2CDG110007R0011	BE/M 4.12.1	40 16779 58313 8	26	17
2CDG110008R0011	USB/S 1.1	40 16779 58921 5	26	12
2CDG110009R0011	DSA/S 2.16.1	40 16779 58584 2	26	39
2CDG110012R0011	UD/M 1.300.1	40 11395 04281 6	26	18
2CDG110013R0011	ES/M 2.230.1	40 16779 58361 9	26	18
2CDG110014R0011	ES/M 2.24.1	40 16779 58362 6	26	18
2CDG110024R0011	SCM/S 1.1	40 16779 58391 6	26	100
2CDG110025R0011	DG/S 8.1	40 16779 58582 8	26	38
2CDG110026R0011	DG/S 1.1	40 16779 58583 5	26	38
2CDG110028R0011	JA/S 4.SMI.1M	40 16779 65423 4	26	35
2CDG110029R0011	DR/S 4.1	40 16779 58755 6	26	8
2CDG110030R0011	AE/S 4.2	40 16779 58763 1	26	24
2CDG110032R0011	WS/S 4.1	40 16779 58771 6	26	25
2CDG110034R0011	WZ/S 1.1	40 16779 58612 2	26	25
2CDG110058R0011	ES/S 4.1.2.1	40 16779 67206 1	26	45
2CDG110059R0011	ES/S 8.1.2.1	40 16779 67207 8	26	45
2CDG110060R0011	DSM/S 1.1	40 16779 65205 6	26	13
2CDG110061R0011	IPR/S 2.1	40 16779 65229 2	26	10
2CDG110065R0011	US/U 12.2	40 16779 65012 0	26	23
2CDG110066R0011	EUB/S 1.1	40 16779 64991 9	26	97
2CDG110067R0011	BDB/S 1.1	40 16779 65753 2	26	97
2CDG110070R0011	NTU/S 12.2000.1	40 16779 68117 9	26	9
2CDG110071R0011	UK/S 32.2	40 16779 65577 4	26	55
2CDG110072R0011	ABZ/S 2.1	40 16779 65236 0	26	53
2CDG110073R0011	ABL/S 2.1	40 16779 65264 3	26	53
2CDG110074R0011	UD/S 2.300.2	40 16779 66306 9	26	40
2CDG110075R0011	XS/S 1.1	40 16779 66704 3	26	100
2CDG110077R0011	LFA/S 1.1	40 16779 65546 0	26	46
2CDG110078R0011	LFA/S 2.1	40 16779 65547 7	26	46
2CDG110079R0011	SD/S 2.16.1	40 16779 65996 3	26	40
2CDG110080R0011	SD/S 4.16.1	40 16779 65937 6	26	40
2CDG110081R0011	SD/S 8.16.1	40 16779 65918 5	26	40
2CDG110083R0011	ZS/S 1.1	40 16779 66207 9	26	88
2CDG110084R0011	FCA/S 1.1M	40 16779 66508 7	26	46
2CDG110085R0011	SV/S 30.160.5	40 16779 66206 2	26	7
2CDG110086R0011	AE/A 2.1	40 16779 66401 1	26	24
2CDG110087R0011	LR/S 2.16.1	40 16779 66405 9	26	40
2CDG110088R0011	LR/S 4.16.1	40 16779 66489 9	26	40
2CDG110089R0011	LF/U 2.1	40 16779 66416 5	26	40
2CDG110090R0011	BE/S 4.20.2.1	40 16779 71078 7	26	23
2CDG110091R0011	BE/S 4.230.2.1	40 16779 71106 7	26	23
2CDG110092R0011	BE/S 8.20.2.1	40 16779 71076 3	26	23
2CDG110093R0011	BE/S 8.230.2.1	40 16779 71077 0	26	23
2CDG110094R0011	RM/S 1.1	40 16779 66556 8	26	19
2CDG110095R0011	RM/S 2.1	40 16779 66567 4	26	19
2CDG110096R0011	NTI/Z 28.30.1	40 16779 66316 8	26	8
2CDG110098R0011	IPS/S 2.1	40 16779 66484 4	26	10
2CDG110100R0011	SA/M 2.16.1	40 16779 68158 2	26	17
2CDG110101R0011	DLR/S 8.16.1M	40 16779 67656 4	26	39
2CDG110103R0011	DG/S 1.16.1	40 16779 66950 4	26	38
2CDG110104R0011	RC/A 4.2	40 16779 67647 2	26	16

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Order code	Type	EAN	PG	Page
2CDG110106R0011	RC/A 8.2	40 16779 68126 1	26	16
2CDG110107R0011	SD/M 2.6.2	40 16779 68066 0	26	17
2CDG110108R0011	LR/M 1.6.2	40 16779 68067 7	26	18
2CDG110109R0011	MT/S 4.12.2M	40 16779 71187 6	26	100
2CDG110110R0011	MT/S 8.12.2M	40 16779 71186 9	26	100
2CDG110111R0011	MT/U 2.12.2	40 16779 71176 0	26	100
2CDG110112R0011	SA/S 2.16.6.1	40 16779 70830 2	26	30
2CDG110113R0011	SA/S 4.16.6.1	40 16779 70831 9	26	30
2CDG110114R0011	SA/S 8.16.6.1	40 16779 70832 6	26	30
2CDG110116R0011	VAA/S 6.230.2.1	40 16779 82986 1	26	45
2CDG110117R0011	VAA/S 12.230.2.1	40 16779 82987 8	26	45
2CDG110119R0011	TG/Z 1.1	40 16779 69788 0	26	55
2CDG110120R0011	JRA/S 2.230.2.1	40 16779 69839 9	26	34
2CDG110121R0011	JRA/S 4.230.2.1	40 16779 69840 5	26	34
2CDG110122R0011	JRA/S 8.230.2.1	40 16779 69841 2	26	34
2CDG110124R0011	JRA/S 2.230.5.1	40 16779 69843 6	26	34
2CDG110125R0011	JRA/S 4.230.5.1	40 16779 69844 3	26	34
2CDG110126R0011	JRA/S 8.230.5.1	40 16779 69845 0	26	34
2CDG110128R0011	JRA/S 4.24.5.1	40 16779 69847 4	26	34
2CDG110129R0011	JRA/S 2.230.1.1	40 16779 69848 1	26	35
2CDG110130R0011	JRA/S 4.230.1.1	40 16779 69849 8	26	35
2CDG110131R0011	JRA/S 8.230.1.1	40 16779 69850 4	26	35
2CDG110132R0011	SA/S 2.16.5.1	40 16779 70827 2	26	29
2CDG110133R0011	SA/S 4.16.5.1	40 16779 70828 9	26	29
2CDG110134R0011	SA/S 8.16.5.1	40 16779 70829 6	26	29
2CDG110135R0011	TG/S 3.2	40 16779 70851 7	26	55
2CDG110136R0011	SE/S 3.16.1	40 16779 70977 4	26	87
2CDG110138R0011	SA/S 12.16.6.1	40 16779 76516 9	26	30
2CDG110141R0011	FCA/S 1.2.2.1	40 16779 87727 5	26	46
2CDG110142R0011	DGN/S 1.16.1	40 16779 84556 4	26	38
2CDG110143R0011	SJR/S4.24.2.1	40 16779 86446 6	26	35
2CDG110148R0011	EM/S 3.16.1	40 16779 87706 0	26	87
2CDG110152R0011	SA/S 4.6.1.1	40 16779 87786 2	26	29
2CDG110153R0011	SA/S 8.6.1.1	40 16779 87785 5	26	29
2CDG110154R0011	SA/S 12.6.1.1	40 16779 87784 8	26	29
2CDG110155R0011	SA/S 2.10.2.1	40 16779 87783 1	26	29
2CDG110156R0011	SA/S 4.10.2.1	40 16779 87782 4	26	29
2CDG110157R0011	SA/S 8.10.2.1	40 16779 87781 7	26	29
2CDG110158R0011	SA/S 12.10.2.1	40 16779 87780 0	26	29
2CDG110159R0011	SA/S 2.16.2.1	40 16779 87779 4	26	29
2CDG110160R0011	SA/S 4.16.2.1	40 16779 87778 7	26	29
2CDG110161R0011	SA/S 8.16.2.1	40 16779 87777 0	26	29
2CDG110162R0011	SA/S 12.16.2.1	40 16779 87776 3	26	29
2CDG110165R0011	RM/S 3.1	40 16779 88106 7	26	19
2CDG110168R0011	IO/S 4.6.1.1	40 16779 88107 4	26	30
2CDG110169R0011	IO/S 8.6.1.1	40 16779 88108 1	26	30
2CDG110170R0011	RM/S 4.1	40 16779 88126 5	26	19
2CDG110172R0011	DLR/A 4.8.1.1	40 16779 88237 8	26	39
2CDG120001R0011	FC/S 1.1	40 16779 58383 1	20	47
2CDG120002R0011	TS/K 1.1	40 16779 58381 7	20	47
2CDG120004R0011	ST/K 1.1	40 16779 63022 1	20	47
2CDG120005R0011	AA/S 4.1	40 16779 65886 7	20	30
2CDG120006R0011	AAM/S 4.1	40 16779 65887 4	20	30
2CDG120007R0011	TSA/K 230.1	40 16779 65299 5	20	48
2CDG120008R0011	TSA/K 24.1	40 16779 65300 8	20	48
2CDG120009R0011	VA/Z 10.1	40 16779 65319 0	20	48
2CDG120010R0011	VA/Z 50.1	40 16779 65320 6	20	48
2CDG120011R0011	VA/Z 78.1	40 16779 65321 3	20	48
2CDG120012R0011	VA/Z 80.1	40 16779 65322 0	20	48
2CDG120032R0011	VAA/A 6.24.1	40 16779 67064 7	20	45
2CDG120033R0011	WES/A 2.1	40 16779 69736 1	20	25
2CDG120034R0011	ISM/S 5.1	40 1677969792 7	20	10
2CDG120035R0011	ISS/S 5.1	40 16779 69791 0	20	11

