

# Data Sheets

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# M-Bus 10 Converters Data Sheet

## M-Bus Converters (C01 - C04)

<p><b>C01 C02 C03 C04</b></p> <p></p>	<p><b>Features</b></p> <ul style="list-style-type: none"><li>• Serial ports RS232 and RS485</li><li>• Up to 10 simultaneously connected slave devices</li><li>• ESD protection for the RS232/485 data line</li><li>• 3000 VDC isolation protection</li><li>• Power supply: +12 to +30 VDC or 24 VAC</li><li>• Transmission speed up to 9600 bps</li><li>• Tx, Rx and power LED indicators</li><li>• RS485 embedded termination 120 ohm</li><li>• Operating temperatures: -40°C to +75°C</li><li>• DIN-rail mounting</li><li>• Compact size - single module format (1M)</li><li>• Dimensions: 90x56.4x17.5 mm</li><li>• 3 years warranty</li><li>• Customization of OEM is welcomed</li></ul>
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## Introduction

C01 - C04 family products are reliable M-Bus electrical standard converters. They enable communication in master mode with up to 10 simultaneously connected slave devices. Dedicated EMC integrated circuits guarantee improved connection quality by limiting the impact of interferences typical for an industrial environment.

## Specifications

Redisage PN		C01	C02	C03	C04
Converter ports	Serial	1 x passive RS232	1 x active RS232	1 x RS485	1 x active RS232/RS485

Redisage PN		C01	C02	C03	C04
M-Bus	1 x M-Bus master with up to 10 x slaves				
Power	Voltage	12-30 VDC / 24 VAC			
	Power	< 1 W			
Frame ground connection		yes			
Serial interface	RS232	TxD, RxD, GND			
	RS485	A, B			
	M-Bus	MBus+, MBus -			
3000 VDC isolation side		N/A	RS232	RS485	RS232/RS485
1000 VDC isolation side		RS232	N/A		
Baud rate		up to 9600 bps			
LED indicators		communication Tx, Rx, power			
		RS232 OK	N/A		
RS485 termination		120 ohm manually enabled			
Connector	RS232	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
	RS485	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
	Power	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
	M-Bus	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
Transmission distance	RS485	max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)			
	RS232	max. 15 m at 115.2 kbps			

