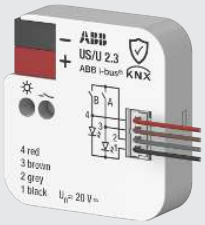
TECHNICAL DATA

ABB i-bus® KNX

US/U x.3

Universal interface



Device description

The devices are flush mounting devices (FM). They are designed for installation in flush mounting sockets with a diameter of 60 mm. The devices can be placed behind electrical equipment (e.g. pushbuttons).

The devices are KNX-certified and can be used as products in a KNX system
→ EU declaration of conformity.

The devices are powered via the bus (ABB i-bus® KNX) and require no additional auxiliary voltage.

The connection to the bus (ABB i-bus® KNX) is made via a KNX bus connection terminal on the side of the housing.

The connections at the inputs or outputs are made via plug-in connecting cables
→ designation on the housing.

The software application Engineering Tool Software (ETS) is used for physical address assignment and parameterization.

Device functions

Each channel can be used as either an input or an output.

The inputs are used as an interface for operating KNX systems via conventional buttons/switches or for coupling floating binary signals (signal contacts).

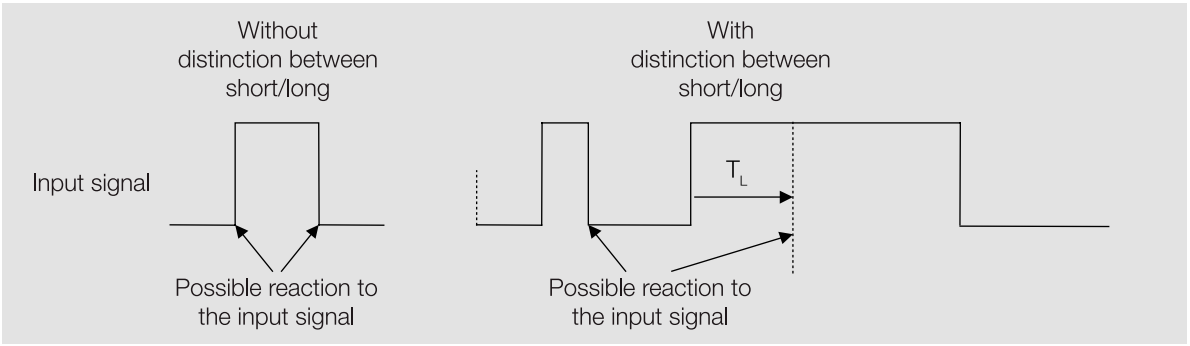
The outputs are used to control electrical loads (3.3 V DC, max. 5 mA, limited by pre-resistor) in a KNX environment.

When the contacts connected to the device inputs are operated, the devices send telegrams on the bus (ABB i-bus® KNX) via the application-specific Group Objects.

Distinction between short and long operation

The devices react to the rising or falling edge that is triggered by operating one of the contacts connected to the device input. Each time an edge is triggered, the devices send telegrams to the Group Objects that are enabled for the input.

If you wish to distinguish between short and long operation (e.g. for the execution of different events), you need to specify, in the parameters, how long a connected contact must be operated for in order to be recognized as a long operation.



Note
T_L is the time from which a long operation is detected.

Connections

The devices possess the following connections:

- Depending on the device type – 2 or 4 channels – each channel can be used as an input or an output
  - Binary inputs for the acquisition of floating binary signals
  - Outputs for connecting electrical loads (3.3 V DC, max. 5 mA, limited by pre-resistor)
- 1 KNX bus connection

Inputs

Application/function	a	b	c	d
Switch (1-button operation)	x	x	x	x
Switch (2-button operation)	x		x	
Blind/shutter (1-button operation)	x	x	x	x
Blind/shutter (2-button operation)	x		x	
Switch/dim (1-button operation)	x	x	x	x
Switch/dim (2-button operation)	x		x	
Scenes	x	x	x	x
Send value/multiple operation	x	x	x	x
Fault indicator/logic input	x	x	x	x
Switching sequence (1-button operation)	x	x	x	x
Switching sequence (2-button operation)	x		x	
Pulse counter	x	x	x	x
Logic	x	x	x	x
Block input	x	x	x	x