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2CDG120036R0011	IPM/S 1.1	40 16779 69790 3	20	11
2CDG120037R0011	CP-D 24/2.5	40 16779 69789 7	20	71
2CDG120038R0011	LGS/A 1.1	40 16779 83712 5	20	47
2CDG120039R0011	FW/S 8.2.1	40 16779 90666 1	20	54
2CDG120040R0011	FAD/A 1.1	40 16779 90668 5	20	54
2CDG120041R0011	FAG/A 1.1	40 16779 90669 2	20	54
2CDG120042R0011	PS/E 2.1	40 16779 90670 8	20	54
2CDG120043R0011	PK/E 2.1	40 16779 90671 5	20	54
2CDG120044R0011	HS/S 4.2.1	40 16779 90672 2	20	41
2CDG120045R0011	LFO/A 1.1	40 16779 90673 9	20	41
2CDG220003R0011	L240/MG2	40 16779 65737 2	50	103
2CDG230004R0011	L240	40 13232 65736 5	50	101
2CDG230013R0011	L240/IP	40 16779 66856 9	50	102
2CDG230014R0011	L240/PT	40 16779 66855 2	50	101
2CDG230023R0011	IR/XB	40 16779 67877 3	50	102
2CDG230024R0011	IR/XC	40 16779 67878 0	50	102
2CDG230025R0011	EIM/XB	40 16779 67879 7	50	102
2CDG230026R0011	EIM/XC	40 16779 67880 3	50	102
2CDG230027R0011	IR/KB	40 16779 75716 4	50	106
2CDG230028R0011	EIM/KB	40 16779 75717 1	50	107
2CDG230029R0011	EIM/KC	40 16779 75718 8	50	107
2CDG240019R0011	SSM/A	40 16779 83746 0	50	104
2CDG240020R0011	SSM/U	40 16779 83747 7	50	104
2CDG250003R0011	WRK/W	40 16779 66404 2	50	105
2CDG430051R0011	FC600/BREL	40 16779 70840 1	50	109
2CDG430073R0011	FC650/O	40 16779 86479 4	50	108
2CDG430081R0011	FC650/TMAX	40 16779 86477 0	50	108
2CDG924003R0011	PS 1/4/6-KNX	40 16779 66758 6	20	13
2CDG924004R0011	PS 1/60/6-KNX	40 16779 66759 3	20	13
2CDL000001R0001	PS-END 1-S	40 16779 66698 5	5	13
2CMA170500R1000	A41 112 - 100	73 92696 70500 4		91
2CMA170501R1000	A41 212 - 100	73 92696 70501 1		91
2CMA170502R1000	A41 311 - 100	73 92696 70502 8		91
2CMA170503R1000	A41 312 - 100	73 92696 70503 5		91
2CMA170504R1000	A41 313 - 100	73 92696 70504 2		91
2CMA170505R1000	A41 412 - 100	73 92696 70505 9		91
2CMA170506R1000	A41 413 - 100	73 92696 70506 6		91
2CMA170508R1000	A41 513 - 100	73 92696 70508 0		91
2CMA170510R1000	A42 112 - 100	73 92696 70510 3		92
2CMA170511R1000	A42 212 - 100	73 92696 70511 0		92
2CMA170512R1000	A42 312 - 100	73 92696 70512 7		92
2CMA170513R1000	A42 412 - 100	73 92696 70513 4		92
2CMA170514R1000	A42 413 - 100	73 92696 70514 1		92
2CMA170518R1000	A42 552 - 120	73 92696 70518 9		92
2CMA170519R1000	A42 553 - 120	73 92696 70519 6		92
2CMA170520R1000	A43 111 - 100	73 92696 70520 2		93
2CMA170521R1000	A43 121 - 100	73 92696 70521 9		93
2CMA170522R1000	A43 212 - 100	73 92696 70522 6		93
2CMA170523R1000	A43 213 - 100	73 92696 70523 3		93
2CMA170524R1000	A43 311 - 100	73 92696 70524 0		93
2CMA170525R1000	A43 312 - 100	73 92696 70525 7		93
2CMA170526R1000	A43 313 - 100	73 92696 70526 4		93
2CMA170528R1000	A43 412 - 100	73 92696 70528 8		93
2CMA170529R1000	A43 413 - 100	73 92696 70529 5		93
2CMA170531R1000	A43 512 - 100	73 92696 70531 8		93
2CMA170532R1000	A43 513 - 100	73 92696 70532 5		93
2CMA170533R1000	A44 111 - 100	73 92696 70533 2		94
2CMA170534R1000	A44 212 - 100	73 92696 70534 9		94
2CMA170535R1000	A44 213 - 100	73 92696 70535 6		94
2CMA170536R1000	A44 311 - 100	73 92696 70536 3		94
2CMA170537R1000	A44 352 - 100	73 92696 70537 0		94
2CMA170538R1000	A44 353 - 100	73 92696 70538 7		94
2CMA170540R1000	A44 452 - 100	73 92696 70540 0		94

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Order code	Type	EAN	PG	Page
2CMA170541R1000	A44 453 - 100	73 92696 70541 7		94
2CMA170545R1000	A44 552 - 100	73 92696 70545 5		94
2CMA170546R1000	A44 553 - 100	73 92696 70546 2		94
2CMA170548R1000	A44 553 - 110	73 92696 70548 6		94
2CMA170549R1000	A44 552 - 110	73 92696 70549 3		94
2CMA170550R1000	C11 110 - 300	73 92696 70550 9		97
2CMA170554R1000	A41 111 - 100	73 92696 70554 7		91
2CMA170555R1000	A42 111 - 100	73 92696 70555 4		92
6020-0-1133	6010-25-500	40 11395 93850 8	19	81
6115-0-0183	6125/01-84-500	40 11395 13559 4	26	72
6115-0-0205	6125/01-81-500	40 11395 13947 9	26	72
6115-0-0206	6125/01-82-500	40 11395 13948 6	26	72
6115-0-0207	6125/01-83-500	40 11395 13949 3	26	72
6115-0-0209	6125/01-87-500	40 11395 13951 6	26	72
6115-0-0211	6125/01-866-500	40 11395 13953 0	26	72
6115-0-0212	6125/01-803-500	40 11395 13954 7	26	72
6115-0-0213	6125/01-815-500	40 11395 13955 4	26	72
6115-0-0214	6125/01-884-500	40 11395 13956 1	26	72
6115-0-0215	6125/01-885-500	40 11395 13957 8	26	72
6115-0-0216	6125/02-81-500	40 11395 13958 5	26	73
6115-0-0217	6125/02-82-500	40 11395 13959 2	26	73
6115-0-0218	6125/02-83-500	40 11395 13961 5	26	73
6115-0-0219	6125/02-84-500	40 11395 13962 2	26	73
6115-0-0221	6125/02-87-500	40 11395 13964 6	26	73
6115-0-0223	6125/02-866-500	40 11395 13966 0	26	73
6115-0-0224	6125/02-803-500	40 11395 13967 7	26	73
6115-0-0225	6125/02-815-500	40 11395 13968 4	26	73
6115-0-0226	6125/02-884-500	40 11395 13969 1	26	73
6115-0-0227	6125/02-885-500	40 11395 13971 4	26	73
6115-0-0449	6125/01-896-500	40 11395 16988 9	26	72
6115-0-0451	6125/02-896-500	40 11395 16991 9	26	73
6116-0-0174	6126/01-84-500	40 11395 13574 7	26	72
6116-0-0195	6126/01-81-500	40 11395 13985 1	26	72
6116-0-0196	6126/01-82-500	40 11395 13986 8	26	72
6116-0-0197	6126/01-83-500	40 11395 13987 5	26	72
6116-0-0199	6126/01-87-500	40 11395 13991 2	26	72
6116-0-0201	6126/01-866-500	40 11395 13993 6	26	72
6116-0-0202	6126/01-803-500	40 11395 13994 3	26	72
6116-0-0203	6126/01-815-500	40 11395 13995 0	26	72
6116-0-0204	6126/01-884-500	40 11395 13996 7	26	72
6116-0-0205	6126/01-885-500	40 11395 13997 4	26	72
6116-0-0206	6126/02-81-500	40 11395 13998 1	26	73
6116-0-0207	6126/02-82-500	40 11395 13999 8	26	73
6116-0-0208	6126/02-83-500	40 11395 14001 7	26	73
6116-0-0209	6126/02-84-500	40 11395 14002 4	26	73
6116-0-0209	6126/02-84-500	40 11395 14038 3	26	73
6116-0-0211	6126/02-87-500	40 11395 14004 8	26	73
6116-0-0213	6126/02-866-500	40 11395 14006 2	26	73
6116-0-0214	6126/02-803-500	40 11395 14007 9	26	73
6116-0-0215	6126/02-815-500	40 11395 14008 6	26	73
6116-0-0216	6126/02-884-500	40 11395 14009 3	26	73
6116-0-0217	6126/02-885-500	40 11395 14011 6	26	73
6116-0-0224	6126/01-896-500	40 11395 16993 3	26	72
6116-0-0226	6126/02-896-500	40 11395 16995 7	26	73
6117-0-0200	6127/01-84-500	40 11395 13588 4	26	72
6117-0-0221	6127/01-81-500	40 11395 14024 6	26	72
6117-0-0222	6127/01-82-500	40 11395 14025 3	26	72
6117-0-0223	6127/01-83-500	40 11395 14026 0	26	72
6117-0-0225	6127/01-87-500	40 11395 14028 4	26	72
6117-0-0227	6127/01-866-500	40 11395 14030 7	26	72
6117-0-0228	6127/01-803-500	40 11395 14031 4	26	72
6117-0-0229	6127/01-815-500	40 11395 14032 1	26	72
6117-0-0230	6127/01-884-500	40 11395 14033 8	26	72