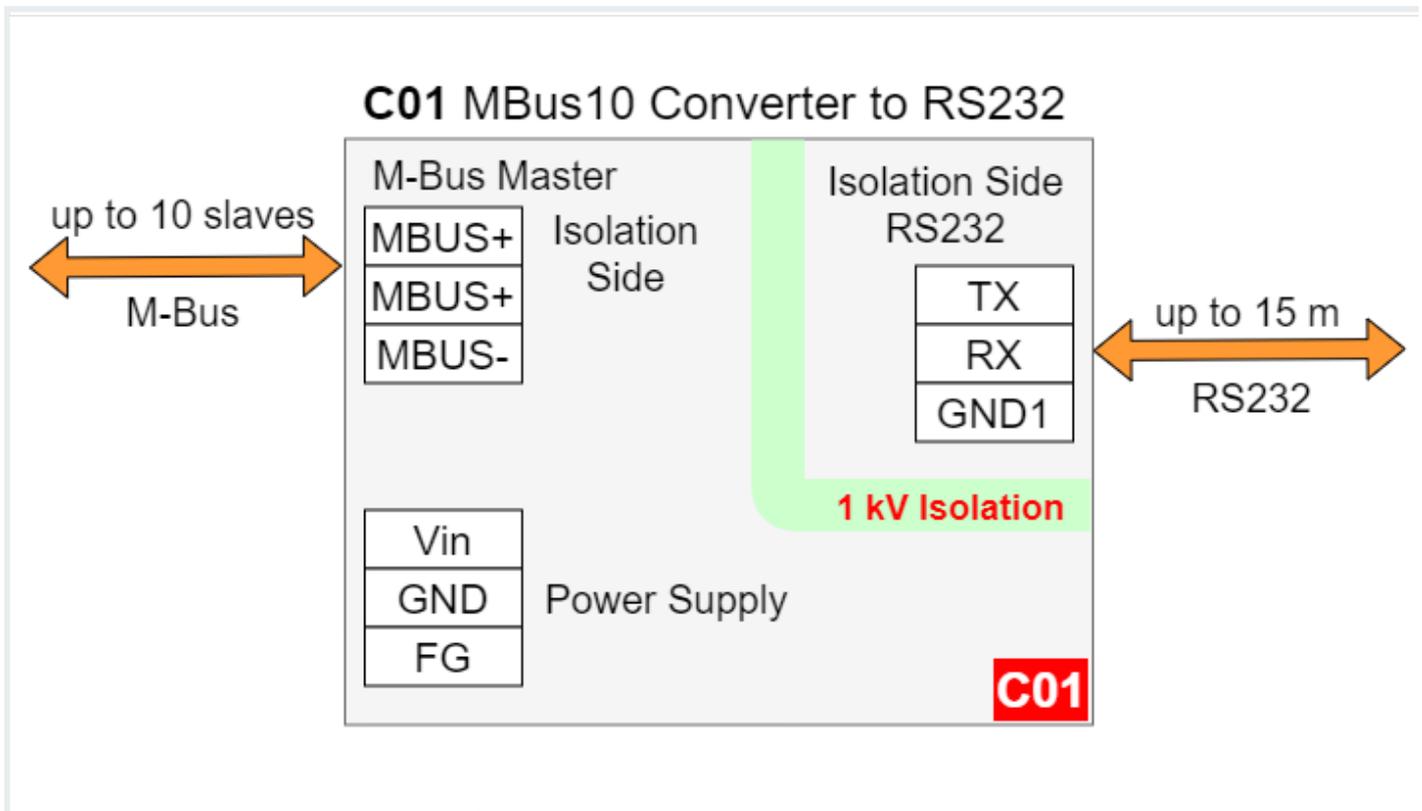
Redisage PN	C01	C02	C03	C04
M-Bus	see: M-Bus max. transmission distance			
Mounting and enclosure	DIN rail, plastic PA - UL 94 V0, black/green			
Temperatures	-40°C to +75°C operating and storage			
