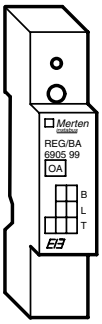
Bus coupler REG



Colour	Article No.
light grey	690599

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1. Function

The bus coupler REG is the base unit for INSTABUS devices and contains the necessary system software in the built-in microprocessor. It safeguards the communication within the INSTABUS system e.g. the sending and receiving of telegrams as well as collision detection (CSMA/CA).

A transformer is built into the bus couplers on the bus side which isolates the signal voltage from the direct bus voltage.

An integrated, stabilised power supply guarantees the supply to the microprocessor, its peripheral devices and the application module.

2. Installation

The bus coupler REG is snapped onto a DIN rail EN50022-35x7.5 with data rail inserted. The application modules are clipped onto the bus coupler from the left-hand side. For DIN rail mounted bus couplers, the bus connection is carried out by pressure contacts on the base of the data rail.

3. Technical Data

Nominal voltage:	DC 24 V (+6V / -3V)
Leakage loss:	100 mW (max. 150 mW)
Current consumption:	approx. 3 mA (max. 7 mA)
Reverse voltage protection:	integrated, the device is not operational when polarity is reversed
Dielectric strength:	surge-proof up to 2 kV
Data transmission rate:	9.6 kbit/s
Behaviour on bus voltage failure:	below DC 21 V the bus coupler disconnects itself from the bus, volatile data can be recovered (depending on the application software)
Connections	
Bus:	Pressure contacts on the base for connection to the data rail
Application module:	10-pole socket connector
Ambient temperature	
Operation:	-5 °C to +45 °C
Storage:	-25 °C to +55 °C
Transport:	-25 °C to +70 °C
Environment:	The device is designed for use at a height up to 2000 m above sea level
Max. humidity:	93 %
Operating elements:	Programming button
Display elements:	Red LED for checking the programming
EC guidelines:	corresponds to low voltage guideline 73/23/EEC, corresponds to EMC guideline 89/336/EEC
Dimensions:	90x18x74 mm (HxWxD)
Device width:	1 module = 18 mm

4. Settings in the EIB Tool Software (ETS)

Selection in the product database

Manufacturer:	Merten	
Product family:	1.1	System devices
Product type:	1.1.04	Bus coupler
Program name:		Bin. standard 1274 2x2 Inputs 7200 2x4 Inputs 7201 1x8 Inputs 7202 Lichtscene Switching 7210 Lichtscene Dimming 7211 Filter/Time 7220 Lighting control 1 7230 Lighting control 2 7231 1->2 bit conv. 7251
Media type:	Twisted Pair	
Product name:	Bus coupler REG	
Order number:	690599	

Manufacturer:	Merten	
Product family:	1.4	Multi-function module
Product type:	1.4.01	Logic operation
Program name:		2x2 Inputs 7200 2x4 Inputs 7201 1x8 Inputs 7202
Media type:	Twisted Pair	
Product name:	Bus coupler REG	
Order number:	690599	

Manufacturer:	Merten	
Product type:	1.4.02	Filter/telegram conversion
Program name:		Filter/Time 7220 1->2 bit conv. 7251
Media type:	Twisted Pair	
Product name:	Bus coupler REG	
Order number:	690599	

Manufacturer:	Merten	
Product type:	1.4.03	Lightscene controller
Program name:		Lichtscene Switching 7210 Lichtscene Dimming 7211
Media type:	Twisted Pair	
Product name:	Bus coupler REG	
Order number:	690599	

Manufacturer:	Merten	
Product type:	1.4.04	Lighting control
Program name:		Lighting control 1 7230 Lighting control 2 7231
Media type:	Twisted Pair	
Product name:	Bus coupler REG	
Order number:	690599	

5. Application overview

The following applications can be selected:

Application	Vers.	Function
Bin. standard 1274	3	Functionality of a binary input. Devices with a lateral plug-in connection can be attached. Article No. (670101, 670201, 670401, 670601)
		Setting the switching characteristics (edge => telegram value)
		Setting the time delay
		Logic operation of channel 1+2 or 3+4
2x2 Inputs 7200	2	2 x logic gates, each with two inputs
		1 x output gate
		AND, OR, EXCLUSIVE OR (XOR), NOT AND (NAND), NOT OR (NOR), EQUIVALENCE (NOT XOR)
		Input telegrams can be inverted
		Send criteria: change at output or input update
		Cyclical sending
2x4 Inputs 7201	2	2 x logic gates, each with four inputs
		AND, NOT AND (NAND), OR, NOT OR (NOR)
		Input telegrams can be inverted
		Send criteria: change at output or input update
		Cyclical sending
1x8 Inputs 7202	2	1 x logic gate, each with eight inputs
		AND, OR, NOT AND (NAND), NOT OR (NOR)
		Input telegrams can be inverted
		Send criteria: change at output or input update
		Cyclical sending
Lichtscene Switching 7210	1	Recall of 8 x 4 switching states in normal mode
		Individual assignment of ON and OFF for all 32 stored 1 bit values
		Storing of switching states in programming mode
Lichtscene Dimming 7211	1	Recall of 8 x 4 brightness values in normal mode
		Individual assignment of brightness values for all 32 stored 8 bit values
		Storing of brightness values in programming mode
Filter/Time 7220	1	2 independent channels With blocking of output telegrams
		With ON and/or OFF delay
		With filtering of input telegrams
Lighting control 1 7230	1	3 buffers for 1 bit telegrams Up to four 1 bit output telegrams are sent per buffer on receipt of a 1 bit input telegram
		With enabling of outputs A to D
		With master enable
Lighting control 2 7231	1	3 buffers for 4 bit telegrams Up to four 4 bit output telegrams are sent per buffer on receipt of a 4 bit input telegram
		With enabling of outputs A to D
		With master enable
1->2 bit conv. 7251	1	Conversion of 1 bit switching telegrams into 2 bit telegrams
		Eight conversion gates
		Parameterisable priority control