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6117-0-0231	6127/01-885-500	40 11395 14034 5	26	72
6117-0-0232	6127/02-81-500	40 11395 14035 2	26	73
6117-0-0233	6127/02-82-500	40 11395 14036 9	26	73
6117-0-0234	6127/02-83-500	40 11395 14037 6	26	73
6117-0-0235	6127/02-84-500	40 11395 14038 3	26	73
6117-0-0237	6127/02-87-500	40 11395 14041 3	26	73
6117-0-0239	6127/02-866-500	40 11395 14043 7	26	73
6117-0-0240	6127/02-803-500	40 11395 14044 4	26	73
6117-0-0241	6127/02-815-500	40 11395 14045 1	26	73
6117-0-0242	6127/02-884-500	40 11395 14046 8	26	73
6117-0-0243	6127/02-885-500	40 11395 14047 5	26	73
6117-0-0249	6127/01-896-500	40 11395 16997 1	26	72
6117-0-0251	6127/02-896-500	40 11395 16999 5	26	73
6120-0-0072	6120/13-500	40 11395 10227 5	26	66
6120-0-0073	6120/13-508	40 11395 11658 6	26	66
6120-0-0075	6120/12-101-500	40 11395 13548 8	26	66
6120-0-0076	6120/12-101-508	40 11395 14733 7	26	66
6132-0-0250	6122/01-84-500	40 11395 13505 1	26	43
6132-0-0263	6122/02-84-500	40 11395 13521 1	26	43
6132-0-0272	6122/01-81-500	40 11395 14048 2	26	43
6132-0-0273	6122/01-82-500	40 11395 14049 9	26	43
6132-0-0274	6122/01-83-500	40 11395 14051 2	26	43
6132-0-0276	6122/01-87-500	40 11395 14053 6	26	43
6132-0-0278	6122/01-866-500	40 11395 14055 0	26	43
6132-0-0279	6122/01-803-500	40 11395 14056 7	26	43
6132-0-0280	6122/01-815-500	40 11395 14057 4	26	43
6132-0-0281	6122/01-884-500	40 11395 14058 1	26	43
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6132-0-0285	6122/02-83-500	40 11395 14062 8	26	43
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6132-0-0291	6122/02-815-500	40 11395 14068 0	26	43
6132-0-0292	6122/02-884-500	40 11395 14069 7	26	43
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6132-0-0295	6131/10-24-500	40 11395 14772 6	26	42
6132-0-0297	6131/10-183-500	40 11395 14774 0	26	42
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6132-0-0301	6131/11-183-500	40 11395 14778 8	26	42
6132-0-0313	6179/01-204-500	40 11395 16854 7	26	44
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6132-0-0317	6179/02-204-500	40 11395 16861 5	26	44
6132-0-0318	6179/02-208-500	40 11395 16862 2	26	44
6132-0-0320	6179-500	40 11395 16865 3	26	44
6132-0-0322	6122/01-896-500	40 11395 16982 7	26	43
6132-0-0324	6122/02-896-500	40 11395 16984 1	26	43
6133-0-0201	6149/21-500	40 11395 11896 2	26	70
6133-0-0207	6108/01-500	40 11395 13542 6	26	71
6133-0-0209	6108/02-500	40 11395 13544 0	26	71
6133-0-0211	6108/04-500	40 11395 14403 9	26	71
6133-0-0213	6108/05-500	40 11395 14405 3	26	71
6134-0-0248	6124/01-84-500	40 11395 13535 8	26	49
6134-0-0261	6128/01-84-500	40 11395 13602 7	26	49
6134-0-0271	6108/03-500	40 11395 13546 4	26	51
6134-0-0274	6124/01-82-500	40 11395 14071 0	26	49
6134-0-0275	6124/01-83-500	40 11395 14072 7	26	49
6134-0-0277	6124/01-87-500	40 11395 14074 1	26	49
6134-0-0279	6124/01-866-500	40 11395 14076 5	26	49
6134-0-0280	6124/01-803-500	40 11395 14077 2	26	49
6134-0-0281	6124/01-815-500	40 11395 14078 9	26	49
6134-0-0282	6124/01-884-500	40 11395 14079 6	26	49

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6134-0-0283	6124/01-885-500	40 11395 14081 9	26	49
6134-0-0284	6128/01-81-500	40 11395 14082 6	26	49
6134-0-0285	6128/01-82-500	40 11395 14083 3	26	49
6134-0-0286	6128/01-83-500	40 11395 14084 0	26	49
6134-0-0288	6128/01-87-500	40 11395 14086 4	26	49
6134-0-0290	6128/01-866-500	40 11395 14088 8	26	49
6134-0-0291	6128/01-803-500	40 11395 14089 5	26	49
6134-0-0292	6128/01-815-500	40 11395 14091 8	26	49
6134-0-0293	6128/01-884-500	40 11395 14092 5	26	49
6134-0-0294	6128/01-885-500	40 11395 14093 2	26	49
6134-0-0295	6124/01-81-500	40 11395 14351 3	26	49
6134-0-0304	6124/01-896-500	40 11395 16986 5	26	49
6134-0-0306	6128/01-896-500	40 11395 17002 1	26	49
6135-0-0146	6129/01-84-500	40 11395 13616 4	26	74
6135-0-0156	6129/01-81-500	40 11395 14094 9	26	74
6135-0-0157	6129/01-82-500	40 11395 14095 6	26	74
6135-0-0158	6129/01-83-500	40 11395 14096 3	26	74
6135-0-0160	6129/01-87-500	40 11395 14098 7	26	74
6135-0-0162	6129/01-866-500	40 11395 14100 7	26	74
6135-0-0163	6129/01-803-500	40 11395 14101 4	26	74
6135-0-0164	6129/01-815-500	40 11395 14102 1	26	74
6135-0-0165	6129/01-884-500	40 11395 14103 8	26	74
6135-0-0166	6129/01-885-500	40 11395 14104 5	26	74
6135-0-0170	6129/01-896-500	40 11395 17004 5	26	74
6136-0-0124	6136/UP	40 11395 04437 7	26	61
6136-0-0139	6136/10-500	40 11395 07927 0	26	61
6136-0-0141	6136/11-500	40 11395 07929 4	26	61
6136-0-0196	6136/15-500	40 11395 15694 0	26	61
6138-0-0003	6138/11-84-500	40 11395 11609 8	26	46
6138-0-0005	6138/11-83-500	40 11395 11613 5	26	46
6151-0-0245	6151/11 U-500	40 11395 16395 5	26	20
6151-0-0247	6164/11 U-500	40 11395 16399 3	26	20
6151-0-0249	6173/11 U-500	40 11395 16402 0	26	20
6152-0-0040	6152/11 U-500	40 11395 16397 9	26	20
6186-0-0021	6186 UP-500	40 11395 10164 3	34	58
6186-0-0023	6186/01 UP-500	40 11395 15886 9	34	57
6197-0-0036	6197/12-101-500	40 11395 16366 5	33	41
6197-0-0037	6197/13-101-500	40 11395 16367 2	33	41
6197-0-0038	6197/14-101-500	40 11395 16368 9	33	41
6197-0-0039	6197/15-101-500	40 11395 16369 6	33	41
6197-0-0040	6197/52-101-500	40 11395 16371 9	33	41
6197-0-0041	6197/53-101-500	40 11395 16372 6	33	41
6310-0-0078	6345-866-101-500	40 11395 11868 9	34	69
6310-0-0079	6345-810-101-500	40 11395 11871 9	34	69
6310-0-0080	6345-825-101-500	40 11395 11872 6	34	69
6310-0-0081	6345-24G-101-500	40 11395 11873 3	34	69
6310-0-0092	6351-825-101-500	40 11395 13152 7	34	70
6310-0-0093	6353/20-860-500	40 11395 11892 4	34	70
6310-0-0094	6353/30-860-500	40 11395 11893 1	34	70
6310-0-0095	6353/40-860-500	40 11395 11894 8	34	70
6310-0-0096	6353/50-860-500	40 11395 11895 5	34	70
6310-0-0097	6354 U-500	40 11395 11897 9	34	66
6310-0-0098	6355 U-500	40 11395 11898 6	34	66
6310-0-0099	6356 U-500	40 11395 11899 3	34	66
6310-0-0106	6340-866-101-500	40 11395 13088 9	34	67
6310-0-0107	6340-810-101-500	40 11395 13089 6	34	67
6310-0-0108	6340-825-101-500	40 11395 13091 9	34	67
6310-0-0109	6340-24G-101-500	40 11395 13092 6	34	67
6310-0-0114	6341-866-101-500	40 11395 13097 1	34	68
6310-0-0115	6341-810-101-500	40 11395 13098 8	34	68
6310-0-0116	6341-825-101-500	40 11395 13099 5	34	68
6310-0-0117	6341-24G-101-500	40 11395 13100 8	34	68
6310-0-0122	6342-866-101-500	40 11395 13105 3	34	68

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6310-0-0123	6342-810-101-500	40 11395 13106 0	34	68
6310-0-0124	6342-825-101-500	40 11395 13107 7	34	68
6310-0-0125	6342-24G-101-500	40 11395 13108 4	34	68
6310-0-0130	6344-866-101-500	40 11395 13114 5	34	68
6310-0-0131	6344-810-101-500	40 11395 13115 2	34	68
6310-0-0132	6344-825-101-500	40 11395 13116 9	34	68
6310-0-0133	6344-24G-101-500	40 11395 13117 6	34	68
6310-0-0135	6346/10-101-500	40 11395 13119 0	34	67
6310-0-0137	6346/11-101-500	40 11395 13122 0	34	67
6310-0-0139	6346/12-101-500	40 11395 13124 4	34	67
6310-0-0145	6348-810-101-500	40 11395 13130 5	34	69
6310-0-0146	6348-825-101-500	40 11395 13131 2	34	69
6310-0-0147	6348-24G-101-500	40 11395 13132 9	34	69
6310-0-0153	6349-810-101-500	40 11395 13139 8	34	69
6310-0-0154	6349-825-101-500	40 11395 13140 4	34	69
6310-0-0155	6349-24G-101-500	40 11395 13142 8	34	69
6310-0-0157	6350-825-101-500	40 11395 13144 2	34	69
6310-0-0163	6352-810-101-500	40 11395 13150 3	34	70
6310-0-0164	6352-825-101-500	40 11395 13151 0	34	70
6310-0-0165	6352-24G-101-500	40 11395 13151 0	34	70
6310-0-0168	6340-811-101-500	40 11395 15674 2	34	67
6310-0-0170	6341-811-101-500	40 11395 15676 6	34	68
6310-0-0172	6342-811-101-500	40 11395 15678 0	34	68
6310-0-0174	6344-811-101-500	40 11395 15681 0	34	68
6310-0-0176	6345-811-101-500	40 11395 15683 4	34	69
6310-0-0178	6348-811-101-500	40 11395 15685 8	34	69
6310-0-0180	6349-811-101-500	40 11395 15687 2	34	69
6310-0-0182	6352-811-101-500	40 11395 15689 6	34	70
6320-0-0002	6320/10-20-500	40 11395 13857 1	26	79
6320-0-0004	6320/10-24G-500	40 11395 13873 1	26	79
6320-0-0006	6320/10-79-500	40 11395 13875 5	26	79
6320-0-0008	6320/10-83-500	40 11395 13877 9	26	79
6320-0-0010	6320/10-260-500	40 11395 13879 3	26	79
6320-0-0012	6320/30-20-500	40 11395 13882 3	26	79
6320-0-0014	6320/30-24G-500	40 11395 13885 4	26	79
6320-0-0016	6320/30-79-500	40 11395 13887 8	26	79
6320-0-0018	6320/30-83-500	40 11395 13889 2	26	79
6320-0-0020	6320/30-260-500	40 11395 13892 2	26	79
6320-0-0022	6320/38-20-500	40 11395 13895 3	26	50
6320-0-0022	6320/38-20-500	40 11395 13895 3	26	80
6320-0-0024	6320/38-24G-500	40 11395 13897 7	26	50
6320-0-0024	6320/38-24G-500	40 11395 13897 7	26	80
6320-0-0026	6320/38-79-500	40 11395 13900 4	26	50
6320-0-0026	6320/38-79-500	40 11395 13900 4	26	80
6320-0-0028	6320/38-83-500	40 11395 13902 8	26	50
6320-0-0028	6320/38-83-500	40 11395 13902 8	26	80
6320-0-0030	6320/38-260-500	40 11395 13904 2	26	50
6320-0-0030	6320/38-260-500	40 11395 13904 2	26	80
6320-0-0032	6320/50-20-500	40 11395 13911 0	26	80
6320-0-0034	6320/50-24G-500	40 11395 13914 1	26	80
6320-0-0036	6320/50-79-500	40 11395 13916 5	26	80
6320-0-0038	6320/50-83-500	40 11395 13918 9	26	80
6320-0-0040	6320/50-260-500	40 11395 13921 9	26	80
6320-0-0042	6320/58-20-500	40 11395 13923 3	26	50
6320-0-0042	6320/58-20-500	40 11395 13923 3	26	81
6320-0-0044	6320/58-24G-500	40 11395 13926 4	26	50
6320-0-0044	6320/58-24G-500	40 11395 13926 4	26	81
6320-0-0046	6320/58-79-500	40 11395 13928 8	26	50
6320-0-0046	6320/58-79-500	40 11395 13928 8	26	81
6320-0-0048	6320/58-83-500	40 11395 13931 8	26	50
6320-0-0048	6320/58-83-500	40 11395 13931 8	26	81
6320-0-0050	6320/58-260-500	40 11395 13933 2	26	50
6320-0-0050	6320/58-260-500	40 11395 13933 2	26	81

