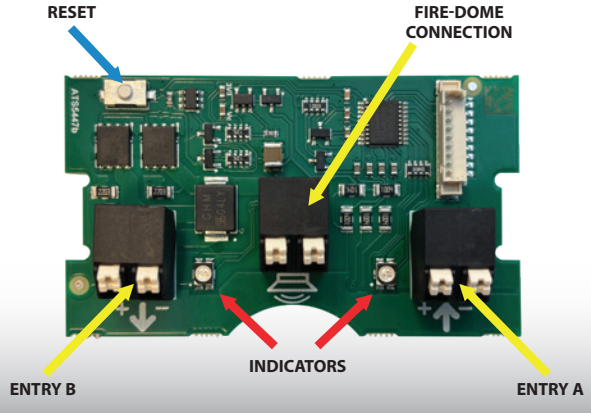
RING PROTECTOR UNIT - RPU



Short Circuit Isolator

The **Ring Protector Unit (RPU)** represents the latest advancement in **loudspeaker ring-isolation devices**, incorporating cutting-edge design and technology to deliver **enhanced availability** and resilience for **evacuation loudspeaker lines** configured in a **return-loop topology**.
When a fault occurs—such as a **wire-to-wire short circuit** or an open line—the RPU automatically **detects and isolates** the affected segment between two RPUs. This ensures that all **loudspeakers outside the faulty section** remain fully operational, enabling the **uninterrupted delivery of critical evacuation messages**.

RPU		INDICATORS	
DC Power supply	30VDC	Quiescent	Alternately Flashing GREEN
Power consumption	200µA/6 mW	Reset	= back to Quiescent
Max. Audio power handling	500W/100V	Short	Flash Fast ORANGE (2 Hz)
Fire-dome connection	Single speaker with capacitor	Short memory	Flash Slow ORANGE (0,5 Hz)
Short isolation time	<3sec.		
Connectors	3 x 2 PIN, Quick snap		
Wiring	0.8 - 2.5mm2, Max. 1km		
Reset button	Local manual reset		
Safety	EN60065		
CPR - EN54-17	0063-CPR-252190016/00		
Operating conditions	-10 °C ~ 55 °C		

MECHANICAL		WIRING		
Housing	IP-30 70x70x50mm (WxHxD) 100gr	Isolating	Mode 1	Mode 2
Complies with	PC-plastic IEC 60695 / UL94 / V-0	Line phase (+/-) sensitive	Yes	Yes
		RPU line IN/OUT sensitive	Yes	No

ORDERING INFORMATION	
RPU-01	1x RPU 3x blind-knob 1x plastic bag with manual

Note:
Loudspeakers requires DC-by-polar decoupling capacitor. Typical values are: Up to 6W - 1uF / 6 to 10W - 2,2 uF / 10 to 20W - 4,7uF

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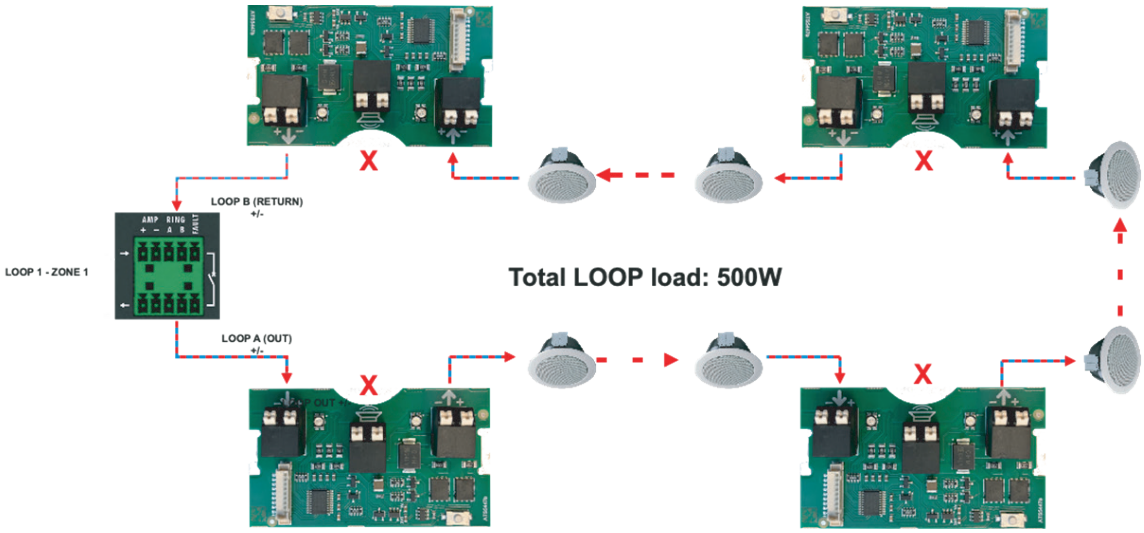
RING PROTECTOR UNIT - RPU