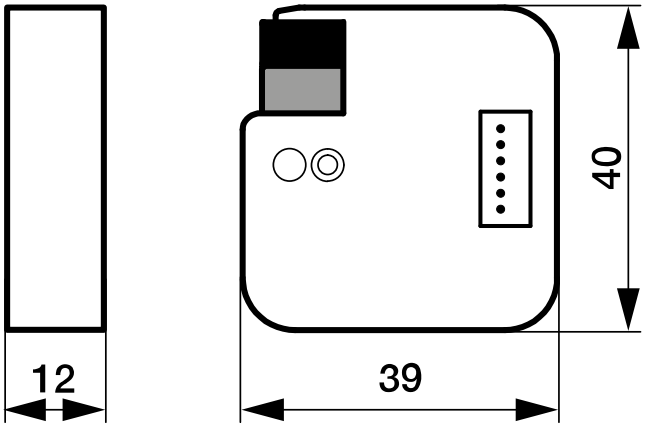
Outputs

Application/function	A	B	C	D
LED control	x	x	x	x

The product family described in this document includes the following devices:

Device type	Name	Features
US/U 2.3	Universal interface	2-fold, FM
US/U 4.3	Universal interface	4-fold, FM

Dimension drawing



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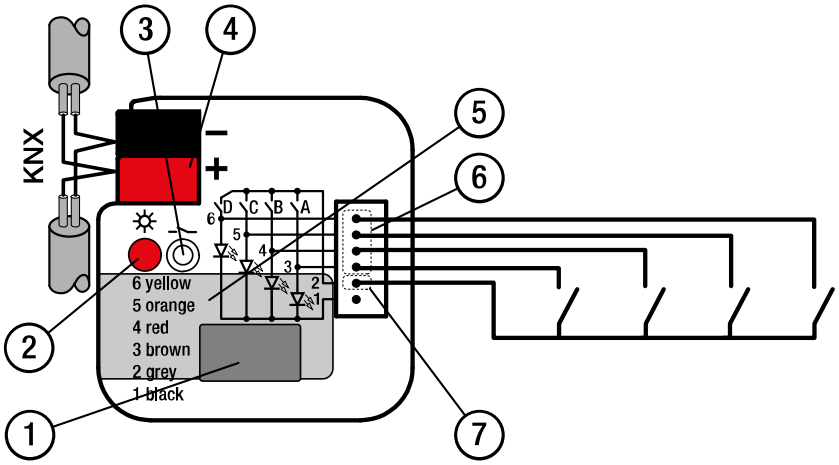
Connection diagram

Note
The largest and most extensive device in the product family is described below as an example.

Input connection diagram



Legend

1 Labeling field
2 *Programming* LED
3 *Programming* button
4 KNX bus connection terminal
5 FDSK sticker
6 Binary input
7 Binary input (+)

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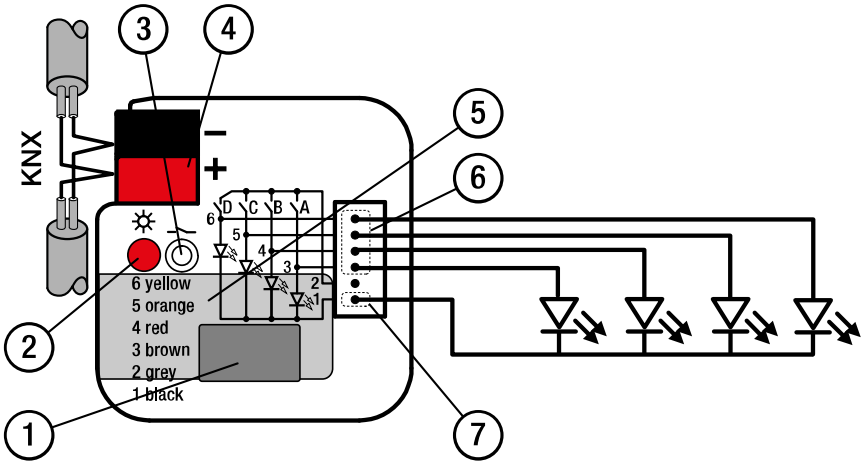
Output connection diagram