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6599-0-0195	2114-214	40 11395 37520 4	19	52
6599-0-1193	2114-212	40 11395 37870 0	19	52
6599-0-1557	6541-24	40 11395 38180 9	19	52
6599-0-2076	6541-74	40 11395 54180 7	19	52
6599-0-2142	6541-79	40 11395 55810 2	19	52
6599-0-2332	6541-24G	40 11395 70860 6	19	52
6599-0-2795	6541-22G	40 11395 91730 5	19	52
6599-0-2832	6541-82	40 11395 99569 3	19	51
6599-0-2835	6541-84	40 11395 99663 8	19	51
6599-0-2844	6541-87	40 11395 99917 2	19	51
6599-0-2882	6541-81	40 11395 05642 4	19	51
6599-0-2885	6541-83	40 11395 07445 9	19	51
6599-0-2924	6541-866	40 11395 08815 9	19	51
6599-0-2936	6541-815	40 11395 11111 6	19	51
6599-0-2940	6541-803	40 11395 11115 4	19	51
6599-0-2962	6541-884	40 11395 12964 7	19	51
6599-0-2967	6541-885	40 11395 12965 4	19	51
6599-0-2998	6541-896	40 11395 16703 8	19	51
6800-0-2512	6826-84	40 11395 13741 3	14	110
6800-0-2513	6827-84	40 11395 13744 4	14	110
6800-0-2514	6828	40 11395 13745 1	14	110
6800-0-2515	6829-84	40 11395 13746 8	14	111
6800-0-2516	6824-84	40 11395 13747 5	14	111
6800-0-2562	6868-204-500	40 11395 15097 9	29	42
6800-0-2563	6868-208-500	40 11395 15098 6	29	42
6899-0-0282	6885-500	40 11395 00468 5	29	42
6899-0-0297	6885-183-500	40 11395 06825 0	29	42
8100-0-0344	8186/03-500	40 11395 17146 2	32	11
8100-0-0346	8186/04-500	40 11395 17148 6	32	11
8136-0-0002	8136-500	40 11395 10162 9	34	57
8136-0-0004	8136/20-500	40 11395 10168 1	34	58
8136-0-0006	8136/23-500	40 11395 10171 1	34	58
8136-0-0012	8136/30-500	40 11395 10177 3	34	59
8136-0-0014	8136/31-500	40 11395 10179 7	34	59
8136-0-0016	8136/40-500	40 11395 11182 6	34	58
8136-0-0018	8136/41-500	40 11395 11184 0	34	58
8136-0-0020	8136/UP-500	40 11395 11921 1	34	59
8136-0-0024	8136/09-811-500	40 11395 15877 7	34	56
8136-0-0026	8136/09-825-500	40 11395 15879 1	34	56
8136-0-0028	8136/12-811-500	40 11395 15882 1	34	56
8136-0-0030	8136/12-825-500	40 11395 15884 5	34	56
8136-0-0032	8136/01 UP-500	40 11395 15891 3	34	57
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GHQ3050017R0001	SSF/G	40 16779 53466 6	50	109
GHQ3050018R0001	SSF/GB	40 16779 53467 3	50	110
GHQ3050023R0001	WEL/A, ES	40 16779 58570 5	P4	103
GHQ3050024R0001	WELT/A, ES	40 16779 58571 2	P4	103
GHQ3050027R0001	SCS	40 16779 58575 0	50	103
GHQ3050031R0001	L240/BS	40 16779 58561 3	50	104
GHQ3201972R0001	MRS/W	40 16779 50660 1	50	105
GHQ3201972R0002	MRS/B	40 16779 50659 5	50	105
GHQ3201972R0011	VMRS/W	40 16779 50658 8	50	105
GHQ3201972R0012	VMRS/B	40 16779 50657 1	50	105
GHQ3201973R0021	RTK	40 16779 50655 7	50	105
GHQ3280011R0001	L840/MG4	40 13232 73240 9	50	103
GHQ3280013R0001	SAD/GUP	40 13232 73260 7	50	104
GHQ3280014R0001	SAD/ED	40 13232 73270 6	50	104
GHQ3280015R0001	SAD/GAP	40 13232 73280 5	50	104
GHQ3280220R0001	L208/V.24	40 16779 44510 8	50	101
GHQ4001906R0001	LKS	40 13232 39280 1	50	105
GHQ4030001R0012	SWM4/RN	40 13232 05750 2	50	108
GHQ6050053R0001	LL/S 1.1	40 16779 39210 5	20	12
GHQ6050056R0002	NT/S 12.1600	40 16779 51467 5	20	9

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GHQ6050057R0002	NT/S 24.800	40 16779 51468 2	20	9
GHQ6050059R0005	MT 701.2, WS	40 16779 57581 2	20	55
GHQ6050059R0006	MT 701.2, SR	40 16779 57582 9	20	55
GHQ6050059R0011	T-RAHM, WS	40 16779 49585 1	20	55
GHQ6050059R0012	T-RAHM, SR	40 16779 49586 8	20	55
GHQ6050059R0014	UP-KAST 2	40 16779 51396 8	20	55
GHQ6050063R0001	HS/S 3.1	40 16779 50098 2	20	41
GHQ6301901R0001	BUSKLEMME	40 12233 80230 2	20	13
GHQ6301902R0001	KLEMME	40 16779 07930 3	20	13
GHQ6301908R0001	VB/K 200.1	40 16779 46980 7	20	13
GHQ6301908R0002	VB/K 270.1	40 16779 46990 6	20	13
GHQ6301908R0003	VB/K 100.1	40 16779 50103 3	20	13
GHQ6301908R0004	VB/K 360.1	40 16779 84676 9	20	13
GHQ6301910R0001	KS/K 4.1	40 16779 51725 6	20	8
GHQ6301910R0011	KS/K 2.1	40 16779 52893 1	20	8
GHQ6310009R0001	US/E 1	40 16779 00570 8	20	13
GHQ6310038R0111	SV/S 30.320.5	40 16779 49090 0	26	7
GHQ6310044R0111	ER/U 1.1	40 16779 49725 1	26	45
GHQ6310048R0111	SV/S 30.640.5	40 16779 51474 3	26	7
GHQ6310049R0111	SU/S 30.640.1	40 16779 51477 4	26	7
GHQ6310062R0111	AM/S 12.1	40 16779 51481 1	26	7
GHQ6310070R0111	US/U 4.2	40 16779 56481 6	26	23
GHQ6310070R0111	US/U 4.2	40 16779 56481 6	26	45
GHQ6310074R0111	US/U 2.2	40 16779 56483 0	26	23
GHQ6310074R0111	US/U 2.2	40 16779 56483 0	26	45
GHQ6310080R0111	LM/S 1.1	40 16779 58121 9	26	53
GHQ6310084R0111	JSB/S 1.1	40 16779 57993 3	26	35
GHQ6310085R0111	SMB/S 1.1	40 16779 58092 2	26	97
GHQ7132443R0003	EP	40 13232 04220 1	50	106
GHQ7132443R0004	NDA/W	40 13232 61690 7	50	106
GHQ7132443R0011	ND/W	40 13232 02540 2	50	106
GHQ7132443R0021	NDU/W	40 13232 02550 1	50	106
GHV9210018V0020	ADB	40 13232 53420 1	50	106
GHV9210018V0022	VSUE	40 13232 70120 7	50	106
GHV9220004V0004	GP2	40 13232 66670 4	50	105
GHV9220004V0009	SPGS/W	40 13232 61420 0	50	105
GHV9220004V0010	SPGS/B	40 13232 61430 9	50	105
GHV9230039V0010	EIM/DB	40 16779 87746 6	50	107
GHV9230039V0020	MW	40 13232 66580 6	50	102
GHV9230039V0020	MW	40 13232 66580 6	50	107
GHV9240001V0011	SAK7	40 13232 74493 8	50	8
GHV9240001V0011	SAK7	40 13232 74493 8	50	102
GHV9240001V0012	SAK12	40 13232 74494 5	50	8
GHV9240001V0013	SAK17	40 13232 74495 2	50	8
GHV9250010V0001	ESPE	40 13232 70140 5	50	104
GHV9250010V0002	EVS	40 16779 44170 4	50	104
GHV9250010V0003	AMSE	40 16779 49290 4	50	104
GHV9250010V0004	AMSP	40 16779 49280 5	50	104
GHV9270001V0001	SSS	40 13232 02320 0	50	109
GHV9270013V0100	RL	40 16779 86476 3	50	109