Humidity	10 - 90% RH, non-condensing			
ESD protection	±4 kV contact discharge / ±8 kV air discharge			
Certification	CE, RoHS			

## M-Bus max. transmission distance

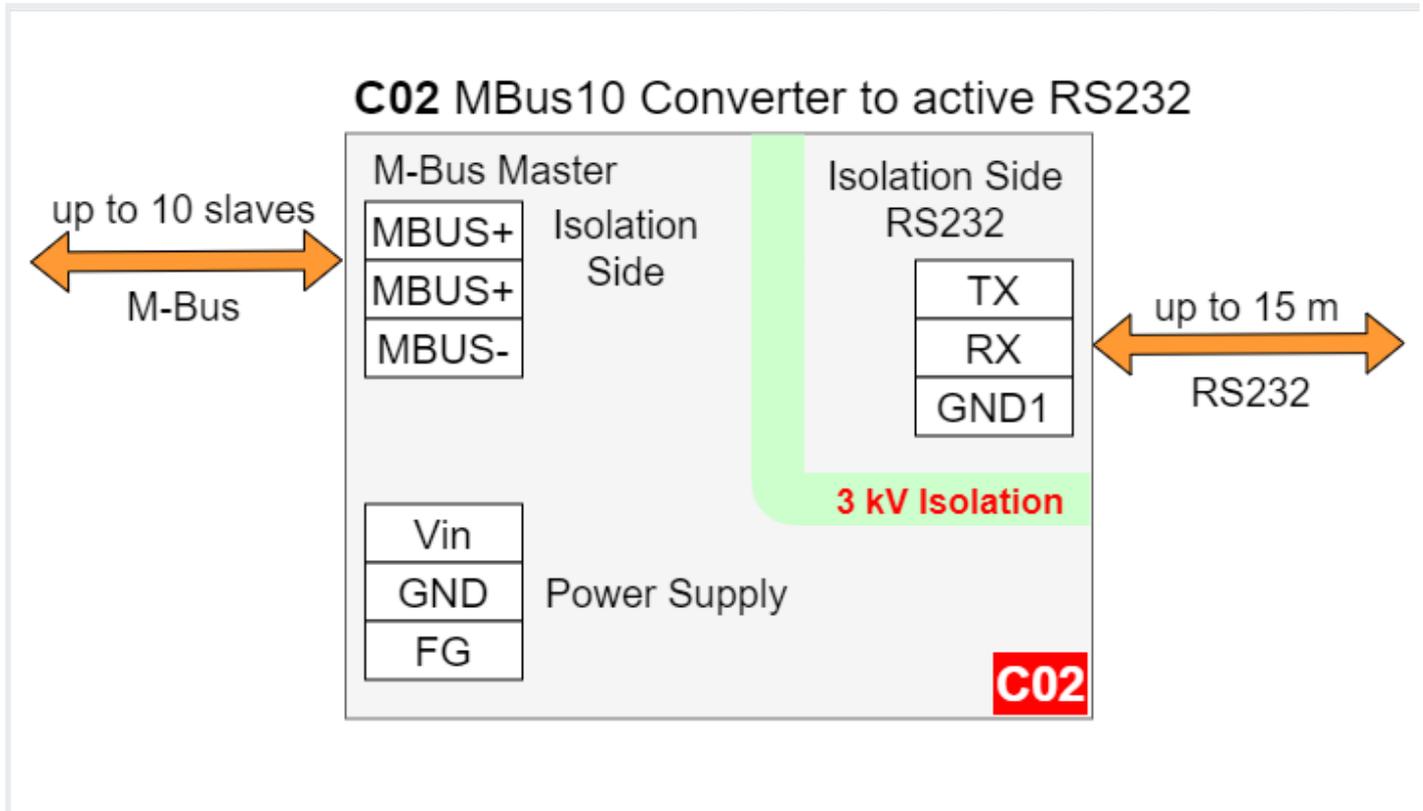
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## Variants

