

# Dimecon RS

Separator.

INTRINSICALLY  
SAFE  
SECURITY SYSTEMS



## DESCRIPTION:

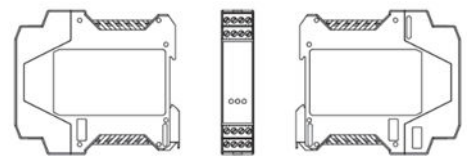
The Dimecon RS bus separator is designed for intrinsically safe isolation of RS-422/RS-485/USB bus circuits, allowing signal transmission between intrinsically safe circuits operating in explosion hazard zones and non-intrinsically safe circuits installed outside such zones. The separator is intended for installation outside explosion hazard zones or in Ex d flameproof enclosures.

## PRODUCT FEATURES:

- RS-422/RS-485 ports for use in the explosion hazard zone – intrinsically safe signals;
- RS-422/RS-485/USB ports for use in the safe area;
- data transmission rate adjustable by hardware or software from 600 bit/s to 1.5 Mbit/s;
- suitable for use with equipment in Zones 0, 1, 2, 20, 21, 22 and mining equipment;
- suitable for Modbus, Fieldbus, Profibus, and other RS-422/RS-485 protocols;
- 35 mm DIN rail mounting;
- suitable for installation outside the explosion hazard zones, or within a flameproof enclosure (Ex d) or with protection by enclosure (Ex t);
- hardware-switchable termination resistors;
- LED operating status indicator;
- electromagnetic compatibility (EMC) compliant with EN 61000-6-2 and EN 61000-6-4;
- special version of the Dimecon RS/PROFIBUS separator featuring an extended common-mode input voltage range ( $\pm 25$  V) and enhanced immunity to high levels of electromagnetic interference and significant ground loop voltage differences; primarily intended for PROFIBUS networks.

## TYPICAL APPLICATIONS:

- intrinsically safe isolation of RS-422/RS-485/USB bus circuits from intrinsically safe circuits operating in explosion hazard zones;
- communication with Ex-certified devices using the RS-422/RS-485 interface.





## TECHNICAL PARAMETERS:

Supply voltage:	$U_n = 10 - 26 \text{ V DC}$ (reverse polarity protection)
Maximum input voltage:	$U_m = 250 \text{ V AC}$
Rated current:	$I_n = 50 \text{ mA}$ (at $U_n = 12\text{V DC}$ , 1,5 Mbit/s transmission); $I_n = 30 \text{ mA}$ (at $U_n = 24\text{V DC}$ , 1,5 Mbit/s transmission)
Rated power:	$P_n \approx 0,7 \text{ W}$
Ambient temperature range:	$-20^\circ\text{C}$ to $+70^\circ\text{C}$
IP Rating:	IP20
Weight:	0,2 kg
Dimensions:	$100 \times 113,5 \times 22,5 \text{ mm}$
Data transmission rate:	600 bit/s to 1,5 Mbit/s; hardware-selectable (via DIP switch) or software-selectable
Connection impedance:	120/200 $\Omega$ - hardware-selectable (via DIP switch)
Connections:	screw terminals or USB-A receptacle
Isolation:	I.S. RS-422 - RS-485/USB - RS-422 - RS-485: 1,5 kV; I.S. RS-422 - RS-485/ power: 1,5 kV
Status indicators:	green LED "PWR" - separator operating state; green LED "TXS - RXH" - transmission from the safe zone to the explosion hazard zone; green LED "RXS - TXH" - transmission from the explosion hazard zone to the safe zone
ATEX and IECEx certifications:	Ex: I (M1) [Ex ia Ma] I; Ex: II (1)G [Ex ia Ga] IIC; Ex: II (1)D [Ex ia Da] IIIC