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1721-183K	1754-0-4301	40 11395 06905 9	4	75
1721-184K	1754-0-4235	40 11395 05075 0	1	75
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1721-281	1754-0-4409	40 11395 12636 3	4	77
1721-284	1754-0-4331	40 11395 11324 0	1	77
1721-285	1754-0-4334	40 11395 11327 1	4	77
1721-286	1754-0-4337	40 11395 11331 8	4	77
1721-287	1754-0-4340	40 11395 11334 9	4	77
1721-288	1754-0-4343	40 11395 11337 0	4	77
1721-291-500	1754-0-4471	40 11395 16507 2	4	77
1721-295-500	1754-0-4491	40 11395 16509 6	4	77
1721-296-500	1754-0-4486	40 11395 16512 6	1	77
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1721-299-500	1754-0-4481	40 11395 16517 1	4	77
1721-80	1754-0-4104	40 11395 99482 5	4	76
1721-80G	1754-0-4326	40 11395 11305 9	4	76
1721-810	1754-0-4250	40 11395 05671 4	4	76
1721-821	1754-0-4258	40 11395 05687 5	4	76
1721-823-101	1754-0-4356	40 11395 11522 0	4	76
1721-825	1754-0-4322	40 11395 08891 3	4	76
1721-826-101	1754-0-4360	40 11395 11526 8	4	76
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1721-860	1754-0-4254	40 11395 05679 0	4	76
1721-866K	1754-0-4317	40 11395 08831 9	4	77
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1722-184K	1754-0-4236	40 11395 05076 7	1	75
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1722-810	1754-0-4251	40 11395 05673 8	4	76
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1722-823-101	1754-0-4357	40 11395 11523 7	4	76
1722-825	1754-0-4323	40 11395 08892 0	4	76
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1722-885K	1754-0-4420	40 11395 12831 2	4	75
1723-181K	1754-0-4242	40 11395 0508 28	4	75
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1723-184K	1754-0-4237	40 11395 05077 4	1	75
1723-280	1754-0-4439	40 11395 15697 1	4	78
1723-281	1754-0-4411	40 11395 12638 7	4	78
1723-284	1754-0-4333	40 11395 11326 4	1	78

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1723-287	1754-0-4342	40 11395 11336 3	4	78
1723-288	1754-0-4345	40 11395 11339 4	4	78
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1723-295-500	1754-0-4493	40 11395 16533 1	4	78
1723-296-500	1754-0-4488	40 11395 16535 5	1	78
1723-297-500	1754-0-4478	40 11395 16537 9	4	78
1723-299-500	1754-0-4483	40 11395 16539 3	4	78
1723-80	1754-0-4106	40 11395 99486 3	4	76
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1723-810	1754-0-4252	40 11395 05675 2	4	76
1723-821	1754-0-4260	40 11395 05691 2	4	76
1723-823-101	1754-0-4358	40 11395 11524 4	4	76
1723-826-101	1754-0-4362	40 11395 11528 2	4	76
1723-84	1754-0-4111	40 11395 99615 7	1	76
1723-860	1754-0-4256	40 11395 05683 7	4	76
1723-866K	1754-0-4319	40 11395 08837 1	4	77
1723-884K	1754-0-4416	40 11395 12826 8	1	75
1723-885K	1754-0-4421	40 11395 12832 9	4	75
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1724-182K	1754-0-4233	40 11395 05073 6	1	75
1724-183K	1754-0-4309	40 11395 07483 1	4	75
1724-184K	1754-0-4238	40 11395 05078 1	1	75
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1724-281	1754-0-4412	40 11395 12639 4	4	78
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1724-295-500	1754-0-4494	40 11395 16544 7	4	78
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1724-821	1754-0-4261	40 11395 05693 6	4	76
1724-823-101	1754-0-4359	40 11395 11525 1	4	76
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1725-184K	1754-0-4239	40 11395 05079 8	1	75
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1725-284	1754-0-4347	40 11395 11342 4	1	78
1725-285	1754-0-4349	40 11395 11344 8	4	78
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1725-291-500	1754-0-4475	40 11395 16553 9	4	78
1725-295-500	1754-0-4495	40 11395 16555 3	4	78
1725-296-500	1754-0-4490	40 11395 16557 7	1	78
1725-297-500	1754-0-4480	40 11395 16559 1	4	78

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1725-80G	1754-0-4330	40 11395 11309 7	4	76
1725-84	1754-0-4113	40 11395 99619 5	1	76
1725-866K	1754-0-4321	40 11395 08842 5	4	77
1725-884K	1754-0-4418	40 11395 12828 2	1	75
1725-885K	1754-0-4423	40 11395 12834 3	4	75
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2114-214	6599-0-0195	40 11395 37520 4	19	52
6010-25-500	6020-0-1133	40 11395 93850 8	19	81
6108/01-500	6133-0-0207	40 11395 13542 6	26	71
6108/02-500	6133-0-0209	40 11395 13544 0	26	71
6108/03-500	6134-0-0271	40 11395 13546 4	26	51
6108/04-500	6133-0-0211	40 11395 14403 9	26	71
6108/05-500	6133-0-0213	40 11395 14405 3	26	71
6120/12-101-500	6120-0-0075	40 11395 13548 8	26	66
6120/12-101-508	6120-0-0076	40 11395 14733 7	26	66
6120/13-500	6120-0-0072	40 11395 10227 5	26	66
6120/13-508	6120-0-0073	40 11395 11658 6	26	66
6122/01-803-500	6132-0-0279	40 11395 14056 7	26	43
6122/01-81-500	6132-0-0272	40 11395 14048 2	26	43
6122/01-815-500	6132-0-0280	40 11395 14057 4	26	43
6122/01-82-500	6132-0-0273	40 11395 14049 9	26	43
6122/01-83-500	6132-0-0274	40 11395 14051 2	26	43
6122/01-84-500	6132-0-0250	40 11395 13505 1	26	43
6122/01-866-500	6132-0-0278	40 11395 14055 0	26	43
6122/01-87-500	6132-0-0276	40 11395 14053 6	26	43
6122/01-884-500	6132-0-0281	40 11395 14058 1	26	43
6122/01-885-500	6132-0-0282	40 11395 14059 8	26	43
6122/01-896-500	6132-0-0322	40 11395 16982 7	26	43
6122/02-803-500	6132-0-0290	40 11395 14067 3	26	43
6122/02-81-500	6132-0-0283	40 11395 14060 4	26	43
6122/02-815-500	6132-0-0291	40 11395 14068 0	26	43
6122/02-82-500	6132-0-0284	40 11395 14061 1	26	43
6122/02-83-500	6132-0-0285	40 11395 14062 8	26	43
6122/02-84-500	6132-0-0263	40 11395 13521 1	26	43
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6122/02-884-500	6132-0-0292	40 11395 14069 7	26	43
6122/02-885-500	6132-0-0293	40 11395 14070 3	26	43
6122/02-896-500	6132-0-0324	40 11395 16984 1	26	43
6124/01-803-500	6134-0-0280	40 11395 14077 2	26	49
6124/01-81-500	6134-0-0295	40 11395 14351 3	26	49
6124/01-815-500	6134-0-0281	40 11395 14078 9	26	49
6124/01-82-500	6134-0-0274	40 11395 14071 0	26	49
6124/01-83-500	6134-0-0275	40 11395 14072 7	26	49
6124/01-84-500	6134-0-0248	40 11395 13535 8	26	49
6124/01-866-500	6134-0-0279	40 11395 14076 5	26	49
6124/01-87-500	6134-0-0277	40 11395 14074 1	26	49
6124/01-884-500	6134-0-0282	40 11395 14079 6	26	49
6124/01-885-500	6134-0-0283	40 11395 14081 9	26	49
6124/01-896-500	6134-0-0304	40 11395 16986 5	26	49
6125/01-803-500	6115-0-0212	40 11395 13954 7	26	72
6125/01-81-500	6115-0-0205	40 11395 13947 9	26	72
6125/01-815-500	6115-0-0213	40 11395 13955 4	26	72
6125/01-82-500	6115-0-0206	40 11395 13948 6	26	72
6125/01-83-500	6115-0-0207	40 11395 13949 3	26	72
6125/01-84-500	6115-0-0183	40 11395 13559 4	26	72
6125/01-866-500	6115-0-0211	40 11395 13953 0	26	72
6125/01-87-500	6115-0-0209	40 11395 13951 6	26	72
6125/01-884-500	6115-0-0214	40 11395 13956 1	26	72
6125/01-885-500	6115-0-0215	40 11395 13957 8	26	72
6125/01-896-500	6115-0-0449	40 11395 16988 9	26	72

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6128/01-87-500	6134-0-0288	40 11395 14086 4	26	49
6128/01-884-500	6134-0-0293	40 11395 14092 5	26	49
6128/01-885-500	6134-0-0294	40 11395 14093 2	26	49
6128/01-896-500	6134-0-0306	40 11395 17002 1	26	49
6129/01-803-500	6135-0-0163	40 11395 14101 4	26	74
6129/01-81-500	6135-0-0156	40 11395 14094 9	26	74
6129/01-815-500	6135-0-0164	40 11395 14102 1	26	74
6129/01-82-500	6135-0-0157	40 11395 14095 6	26	74
6129/01-83-500	6135-0-0158	40 11395 14096 3	26	74
6129/01-84-500	6135-0-0146	40 11395 13616 4	26	74
6129/01-866-500	6135-0-0162	40 11395 14100 7	26	74
6129/01-87-500	6135-0-0160	40 11395 14098 7	26	74
6129/01-884-500	6135-0-0165	40 11395 14103 8	26	74
6129/01-885-500	6135-0-0166	40 11395 14104 5	26	74
6129/01-896-500	6135-0-0170	40 11395 17004 5	26	74
6131/10-183-500	6132-0-0297	40 11395 14774 0	26	42
6131/10-24-500	6132-0-0295	40 11395 14772 6	26	42
6131/11-183-500	6132-0-0301	40 11395 14778 8	26	42
6131/11-24-500	6132-0-0299	40 11395 14776 4	26	42
6136/10-500	6136-0-0139	40 11395 07927 0	26	61
6136/11-500	6136-0-0141	40 11395 07929 4	26	61
6136/15-500	6136-0-0196	40 11395 15694 0	26	61
6136/UP	6136-0-0124	40 11395 04437 7	26	61
6138/11-83-500	6138-0-0005	40 11395 11613 5	26	46
6138/11-84-500	6138-0-0003	40 11395 11609 8	26	46
6149/21-500	6133-0-0201	40 11395 11896 2	26	70
6151/11 U-500	6151-0-0245	40 11395 16395 5	26	20
6152/11 U-500	6152-0-0040	40 11395 16397 9	26	20
6164/11 U-500	6151-0-0247	40 11395 16399 3	26	20
6173/11 U-500	6151-0-0249	40 11395 16402 0	26	20
6179/01-204-500	6132-0-0313	40 11395 16854 7	26	44
6179/01-208-500	6132-0-0314	40 11395 16856 1	26	44
6179/02-204-500	6132-0-0317	40 11395 16861 5	26	44
6179/02-208-500	6132-0-0318	40 11395 16862 2	26	44
6179-500	6132-0-0320	40 11395 16865 3	26	44
6186 UP-500	6186-0-0021	40 11395 10164 3	34	58
6186/01 UP-500	6186-0-0023	40 11395 15886 9	34	57
6197/12-101-500	6197-0-0036	40 11395 16366 5	33	41
6197/13-101-500	6197-0-0037	40 11395 16367 2	33	41
6197/14-101-500	6197-0-0038	40 11395 16368 9	33	41
6197/15-101-500	6197-0-0039	40 11395 16369 6	33	41
6197/52-101-500	6197-0-0040	40 11395 16371 9	33	41
6197/53-101-500	6197-0-0041	40 11395 16372 6	33	41
6320/10-20-500	6320-0-0002	40 11395 13857 1	26	79
6320/10-24G-500	6320-0-0004	40 11395 13873 1	26	79
6320/10-260-500	6320-0-0010	40 11395 13879 3	26	79
6320/10-79-500	6320-0-0006	40 11395 13875 5	26	79
6320/10-83-500	6320-0-0008	40 11395 13877 9	26	79
6320/30-20-500	6320-0-0012	40 11395 13882 3	26	79
6320/30-24G-500	6320-0-0014	40 11395 13885 4	26	79
6320/30-260-500	6320-0-0020	40 11395 13892 2	26	79
6320/30-79-500	6320-0-0016	40 11395 13887 8	26	79
6320/30-83-500	6320-0-0018	40 11395 13889 2	26	79
6320/38-20-500	6320-0-0022	40 11395 13895 3	26	50
6320/38-20-500	6320-0-0022	40 11395 13895 3	26	80
6320/38-24G-500	6320-0-0024	40 11395 13897 7	26	50
6320/38-24G-500	6320-0-0024	40 11395 13897 7	26	80
6320/38-260-500	6320-0-0030	40 11395 13904 2	26	50
6320/38-260-500	6320-0-0030	40 11395 13904 2	26	80
6320/38-79-500	6320-0-0026	40 11395 13900 4	26	50
6320/38-79-500	6320-0-0026	40 11395 13900 4	26	80
6320/38-83-500	6320-0-0028	40 11395 13902 8	26	50
6320/38-83-500	6320-0-0028	40 11395 13902 8	26	80