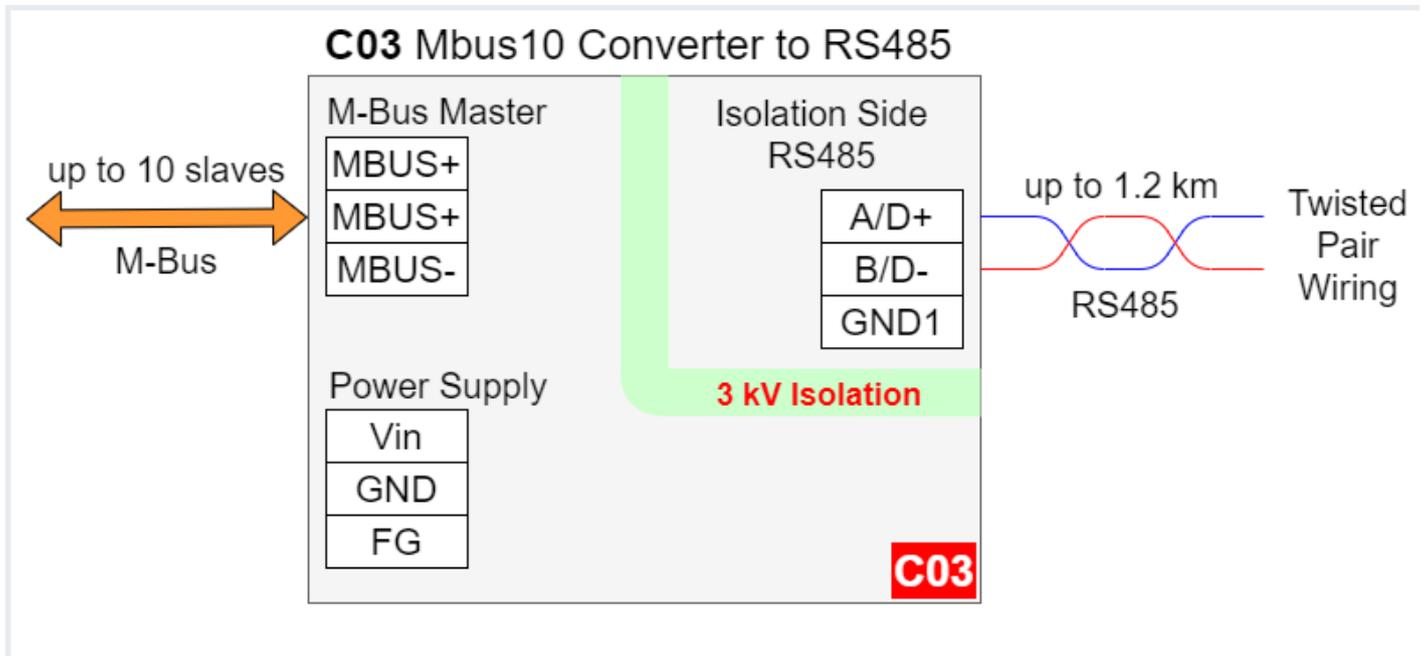
### C01 - MBus10 Converter to RS232



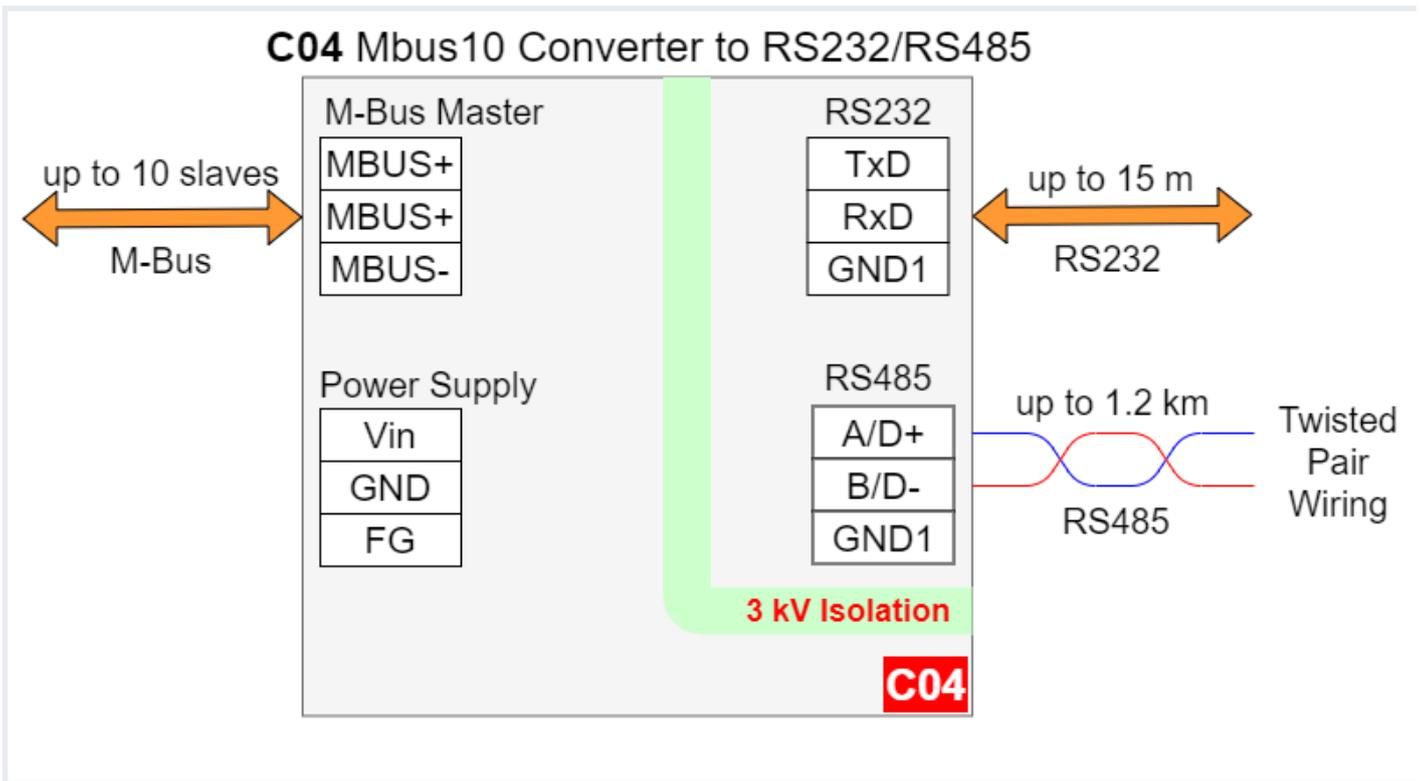
## C02 - MBus10 Converter with active RS232 interface



## C03 - MBus10 Converter to RS485



## C04 - MBus10 Converter to RS232/RS485 with active RS232 interface



## Frame ground FG

Electronic circuits are constantly prone to electrostatic discharge ESD. Redisage Electronics modules feature a design for the frame ground terminal block FG. The frame ground provides a path for bypassing ESD, which provides enhanced static protection ESD abilities and ensures the module is more reliable. Connecting FG terminal block to the earth ground will bypass the ESD disturbances outside the device so will provide a better level of protection against ESD.

