



The coupler can be used as a line coupler or as an area coupler. Used as a line coupler it joins up a line with a main line; as an area coupler it connects a main line with a secondary line. In doing so, it ensures the lines are isolated from each other.

At the same time it acts as a filter for data flow. It can either route those telegrams that are intended for the other line, or it can for diagnosis purposes route or block all the telegrams.

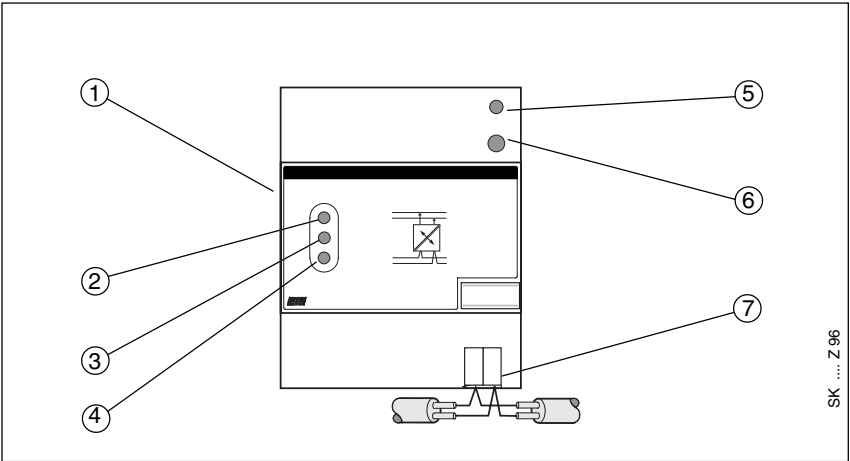
In the distribution board the coupler is installed on the secondary line of the data rail. To ensure a smooth operation, both lines must be correctly supplied.

Technical Data

Power supply	– EIB	24 VDC, via the bus line
Operating and display elements	– red LED and push button	for input of the physical address
	– yellow LED	Telegrams on the secondary line
	– green LED	ON
Connections	– yellow LED	Telegrams on the main line
	– EIB, secondary line	Pressure contacts on the data rail
	– EIB, main line	Pins for bus terminal
Type of protection	– IP 20, EN 60 529	
Ambient temperature range	– Operation	- 5 °C ... 45 °C
	– Storage	-25 °C ... 55 °C
	– Transport	-25 °C ... 70 °C
Design	– modular installation device, proM	
Housing, colour	– Plastic housing, grey	
Mounting	– on 35 mm mounting rail,	
	DIN EN 50022	
Dimensions	– 90 x 72 x 64 mm (H x W x D)	
Mounting depth/width	– 68 mm / 4 modules to 18 mm	
Weight	– 0.25 kg	
Certification	– EIB-certified	
CE norm	– in accordance with the EMC guideline and the low voltage guideline	

Application program	Number of communication objects	Max. number of group addresses	Max. number of associations
Line/Area coupler	0	0	0
Line Repeater	0	0	0

Wiring diagram



- 1 Data rail for secondary line

2 LED for receipt of telegram on secondary line

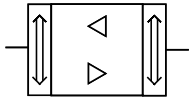
3 LED for normal operation

4 LED for receipt of telegram on main line
- 5 Programming LED

6 Programming push button

7 Connection for main line

Line/Area coupler



Selection in ETS2

- ABB
 - └ System components
 - └ Coupler

Line/Area coupler

The coupler links two lines for data transfer but isolates them electrically.

If the coupler receives telegrams for example during the commissioning of an EIB installation, that use a physical address as the target address, it compares the physical addresses of the transmitter and receiver with its own physical address and then decides whether to route the telegrams or not. If the coupler has not yet received its own physical address, it can cause errors during the commissioning of other devices.

It is not possible to assign parameters to this function. The parameters of the coupler influence its reaction to telegrams that use a group address as a target address.

In normal mode the coupler only routes those telegrams whose group addresses are entered in its filter table.