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Type	Order code	EAN	PG	Page
6320/50-20-500	6320-0-0032	40 11395 13911 0	26	80
6320/50-24G-500	6320-0-0034	40 11395 13914 1	26	80
6320/50-260-500	6320-0-0040	40 11395 13921 9	26	80
6320/50-79-500	6320-0-0036	40 11395 13916 5	26	80
6320/50-83-500	6320-0-0038	40 11395 13918 9	26	80
6320/58-20-500	6320-0-0042	40 11395 13923 3	26	50
6320/58-20-500	6320-0-0042	40 11395 13923 3	26	81
6320/58-24G-500	6320-0-0044	40 11395 13926 4	26	50
6320/58-24G-500	6320-0-0044	40 11395 13926 4	26	81
6320/58-260-500	6320-0-0050	40 11395 13933 2	26	50
6320/58-260-500	6320-0-0050	40 11395 13933 2	26	81
6320/58-79-500	6320-0-0046	40 11395 13928 8	26	50
6320/58-79-500	6320-0-0046	40 11395 13928 8	26	81
6320/58-83-500	6320-0-0048	40 11395 13931 8	26	50
6320/58-83-500	6320-0-0048	40 11395 13931 8	26	81
6340-24G-101-500	6310-0-0109	40 11395 13092 6	34	67
6340-810-101-500	6310-0-0107	40 11395 13089 6	34	67
6340-811-101-500	6310-0-0168	40 11395 15674 2	34	67
6340-825-101-500	6310-0-0108	40 11395 13091 9	34	67
6340-866-101-500	6310-0-0106	40 11395 13088 9	34	67
6341-24G-101-500	6310-0-0117	40 11395 13100 8	34	68
6341-810-101-500	6310-0-0115	40 11395 13098 8	34	68
6341-811-101-500	6310-0-0170	40 11395 15676 6	34	68
6341-825-101-500	6310-0-0116	40 11395 13099 5	34	68
6341-866-101-500	6310-0-0114	40 11395 13097 1	34	68
6342-24G-101-500	6310-0-0125	40 11395 13108 4	34	68
6342-810-101-500	6310-0-0123	40 11395 13106 0	34	68
6342-811-101-500	6310-0-0172	40 11395 15678 0	34	68
6342-825-101-500	6310-0-0124	40 11395 13107 7	34	68
6342-866-101-500	6310-0-0122	40 11395 13105 3	34	68
6344-24G-101-500	6310-0-0133	40 11395 13117 6	34	68
6344-810-101-500	6310-0-0131	40 11395 13115 2	34	68
6344-811-101-500	6310-0-0174	40 11395 15681 0	34	68
6344-825-101-500	6310-0-0132	40 11395 13116 9	34	68
6344-866-101-500	6310-0-0130	40 11395 13114 5	34	68
6345-24G-101-500	6310-0-0081	40 11395 11873 3	34	69
6345-810-101-500	6310-0-0079	40 11395 11871 9	34	69
6345-811-101-500	6310-0-0176	40 11395 15683 4	34	69
6345-825-101-500	6310-0-0080	40 11395 11872 6	34	69
6345-866-101-500	6310-0-0078	40 11395 11868 9	34	69
6346/10-101-500	6310-0-0135	40 11395 13119 0	34	67
6346/11-101-500	6310-0-0137	40 11395 13122 0	34	67
6346/12-101-500	6310-0-0139	40 11395 13124 4	34	67
6348-24G-101-500	6310-0-0147	40 11395 13132 9	34	69
6348-810-101-500	6310-0-0145	40 11395 13130 5	34	69
6348-811-101-500	6310-0-0178	40 11395 15685 8	34	69
6348-825-101-500	6310-0-0146	40 11395 13131 2	34	69
6349-24G-101-500	6310-0-0155	40 11395 13142 8	34	69
6349-810-101-500	6310-0-0153	40 11395 13139 8	34	69
6349-811-101-500	6310-0-0180	40 11395 15687 2	34	69
6349-825-101-500	6310-0-0154	40 11395 13140 4	34	69
6350-825-101-500	6310-0-0157	40 11395 13144 2	34	69
6351-825-101-500	6310-0-0092	40 11395 13152 7	34	70
6352-24G-101-500	6310-0-0165	40 11395 13151 0	34	70
6352-810-101-500	6310-0-0163	40 11395 13150 3	34	70
6352-811-101-500	6310-0-0182	40 11395 15689 6	34	70
6352-825-101-500	6310-0-0164	40 11395 13151 0	34	70
6353/20-860-500	6310-0-0093	40 11395 11892 4	34	70
6353/30-860-500	6310-0-0094	40 11395 11893 1	34	70
6353/40-860-500	6310-0-0095	40 11395 11894 8	34	70
6353/50-860-500	6310-0-0096	40 11395 11895 5	34	70
6354 U-500	6310-0-0097	40 11395 11897 9	34	66
6355 U-500	6310-0-0098	40 11395 11898 6	34	66

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Type	Order code	EAN	PG	Page
6356 U-500	6310-0-0099	40 11395 11899 3	34	66
6541-22G	6599-0-2795	40 11395 91730 5	19	52
6541-24	6599-0-1557	40 11395 38180 9	19	52
6541-24G	6599-0-2332	40 11395 70860 6	19	52
6541-74	6599-0-2076	40 11395 54180 7	19	52
6541-79	6599-0-2142	40 11395 55810 2	19	52
6541-803	6599-0-2940	40 11395 11115 4	19	51
6541-81	6599-0-2882	40 11395 05642 4	19	51
6541-815	6599-0-2936	40 11395 11111 6	19	51
6541-82	6599-0-2832	40 11395 99569 3	19	51
6541-83	6599-0-2885	40 11395 07445 9	19	51
6541-84	6599-0-2835	40 11395 99663 8	19	51
6541-866	6599-0-2924	40 11395 08815 9	19	51
6541-87	6599-0-2844	40 11395 99917 2	19	51
6541-884	6599-0-2962	40 11395 12964 7	19	51
6541-885	6599-0-2967	40 11395 12965 4	19	51
6541-896	6599-0-2998	40 11395 16703 8	19	51
6824-84	6800-0-2516	40 11395 13747 5	14	111
6826-84	6800-0-2512	40 11395 13741 3	14	110
6827-84	6800-0-2513	40 11395 13744 4	14	110
6828	6800-0-2514	40 11395 13745 1	14	110
6829-84	6800-0-2515	40 11395 13746 8	14	111
6868-204-500	6800-0-2562	40 11395 15097 9	29	42
6868-208-500	6800-0-2563	40 11395 15098 6	29	42
6885-183-500	6899-0-0297	40 11395 06825 0	29	42
6885-500	6899-0-0282	40 11395 00468 5	29	42
8136/01 UP-500	8136-0-0032	40 11395 15891 3	34	57
8136/09-811-500	8136-0-0024	40 11395 15877 7	34	56
8136/09-825-500	8136-0-0026	40 11395 15879 1	34	56
8136/12-811-500	8136-0-0028	40 11395 15882 1	34	56
8136/12-825-500	8136-0-0030	40 11395 15884 5	34	56
8136/20-500	8136-0-0004	40 11395 10168 1	34	58
8136/23-500	8136-0-0006	40 11395 10171 1	34	58
8136/30-500	8136-0-0012	40 11395 10177 3	34	59
8136/31-500	8136-0-0014	40 11395 10179 7	34	59
8136/40-500	8136-0-0016	40 11395 11182 6	34	58
8136/41-500	8136-0-0018	40 11395 11184 0	34	58
8136/UP-500	8136-0-0020	40 11395 11921 1	34	59
8136-500	8136-0-0002	40 11395 10162 9	34	57
8186/03-500	8100-0-0344	40 11395 17146 2	32	11
8186/04-500	8100-0-0346	40 11395 17148 6	32	11
A41 111 - 100	2CMA170554R1000	73 92696 70554 7		91
A41 112 - 100	2CMA170500R1000	73 92696 70500 4		91
A41 212 - 100	2CMA170501R1000	73 92696 70501 1		91
A41 311 - 100	2CMA170502R1000	73 92696 70502 8		91
A41 312 - 100	2CMA170503R1000	73 92696 70503 5		91
A41 313 - 100	2CMA170504R1000	73 92696 70504 2		91
A41 412 - 100	2CMA170505R1000	73 92696 70505 9		91
A41 413 - 100	2CMA170506R1000	73 92696 70506 6		91
A41 513 - 100	2CMA170508R1000	73 92696 70508 0		91
A42 111 - 100	2CMA170555R1000	73 92696 70555 4		92
A42 112 - 100	2CMA170510R1000	73 92696 70510 3		92
A42 212 - 100	2CMA170511R1000	73 92696 70511 0		92
A42 312 - 100	2CMA170512R1000	73 92696 70512 7		92
A42 412 - 100	2CMA170513R1000	73 92696 70513 4		92
A42 413 - 100	2CMA170514R1000	73 92696 70514 1		92
A42 552 - 120	2CMA170518R1000	73 92696 70518 9		92
A42 553 - 120	2CMA170519R1000	73 92696 70519 6		92
A43 111 - 100	2CMA170520R1000	73 92696 70520 2		93
A43 121 - 100	2CMA170521R1000	73 92696 70521 9		93
A43 212 - 100	2CMA170522R1000	73 92696 70522 6		93
A43 213 - 100	2CMA170523R1000	73 92696 70523 3		93
A43 311 - 100	2CMA170524R1000	73 92696 70524 0		93

