

PRA-LID Line isolator drive

PRAESENSA



- ▶ Drives up to 200 Line isolator modules
- ▶ Compact DIN-rail mountable unit
- ▶ EN 54-16 compliant

The PRA-LID is one of the two core components of the Loudspeaker line isolator system for PRAESENSA public address voice alarm solution.

Loudspeaker line isolator system

The Loudspeaker line isolator system is the cost-efficient solution for preventing loss of audio function in public address and voice alarm systems, as a result of loudspeaker line faults.

It largely eliminates the need for expensive E30 cabling by making use of the so-called loop wiring method. The system is EN 54-16 compliant and is perfectly suited for use in commercial premises, such as office buildings and hotels.

Functions

The Line isolator drive (PRA-LID) is connected to the PRAESENSA system one side, and driving up-to 200 Line isolator modules on the other side.

Connection to PRAESENSA

- The amplifier channel outputs for the audio transmission.
- Powered from the PRA-MPS3 unit to ensure redundant power.
- Contact closure input is used to report relevant status/faults.

Certifications and approvals

Emergency standard certifications

Europe	EN 54-16
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Regulatory areas

Safety	EN 62368-1 EN 62479
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Immunity	EN 50130-4 EN 55035
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Emissions	EN 61000-6-3 EN 61000-6-4 EN 55032
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Environment	EN IEC 63000
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Conformity declarations

Europe	CE
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Region	Regulatory compliance/quality marks	
Europe	CE	DECL EC LDB (CTN PRA-LID)

Parts included

Quantity	Component
1	Line Isolator Drive
1	5-pole DIN-rail bus connector

Technical specifications

Electrical

DC Power supply	18 - 50 VDC
DC Power consumption	
Inrush	1.44 W
LDB only	1.9 W
LDB full load (plus 200 x FIM)	2.4 W
AMP input (100V audio)	
max. AC voltage	max cont. 100 VRMS, 300 VPP
max. AC current	max cont. 8 A
Frequency range	40 Hz ~ 20 kHz (-3dB)
THD	max 10% (according to EN 54-16)
LOOP output	
AC	same as AMP input
DC voltage	30 V
DC current	max. cont. 130 mA
Wiring	2-wire. Max. 2.5 mm ² / Max. Loop length: 1000 m
Grounding	Earth loop through third connection-pin
Loop relay contact rating	max. 250 VAC / 8 A (Dual-state type)
Maximum total loop load	800 W
Loudspeaker type	only with DC blocking capacitor
Maximum number of FIM connected, single loop	200
Short detection	< 90 Ω (L+ to L-)
Open detection	> 1.8 kΩ (PRI to SEC; AMP+ to AMP-)
Ground leakage detection	< 30 kΩ (L+/L- or AMP+/AMP- to GND)
Functional (Interfacing)	
Status indicators	3 x LED indicator

User buttons	Reset button + Service button
General Fault contact	Pin-to ground (programmable)
Serial data communication	RS-485
Maximum supply current, single DIN rail	8 A
Bus address range	00 - FF (0-255) / max. 32 on single DIN-rail bar
Reset	manual: by reset button or via PC application (access level 3 or 4, EN 54-16)
Reset time	60 s
Fault detection time	
Loop short	< 1 s
Loop open	< 5 s
Earth leakage	10 s
Audio recovery time	
Loop short	< 4 s
Other faults	0 s (no audio interruption)

Environmental

Operating temperature	-5 °C ~ +40 °C
Storage temperature	-20 °C ~ +70 °C
Relative humidity	15% ~ 93%

Mechanical

Housing	Bopla Combinorm-Connect - DIN rail version - IP30
Protection rating	IP 30
Dimensions (W x H x D)	17.5 mm x 114.5 mm x 99 mm
Weight	200 g
Mounting	Quick-snap on DIN-rail, inside rack housing
Connections	

Loopdrive bus	DIN rail connector 5-points 3.5 mm screw terminal block
AMP in	2-point 5 mm screw terminal block (+, -)
LOOP out (PRI/SEC)	3-point 5 mm screw terminal block (L+, L-, optional GND)

Ordering information

PRA-LID Line isolator drive

Line isolator drive to drive and control Line isolator modules (PRA-LIM).

Order number **PRA-LID | F.01U.393.728**

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