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Legend

1 Labeling field
2 *Programming* LED
3 *Programming* button
4 KNX bus connection terminal
5 FDSK sticker
6 Load output
7 Loud output (-)

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Operating controls and display elements

Operating control/LED	Description/function	Display
Programming LED/button	Assignment of the physical address	LED On: Device in programming mode

General technical data

		US/U 2.3	US/U 4.3
Device	Dimensions	39 × 12 × 40 mm (H x W x D)	39 × 12 × 40 mm (H x W x D)
	Weight	0.043	0.044
	Mounting position	Any	Any
	Design	Flush mounting	Flush mounting
	Degree of protection	IP 20	IP 20
	Protection class	III	III
	Overvoltage category	III	III
	Overload protection	Yes	Yes
	Reverse voltage protection	Yes	Yes
	Short-circuit proof	Yes	Yes
	Pollution degree	2	2
Materials	Housing	Ultramid C3U	Ultramid C3U
Material note	Fire classification	Flammability V-0	Flammability V-0
Electronics	Rated voltage, bus	30 V DC	30 V DC
	Voltage range, bus	21 … 31 V DC	21 … 31 V DC
	Current consumption, bus	< 12 mA	< 12 mA
	KNX safety extra low voltage	SELV	SELV
Connections	Connection type, KNX bus	Plug-in terminal	Plug-in terminal
	Cable diameter, KNX bus	0.6 … 0.8 mm, solid	0.6 … 0.8 mm, solid
	Conductor cross-section, flexible	1.1mm²	1.1mm²
	Length, wire end ferrule contact pin	≥ 8 mm	≥ 8 mm
	Stripping length for KNX terminal	6 mm	6 mm
	Stripping length for load terminal	8 mm	8 mm
Certificates and declarations	CE declaration of conformity	→ 9AKK108467A9662	→ 9AKK108467A9662
Ambient condition	Operation	−5 … +45 °C	−5 … +45 °C
	Transport	−25 … +70 °C	−25 … +70 °C
	Storage	−25 … +55 °C	−25 … +55 °C
	Humidity	≤ 95%	≤ 95%
	Condensation allowed	No	No
	Atmospheric pressure	≥ 80 kPa (corresponds to air pressure at 2,000 m above sea level)	≥ 80 kPa (corresponds to air pressure at 2,000 m above sea level)

Inputs/outputs

		US/U 2.3	US/U 4.3
Rated values	Number of inputs/outputs	2	4
	Non-floating	Yes	Yes
Input	Scanning current	≤ 0.5 mA	≤ 0.5 mA
	Scanning voltage U_n	≤ 20 V DC	≤ 20 V DC
Cable length	Between sensor and device input, one-way	≤ 10 m	≤ 10 m
Output	Output voltage	3.3 V AC	3.3 V AC
	Output current	≤ 5 mA, limited by pre-resistor	≤ 5 mA, limited by pre-resistor
	Pre-resistor	390 kΩ	390 kΩ

Ordering details

Description	MB	Type	Order no.	Packaging unit [pcs.]	Weight (incl. packaging) [kg]
Universal interface	-	US/U 2.3	2CDG110308R0011	1	0.060
Universal interface	-	US/U 4.3	2CDG110309R0011	1	0.061

ABB STOTZ-KONTAKT GmbH
Eppelheimer Straße 82
69123 Heidelberg, Germany
Phone: +49 (0)6221 701 607
Fax: +49 (0)6221 701 724
Email: knx.marketing@de.abb.com

Additional information and regional points of contact:
www.abb.de/knx
www.abb.com/knx

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