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Type	Order code	EAN	PG	Page
A43 312 - 100	2CMA170525R1000	73 92696 70525 7		93
A43 313 - 100	2CMA170526R1000	73 92696 70526 4		93
A43 412 - 100	2CMA170528R1000	73 92696 70528 8		93
A43 413 - 100	2CMA170529R1000	73 92696 70529 5		93
A43 512 - 100	2CMA170531R1000	73 92696 70531 8		93
A43 513 - 100	2CMA170532R1000	73 92696 70532 5		93
A44 111 - 100	2CMA170533R1000	73 92696 70533 2		94
A44 212 - 100	2CMA170534R1000	73 92696 70534 9		94
A44 213 - 100	2CMA170535R1000	73 92696 70535 6		94
A44 311 - 100	2CMA170536R1000	73 92696 70536 3		94
A44 352 - 100	2CMA170537R1000	73 92696 70537 0		94
A44 353 - 100	2CMA170538R1000	73 92696 70538 7		94
A44 452 - 100	2CMA170540R1000	73 92696 70540 0		94
A44 453 - 100	2CMA170541R1000	73 92696 70541 7		94
A44 552 - 100	2CMA170545R1000	73 92696 70545 5		94
A44 552 - 110	2CMA170549R1000	73 92696 70549 3		94
A44 553 - 100	2CMA170546R1000	73 92696 70546 2		94
A44 553 - 110	2CMA170548R1000	73 92696 70548 6		94
AA/S 4.1	2CDG120005R0011	40 16779 65886 7	20	30
AAM/S 4.1	2CDG120006R0011	40 16779 65887 4	20	30
ABL/S 2.1	2CDG110073R0011	40 16779 65264 3	26	53
ABZ/S 2.1	2CDG110072R0011	40 16779 65236 0	26	53
ADB	GHV9210018V0020	40 13232 53420 1	50	106
AE/A 2.1	2CDG110086R0011	40 16779 66401 1	26	24
AE/S 4.2	2CDG110030R0011	40 16779 58763 1	26	24
AM/S 12.1	GHQ6310062R0111	40 16779 51481 1	26	7
AMSE	GHV9250010V0003	40 16779 49290 4	50	104
AMSP	GHV9250010V0004	40 16779 49280 5	50	104
BDB/S 1.1	2CDG110067R0011	40 16779 65753 2	26	97
BE/M 4.12.1	2CDG110007R0011	40 16779 58313 8	26	17
BE/M 4.230.1	2CDG110005R0011	40 16779 58311 4	26	17
BE/M 4.24.1	2CDG110006R0011	40 16779 58312 1	26	17
BE/S 4.20.2.1	2CDG110090R0011	40 16779 71078 7	26	23
BE/S 4.230.2.1	2CDG110091R0011	40 16779 71106 7	26	23
BE/S 8.20.2.1	2CDG110092R0011	40 16779 71076 3	26	23
BE/S 8.230.2.1	2CDG110093R0011	40 16779 71077 0	26	23
BUSKLEMME	GHQ6301901R0001	40 12233 80230 2	20	13
C11 110 - 300	2CMA170550R1000	73 92696 70550 9		97
CP-D 24/2.5	2CDG120037R0011	40 16779 69789 7	20	71
DG/S 1.1	2CDG110026R0011	40 16779 58583 5	26	38
DG/S 1.16.1	2CDG110103R0011	40 16779 66950 4	26	38
DG/S 8.1	2CDG110025R0011	40 16779 58582 8	26	38
DGN/S 1.16.1	2CDG110142R0011	40 16779 84556 4	26	38
DLR/A 4.8.1.1	2CDG110172R0011	40 16779 88237 8	26	39
DLR/S 8.16.1M	2CDG110101R0011	40 16779 67656 4	26	39
DR/S 4.1	2CDG110029R0011	40 16779 58755 6	26	8
DSA/S 2.16.1	2CDG110009R0011	40 16779 58584 2	26	39
DSM/S 1.1	2CDG110060R0011	40 16779 65205 6	26	13
EIM/DB	GHV9230039V0010	40 16779 87746 6	50	107
EIM/KB	2CDG230028R0011	40 16779 75717 1	50	107
EIM/KC	2CDG230029R0011	40 16779 75718 8	50	107
EIM/XB	2CDG230025R0011	40 16779 67879 7	50	102
EIM/XC	2CDG230026R0011	40 16779 67880 3	50	102
EM/S 3.16.1	2CDG110148R0011	40 16779 87706 0	26	87
EP	GHQ7132443R0003	40 13232 04220 1	50	106
ER/U 1.1	GHQ6310044R0111	40 16779 49725 1	26	45
ES/M 2.230.1	2CDG110013R0011	40 16779 58361 9	26	18
ES/M 2.24.1	2CDG110014R0011	40 16779 58362 6	26	18
ES/S 4.1.2.1	2CDG110058R0011	40 16779 67206 1	26	45
ES/S 8.1.2.1	2CDG110059R0011	40 16779 67207 8	26	45
ESPE	GHV9250010V0001	40 13232 70140 5	50	104
EUB/S 1.1	2CDG110066R0011	40 16779 64991 9	26	97
EVS	GHV9250010V0002	40 16779 44170 4	50	104

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Type	Order code	EAN	PG	Page
FAD/A 1.1	2CDG120040R0011	40 16779 90668 5	20	54
FAG/A 1.1	2CDG120041R0011	40 16779 90669 2	20	54
FC/S 1.1	2CDG120001R0011	40 16779 58383 1	20	47
FC600/BREL	2CDG430051R0011	40 16779 70840 1	50	109
FC650/O	2CDG430073R0011	40 16779 86479 4	50	108
FC650/TMAX	2CDG430081R0011	40 16779 86477 0	50	108
FCA/S 1.1M	2CDG110084R0011	40 16779 66508 7	26	46
FCA/S 1.2.2.1	2CDG110141R0011	40 16779 87727 5	26	46
FW/S 8.2.1	2CDG120039R0011	40 16779 90666 1	20	54
GP2	GHV9220004V0004	40 13232 66670 4	50	105
HS/S 3.1	GHQ6050063R0001	40 16779 50098 2	20	41
HS/S 4.2.1	2CDG120044R0011	40 16779 90672 2	20	41
IO/S 4.6.1.1	2CDG110168R0011	40 16779 88107 4	26	30
IO/S 8.6.1.1	2CDG110169R0011	40 16779 88108 1	26	30
IPM/S 1.1	2CDG120036R0011	40 16779 69790 3	20	11
IPR/S 2.1	2CDG110061R0011	40 16779 65229 2	26	10
IPS/S 2.1	2CDG110098R0011	40 16779 66484 4	26	10
IR/KB	2CDG230027R0011	40 16779 75716 4	50	106
IR/XB	2CDG230023R0011	40 16779 67877 3	50	102
IR/XC	2CDG230024R0011	40 16779 67878 0	50	102
ISM/S 5.1	2CDG120034R0011	40 1677969792 7	20	10
ISS/S 5.1	2CDG120035R0011	40 16779 69791 0	20	11
JAM 2.230.1	2CDG110003R0011	40 16779 58315 2	26	17
JAM 2.24.1	2CDG110004R0011	40 16779 58316 9	26	17
JAS 4.SMI.1M	2CDG110028R0011	40 16779 65423 4	26	35
JRA/S 2.230.1.1	2CDG110129R0011	40 16779 69848 1	26	35
JRA/S 2.230.2.1	2CDG110120R0011	40 16779 69839 9	26	34
JRA/S 2.230.5.1	2CDG110124R0011	40 16779 69843 6	26	34
JRA/S 4.230.1.1	2CDG110130R0011	40 16779 69849 8	26	35
JRA/S 4.230.2.1	2CDG110121R0011	40 16779 69840 5	26	34
JRA/S 4.230.5.1	2CDG110125R0011	40 16779 69844 3	26	34
JRA/S 4.24.5.1	2CDG110128R0011	40 16779 69847 4	26	34
JRA/S 8.230.1.1	2CDG110131R0011	40 16779 69850 4	26	35
JRA/S 8.230.2.1	2CDG110122R0011	40 16779 69841 2	26	34
JRA/S 8.230.5.1	2CDG110126R0011	40 16779 69845 0	26	34
JSB/S 1.1	GHQ6310084R0111	40 16779 57993 3	26	35
KLEMMME	GHQ6301902R0001	40 16779 07930 3	20	13
KS/K 2.1	GHQ6301910R0011	40 16779 52893 1	20	8
KS/K 4.1	GHQ6301910R0001	40 16779 51725 6	20	8
L208/V.24	GHQ3280220R0001	40 16779 44510 8	50	101
L240	2CDG230004R0011	40 13232 65736 5	50	101
L240/BS	GHQ3050031R0001	40 16779 58561 3	50	104
L240/IP	2CDG230013R0011	40 16779 66856 9	50	102
L240/MG2	2CDG220003R0011	40 16779 65737 2	50	103
L240/PT	2CDG230014R0011	40 16779 66855 2	50	101
L840/MG4	GHQ3280011R0001	40 13232 73240 9	50	103
LF/U 2.1	2CDG110089R0011	40 16779 66416 5	26	40
LFA/S 1.1	2CDG110077R0011	40 16779 65546 0	26	46
LFA/S 2.1	2CDG110078R0011	40 16779 65547 7	26	46
LFO/A 1.1	2CDG120045R0011	40 16779 90673 9	20	41
LGS/A 1.1	2CDG120038R0011	40 16779 83712 5	20	47
LKS	GHQ4001906R0001	40 13232 39280 1	50	105
LL/S 1.1	GHQ6050053R0001	40 16779 39210 5	20	12
LMS 1.1	GHQ6310080R0111	40 16779 58121 9	26	53
LR/M 1.6.2	2CDG110108R0011	40 16779 68067 7	26	18
LR/S 2.16.1	2CDG110087R0011	40 16779 66405 9	26	40
LR/S 4.16.1	2CDG110088R0011	40 16779 66489 9	26	40
MRS/B	GHQ3201972R0002	40 16779 50659 5	50	105
MRS/W	GHQ3201972R0001	40 16779 50660 1	50	105
MT 701.2, SR	GHQ6050059R0006	40 16779 57582 9	20	55
MT 701.2, WS	GHQ6050059R0005	40 16779 57581 2	20	55
MT/S 4.12.2M	2CDG110109R0011	40 16779 71187 6	26	100
MT/S 8.12.2M	2CDG110110R0011	40 16779 71186 9	26	100