Short Circuit Isolator

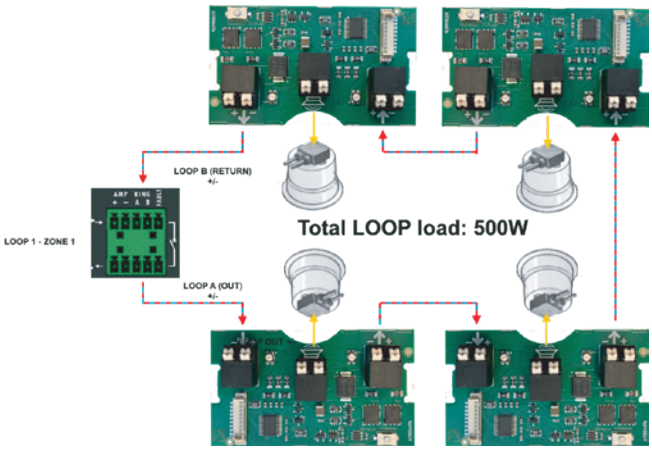
ISOLATING MODE 1 EXAMPLE: ZONE LOUDSPEAKERS

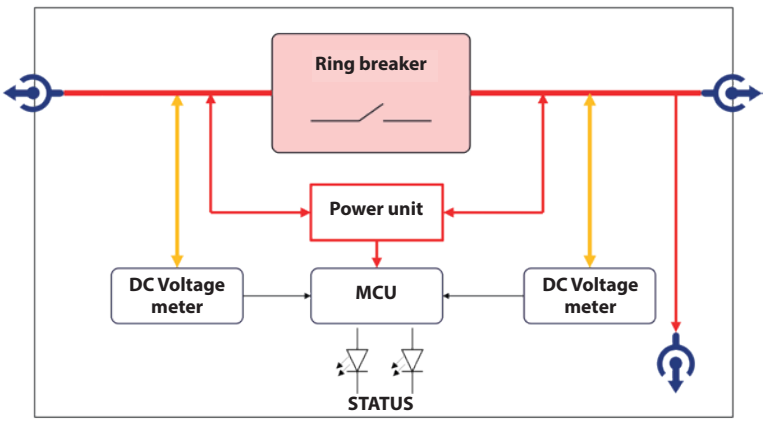
The **RPU** is fitted with a **small power capacitor**, charged by the RDC ring DC, providing sufficient energy to complete **at least two measurement cycles** without requiring recharging.
The RPU is equipped with **LED indicators that flash at regular intervals** to display status conditions. A **RESET button** is available for local control. Detailed LED status indications are listed in the **indicator table**.
The **maximum number of loudspeakers** that can be connected between two RPUs is limited by the RPU's **maximum AC power handling capacity**. (Note: national standards may impose additional restrictions.)
In **Isolating Mode 1**, groups of loudspeakers positioned between isolators can be disconnected from the main loop if a short occurs within that group. In this mode, the RPU is **not sensitive to line IN/OUT** cable swapping between RPUs during installation.



ISOLATING MODE 2 EXAMPLE: SINGLE LOUDSPEAKER

The **RPU FIRE-DOME connection** is specifically designed for **single-loudspeaker applications**. The **RPU** must be mounted directly onto the **fire-dome**, utilizing one of the **standard cable-gland entries**.
It is not recommended to combine **Mode 1** and **Mode 2 loop configurations** within the same installation (see Note 1).





Note1:
When Isolating Mode 1 and Mode 2 are combined, observe the combined cause & effect of line-IN zone-group loudspeakers and DOME loudspeaker when line is shorted (see RPU block diagram).

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