Frame Ground FG connection reference drawing is provided below.



If earth ground is not available FG can be left floating or it can be connected with the power supply GND.

## Pin assignments

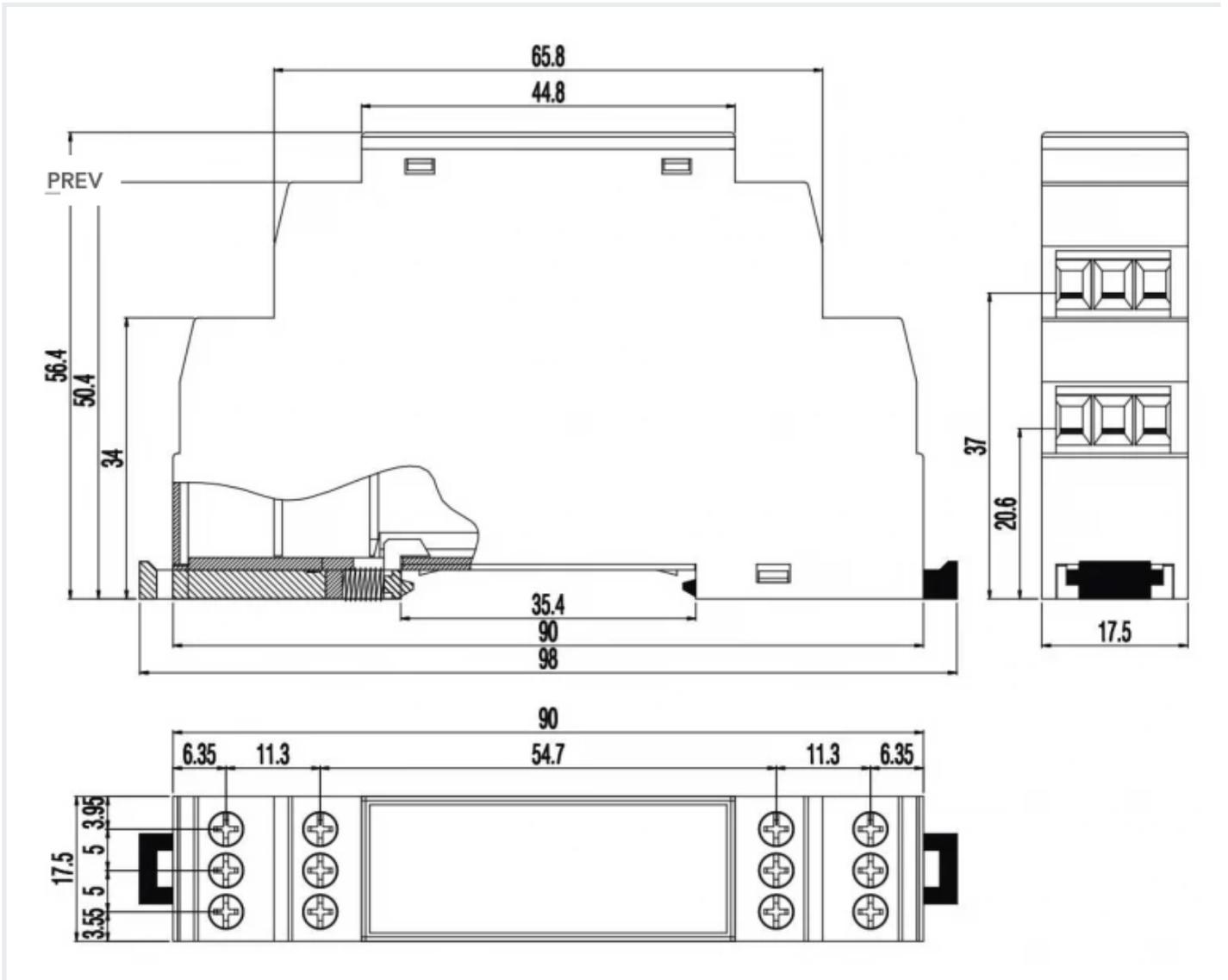
<b>C01</b> 	<b>C02</b> 
<b>C03</b> 	<b>C04</b> 