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Type	Order code	EAN	PG	Page
MT/U 2.12.2	2CDG110111R0011	40 16779 71176 0	26	100
MW	GHV9230039V0020	40 13232 66580 6	50	102
MW	GHV9230039V0020	40 13232 66580 6	50	107
ND/W	GHQ7132443R0011	40 13232 02540 2	50	106
NDA/W	GHQ7132443R0004	40 13232 61690 7	50	106
NDU/W	GHQ7132443R0021	40 13232 02550 1	50	106
NT/S 12.1600	GHQ6050056R0002	40 16779 51467 5	20	9
NT/S 24.800	GHQ6050057R0002	40 16779 51468 2	20	9
NTI/Z 28.30.1	2CDG110096R0011	40 16779 66316 8	26	8
NTU/S 12.2000.1	2CDG110070R0011	40 16779 68117 9	26	9
PK/E 2.1	2CDG120043R0011	40 16779 90671 5	20	54
PS 1/4/6-KNX	2CDG924003R0011	40 16779 66758 6	20	13
PS 1/60/6-KNX	2CDG924004R0011	40 16779 66759 3	20	13
PS/E 2.1	2CDG120042R0011	40 16779 90670 8	20	54
PS-END 1-S	2CDL000001R0001	40 16779 66698 5	5	13
RC/A 4.2	2CDG110104R0011	40 16779 67647 2	26	16
RC/A 8.2	2CDG110106R0011	40 16779 68126 1	26	16
RL	GHV9270013V0100	40 16779 86476 3	50	109
RM/S 1.1	2CDG110094R0011	40 16779 66556 8	26	19
RM/S 2.1	2CDG110095R0011	40 16779 66567 4	26	19
RM/S 3.1	2CDG110165R0011	40 16779 88106 7	26	19
RM/S 4.1	2CDG110170R0011	40 16779 88126 5	26	19
RTK	GHQ3201973R0021	40 16779 50655 7	50	105
SAM 2.16.1	2CDG110100R0011	40 16779 68158 2	26	17
SAM 2.6.1	2CDG110002R0011	40 16779 58314 5	26	17
SA/S 12.10.2.1	2CDG110158R0011	40 16779 87780 0	26	29
SA/S 12.16.2.1	2CDG110162R0011	40 16779 87776 3	26	29
SA/S 12.16.6.1	2CDG110138R0011	40 16779 76516 9	26	30
SA/S 12.6.1.1	2CDG110154R0011	40 16779 87784 8	26	29
SA/S 2.10.2.1	2CDG110155R0011	40 16779 87783 1	26	29
SA/S 2.16.2.1	2CDG110159R0011	40 16779 87779 4	26	29
SA/S 2.16.5.1	2CDG110132R0011	40 16779 70827 2	26	29
SA/S 2.16.6.1	2CDG110112R0011	40 16779 70830 2	26	30
SA/S 4.10.2.1	2CDG110156R0011	40 16779 87782 4	26	29
SA/S 4.16.2.1	2CDG110160R0011	40 16779 87778 7	26	29
SA/S 4.16.5.1	2CDG110133R0011	40 16779 70828 9	26	29
SA/S 4.16.6.1	2CDG110113R0011	40 16779 70831 9	26	30
SA/S 4.6.1.1	2CDG110152R0011	40 16779 87786 2	26	29
SA/S 8.10.2.1	2CDG110157R0011	40 16779 87781 7	26	29
SA/S 8.16.2.1	2CDG110161R0011	40 16779 87777 0	26	29
SA/S 8.16.5.1	2CDG110134R0011	40 16779 70829 6	26	29
SA/S 8.16.6.1	2CDG110114R0011	40 16779 70832 6	26	30
SA/S 8.6.1.1	2CDG110153R0011	40 16779 87785 5	26	29
SAD/ED	GHQ3280014R0001	40 13232 73270 6	50	104
SAD/GAP	GHQ3280015R0001	40 13232 73280 5	50	104
SAD/GUP	GHQ3280013R0001	40 13232 73260 7	50	104
SAK12	GHV9240001V0012	40 13232 74494 5	50	8
SAK17	GHV9240001V0013	40 13232 74495 2	50	8
SAK7	GHV9240001V0011	40 13232 74493 8	50	8
SAK7	GHV9240001V0011	40 13232 74493 8	50	102
SCM/S 1.1	2CDG110024R0011	40 16779 58391 6	26	100
SCS	GHQ3050027R0001	40 16779 58575 0	50	103
SD/M 2.6.2	2CDG110107R0011	40 16779 68066 0	26	17
SD/S 2.16.1	2CDG110079R0011	40 16779 65996 3	26	40
SD/S 4.16.1	2CDG110080R0011	40 16779 65937 6	26	40
SD/S 8.16.1	2CDG110081R0011	40 16779 65918 5	26	40
SE/S 3.16.1	2CDG110136R0011	40 16779 70977 4	26	87
SGL	GHQ3050008R0001	40 16779 53313 3	50	107
SJR/SA.24.2.1	2CDG110143R0011	40 16779 86446 6	26	35
SMB/S 1.1	GHQ6310085R0111	40 16779 58092 2	26	97
SPGS/B	GHV9220004V0010	40 13232 61430 9	50	105
SPGS/W	GHV9220004V0009	40 13232 61420 0	50	105
SSF/G	GHQ3050017R0001	40 16779 53466 6	50	109

Selection Table According to Type

Type	Order code	EAN	PG	Page
SSF/GB	GHQ3050018R0001	40 16779 53467 3	50	110
SSM/A	2CDG240019R0011	40 16779 83746 0	50	104
SSM/U	2CDG240020R0011	40 16779 83747 7	50	104
SSS	GHV9270001V0001	40 13232 02320 0	50	109
ST/K 1.1	2CDG120004R0011	40 16779 63022 1	20	47
SU/S 30.640.1	GHQ6310049R0111	40 16779 51477 4	26	7
SV/S 30.160.5	2CDG110085R0011	40 16779 66206 2	26	7
SV/S 30.320.5	GHQ6310038R0111	40 16779 49090 0	26	7
SV/S 30.640.5	GHQ6310048R0111	40 16779 51474 3	26	7
SWM4/RN	GHQ4030001R0012	40 13232 05750 2	50	108
TG/S 3.2	2CDG110135R0011	40 16779 70851 7	26	55
TG/Z 1.1	2CDG110119R0011	40 16779 69788 0	26	55
T-RAHM, SR	GHQ6050059R0012	40 16779 49586 8	20	55
T-RAHM, WS	GHQ6050059R0011	40 16779 49585 1	20	55
TS/K 1.1	2CDG120002R0011	40 16779 58381 7	20	47
TSA/K 230.1	2CDG120007R0011	40 16779 65299 5	20	48
TSA/K 24.1	2CDG120008R0011	40 16779 65300 8	20	48
UD/M 1.300.1	2CDG110012R0011	40 11395 04281 6	26	18
UD/S 2.300.2	2CDG110074R0011	40 16779 66306 9	26	40
UK/S 32.2	2CDG110071R0011	40 16779 65577 4	26	55
UP-KAST 2	GHQ6050059R0014	40 16779 51396 8	20	55
US/E 1	GHQ6310009R0001	40 16779 00570 8	20	13
US/U 12.2	2CDG110065R0011	40 16779 65012 0	26	23
US/U 2.2	GHQ6310074R0111	40 16779 56483 0	26	23
US/U 2.2	GHQ6310074R0111	40 16779 56483 0	26	45
US/U 4.2	GHQ6310070R0111	40 16779 56481 6	26	23
US/U 4.2	GHQ6310070R0111	40 16779 56481 6	26	45
USB/S 1.1	2CDG110008R0011	40 16779 58921 5	26	12
VA/Z 10.1	2CDG120009R0011	40 16779 65319 0	20	48
VA/Z 50.1	2CDG120010R0011	40 16779 65320 6	20	48
VA/Z 78.1	2CDG120011R0011	40 16779 65321 3	20	48
VA/Z 80.1	2CDG120012R0011	40 16779 65322 0	20	48
VAA/A 6.24.1	2CDG120032R0011	40 16779 67064 7	20	45
VAA/S 12.230.2.1	2CDG110117R0011	40 16779 82987 8	26	45
VAA/S 6.230.2.1	2CDG110116R0011	40 16779 82986 1	26	45
VB/K 100.1	GHQ6301908R0003	40 16779 50103 3	20	13
VB/K 200.1	GHQ6301908R0001	40 16779 46980 7	20	13
VB/K 270.1	GHQ6301908R0002	40 16779 46990 6	20	13
VB/K 360.1	GHQ6301908R0004	40 16779 84676 9	20	13
VMRS/B	GHQ3201972R0012	40 16779 50657 1	50	105
VMRS/W	GHQ3201972R0011	40 16779 50658 8	50	105
VSUE	GHV9210018V0022	40 13232 70120 7	50	106
WEL/A, ES	GHQ3050023R0001	40 16779 58570 5	P4	103
WELT/A, ES	GHQ3050024R0001	40 16779 58571 2	P4	103
WES/A 2.1	2CDG120033R0011	40 16779 69736 1	20	25
WRK/W	2CDG250003R0011	40 16779 66404 2	50	105
WS/S 4.1	2CDG110032R0011	40 16779 58771 6	26	25
WZ/S 1.1	2CDG110034R0011	40 16779 58612 2	26	25
XS/S 1.1	2CDG110075R0011	40 16779 66704 3	26	100
ZS/S 1.1	2CDG110083R0011	40 16779 66207 9	26	88

Contact

Further Information and Local Contacts:

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