

Z301B

ECS LAN Booster

3-349-466-03
1/9.12

- Transmission distance increased by a factor of up to 8 as opposed to the RS 485 standard
- Two boosters per transmission path
- Connection even in the case of cables with high capacitive loads up to a loop resistance value of approx. 800 Ω
- Maximized transmission distance by mean of appropriate transmission speed



Application

Up to 8 Times the Transmission Distance

The ECS LAN booster makes it possible to increase transmission distance via the ECS LAN with 4-wire connection by a factor of 4 to 8 as opposed to the RS 485 standard (1200 m at 60 kBit) by means of a special pre-emphasis process.

Two Boosters per Transmission Path

Two boosters are required for each transmission path; one booster is looped into each transmission cable directly at the ECS LAN input (I/O+ / I/O-).

Connections Even with High Capacitive Loads

Connections are even possible in the case of cables with high capacitive loads up to a loop resistance value of approximately 800 Ω . For cables with negligible capacitive loads, the absolute limit value for loop resistance is 2500 Ω (practically irrelevant).

On LED

The green LED at the front lights up when auxiliary power is connected.

Maximized Transmission Distance

Transmission speed is permanently set to 62.5 kBaud. Maximum transmission distance is assured with this setting. The boosters function with higher or lower bit rates as well, but the pre-emphasis effect is greatly reduced in this case.

Note: When transmission speed is increased to 125 kBaud, transmission distance is usually cut in half and more errors occur, so

that the actual transmission speed is often less than when a setting of 62.5 kBaud is used.

Using a Z301A ECS LAN Router as a Booster

The Z301A ECS LAN router can be transformed into an ECS LAN booster by means of a special DIL switch setting.

After opening the housing, set the router's 6-position DIL switch as follows to this end:

Function	1	2	3	4	5	6
Booster	On	On	On	On	On	On

- The setting selected for the ECS LAN terminating resistor is irrelevant.
- The DIL switch may only be set after disconnecting the device from all sources of electrical power!
- The green status LED lights up when auxiliary power is connected.
- The LAN-L (2 W) connector terminals may not be used when operated as a booster!
- The following applies to the LAN-R (4 W) connector terminals:

Router	0+	0-	I+	I-
Booster	BO+	BO-	BI+	BI-

Order Information

Type	Article Number
ECS LAN Booster	Z301B

Z301B

ECS LAN Booster

Power Supply

Operating voltage 20 to 70 V DC, 2 VA

Electrical Safety

In accordance with EN 60950
 Protection Housing: IP 20 per DIN VDE 0470, part 1 / EN 60529

Electromagnetic Compatibility (EMC)

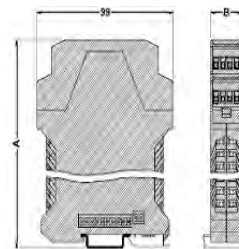
Interference emission EN 50090-2-2: 2007
 Interference immunity EN 50090-2-2: 2007

Ambient Conditions

Operating temp. 0° C to +50° C
 Storage temp. -25° C to +50° C
 Relative humidity 20% to 90%, no condensation allowed

Mechanical Design

Housing width [B] 22.5 mm
 Housing height [A] 114.5 mm
 Housing depth 99 mm



Data Interface

Connector pin assignments

IN DC 20-70V			
+	+	-	-
BOOSTER			
BO+	BO-	BI+	BI-
Ausgang		Eingang	

Wiring Diagram