# Enclosure dimensions

1U Module Enclosure

98 x 17.5 x 56.4

Units: mm



## Additional notes

### Related information and links

[Ordering information](#)

[Accessories](#)

[Similar products](#)

## Products family sample photo



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<https://redisage.com>

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ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

**Datasheet-ID:**

SC-D

# M-Bus 60-400 Converters & Repeaters Data Sheet

## M-Bus Converters (C05 - C08)

<p>C05 C06 C07 C08</p> <p>Image (6).webp or type unknown</p>	<p><b>Features</b></p> <ul style="list-style-type: none"><li>• Serial ports RS232 and RS485</li><li>• Up to 400 simultaneously connected slave devices</li><li>• ESD protection for the RS232/485 data line</li><li>• 3000 VDC isolation protection</li><li>• Power supply: +12 to +30 VDC or 24 VAC</li><li>• Transmission speed up to 9600 bps</li><li>• Tx, Rx, power and M-Bus load LED indicators</li><li>• RS485 embedded termination 120 ohm</li><li>• Operating temperatures: -40°C to +60°C</li><li>• DIN-rail mounting</li><li>• Dimensions: 90x56.4x35,6 mm</li><li>• 3 years warranty</li><li>• Customization of OEM is welcomed</li></ul>
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## Introduction

C05 - C08 is a family of products that are reliable M-Bus electrical standard converters. They enable communication in master mode with many (60-400) simultaneously connected slave devices and can work as M-Bus repeaters letting to broaden the range of the interface, while simultaneously making the quality better and supporting the safety of the communication. Dedicated EMC integrated circuits guarantee improved connection quality by limiting the impact of interference typical for an industrial environment.

## Specifications

Redisage PN		C05	C06	C07	C08
Converter ports	Serial	1 x RS232 & 1 x RS485			

Redisage PN		C05	C06	C07	C08
M-Bus master	up to <b>60</b> slaves	up to <b>120</b> slaves	up to <b>200</b> slaves	up to <b>400</b> slaves	
M-Bus slave	1 x M-Bus slave				
Power	Voltage	12-30 VDC / 24 VAC			
	Max. power	5 W	8 W	15 W	30 W
Frame ground connection		yes			
Serial interface	RS232	TxD, RxD, GND			
	RS485	A, B			
3000 VDC isolation side		RS232, RS485, M-Bus slave			
Baud rate		up to 9600 bps			
LED indicators		communication Tx, Rx, power, M-Bus load, error			
RS485 termination		120 ohm manually enabled			
Connector	RS232	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
	RS485	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
	Power	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
	M-Bus	3-pin terminal block max. 2.5 mm <sup>2</sup> wire			
Transmission Distance	RS485	max. 1,200 m at 9.6 kbps; max. 400 m at 115.2 kbps (Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)			
	RS232	max. 15 m at 115.2 kbps			
	M-Bus	see: M-Bus max. transmission distance			
Mounting and enclosure		DIN rail, plastic PA - UL 94 V0, black/green			

Redisage PN	C05	C06	C07	C08
Temperatures	-40°C to +60°C operating and storage			
Humidity	10 - 90% RH, non-condensing			
ESD protection	±4 kV contact discharge / ±8 kV air discharge			
Certification	CE, RoHS			