Particularly during the commissioning stage and for diagnosis purposes, it can be a good idea to switch the first two parameters "Group telegrams from line to main line" and "Group telegrams from main line to line" to "route".

In this case it is possible at the commissioning stage to download at first only the physical address of the coupler and then only the parameters. If the EIB installation functions without any errors once the sensors and actuators have been commissioned, the ETS2 software can calculate the correct filter table. Finally both parameters can be reset to the default values. Both the parameters and the correct filter table can now be downloaded into the coupler.

During the programming of the filter table, a checksum is established which enables the coupler to determine during operation whether the content of the filter table has changed. This test function can be activated or disabled using the parameter "Check filter table cyclically for faults".

If this option is selected, the parameter "On error in filter table" determines the reaction of the coupler. The option "block group telegrams" can be selected so that errors are detected as quickly as possible. With the default setting "route group telegrams", the installation will generally work without any problems for the user. For installations with a high occurrence of telegrams, there can be time delays.

Main groups 14 and 15 are not contained in the filter table.

They should therefore not normally be planned into a project. If they are used however, the parameter "Telegrams of main group 14/15" must be set correctly.

If the coupler routes a telegram and receives no acknowledgement or if a bus device establishes an error in transmission, the coupler repeats the telegram up to three times. Using the parameters "Repetitions if errors ..." this function can be set separately for both lines. This can be a good idea if the couplers are operating as an exception in an installation without filter tables and are routing all the telegrams. In this case the bus load can be reduced. As a rule these parameters should not be changed.

The coupler normally only acknowledges the telegrams that it routes. The parameters "Telegram acknowledge ..." enable the coupler to acknowledge each telegram separately for both lines. These parameters should also generally not be changed.

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Parameters

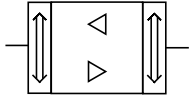
The default setting for the values is **printed in bold type**.

– Group telegrams from line to main line	route block filter
– Group telegrams from main line to line	route block filter
– Check filter table cyclically for faults	no yes
only if option for checking errors is selected:	
– On error in filter table	block group telegrams route group telegrams ignore errors
– Telegrams of main group 14/15	always route always block
– Repetitions if errors on the main line	none 1 2 3
– Repetitions if errors on line	none 1 2 3
– Telegram acknowledge on main line	always only if routed
– Telegram acknowledge on secondary line	always only if routed

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Repeater



Selection in ETS2

- ABB
 - └ System components
 - └ Coupler

Repeater

A coupler can also be used as a line repeater. In its function as a repeater, it links two line segments for data transfer but isolates them electrically.

Up to three line repeaters can be used behind a line coupler. As a result, up to four line segments can form a complete line.

The line repeaters do not have any filter tables. This means that a telegram is sent to all line segments, whether it is processed in the corresponding line segment or not. It is therefore not important whether the telegram has been triggered within the lines or whether it has been sent from the main line to the lines via the line coupler.

If the line repeater receives telegrams for example during the commissioning of an EIB installation, which use a physical address as a target address, it compares the physical addresses of the sender and receiver with its own physical address and then decides whether it must route the telegrams or not. If the line repeater has not yet received its own physical address, it can cause faults when commissioning other devices.

If an error occurs during the transmission of a telegram with the physical address of a receiver, the line repeater can repeat the telegram. It is not repeated in the default setting in order to keep the telegram load as small as possible. This behaviour can be set separately for both line segments with the parameters "Repetitions if errors ... in assigning physical addresses".

If the line repeater routes a telegram and does not receive an acknowledgment or if a bus device establishes a transmission error, the line repeater by default repeats the telegram twice at most. This behaviour can be set separately for both line segments with the parameters "Repetitions if errors ... in group telegrams".

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Parameters
The default setting for the values
is **printed in bold type**.

– Repetitions if errors on main line in assigning physical addresses	none
	1
	2
	3
– Repetitions if errors on main line in group telegrams	none
	1
	2
	3
– Repetitions if errors on line in assigning physical addresses	none
	1
	2
	3
– Repetitions if errors on line in group telegrams	none
	1
	2
	3