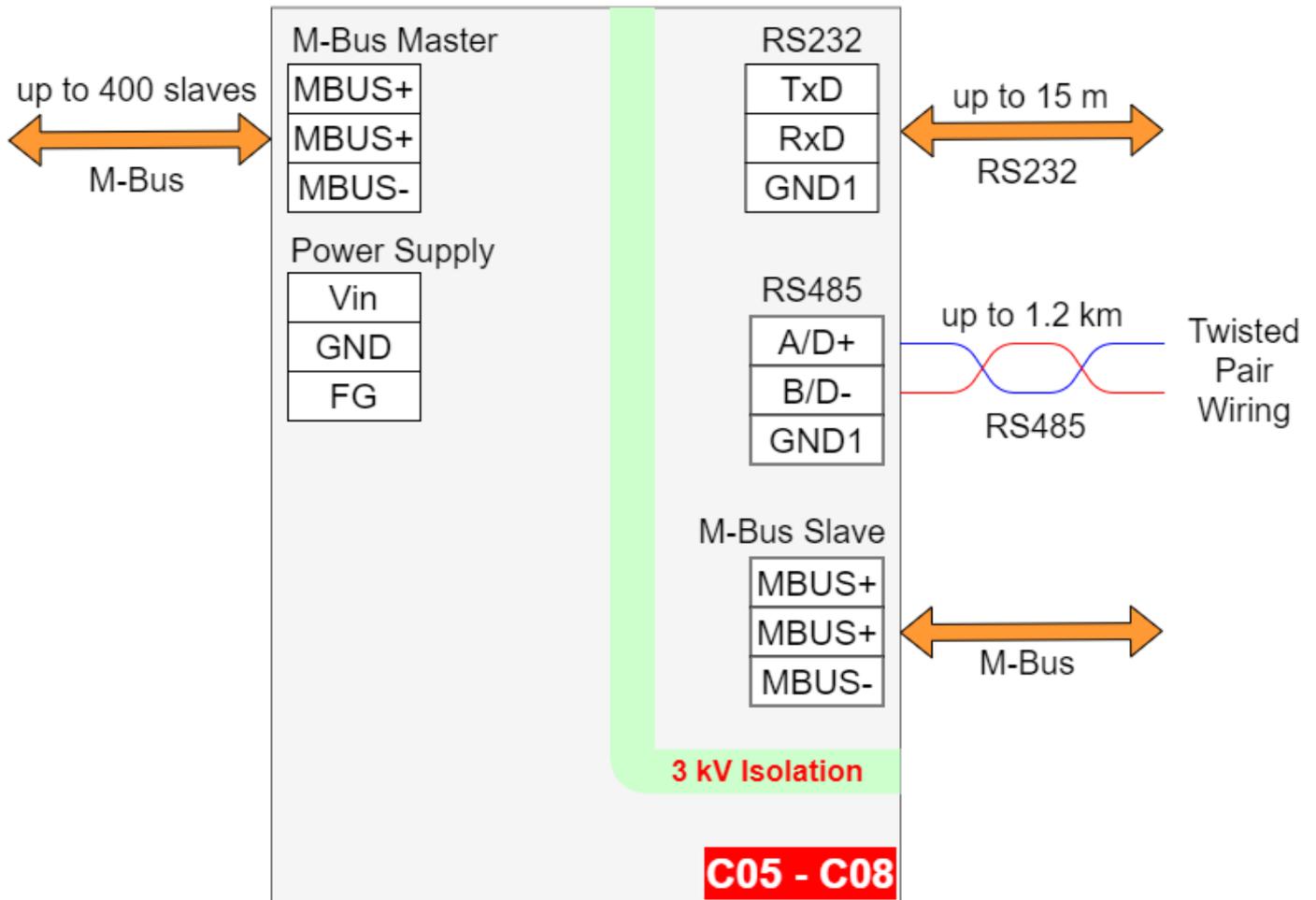
## M-Bus max. transmission distance

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## Variants

C05 - C08 M-Bus Converter with M-Bus repeater functionality

## C05-C08 M-Bus Converter with M-Bus Repeater functionality



## Frame ground FG

Electronic circuits are constantly prone to electrostatic discharge ESD. Redisage Electronics modules feature a design for the frame ground terminal block FG. The frame ground provides a path for bypassing ESD, which provides enhanced static protection ESD abilities and ensures the module is more reliable. Connecting FG terminal block to the earth ground will bypass the ESD disturbances outside the device so will provide a better level of protection against ESD.

Frame Ground FG connection reference drawing is provided below.



If earth ground is not available FG can be left floating or it can be connected with the power supply GND.

# Pin assignments

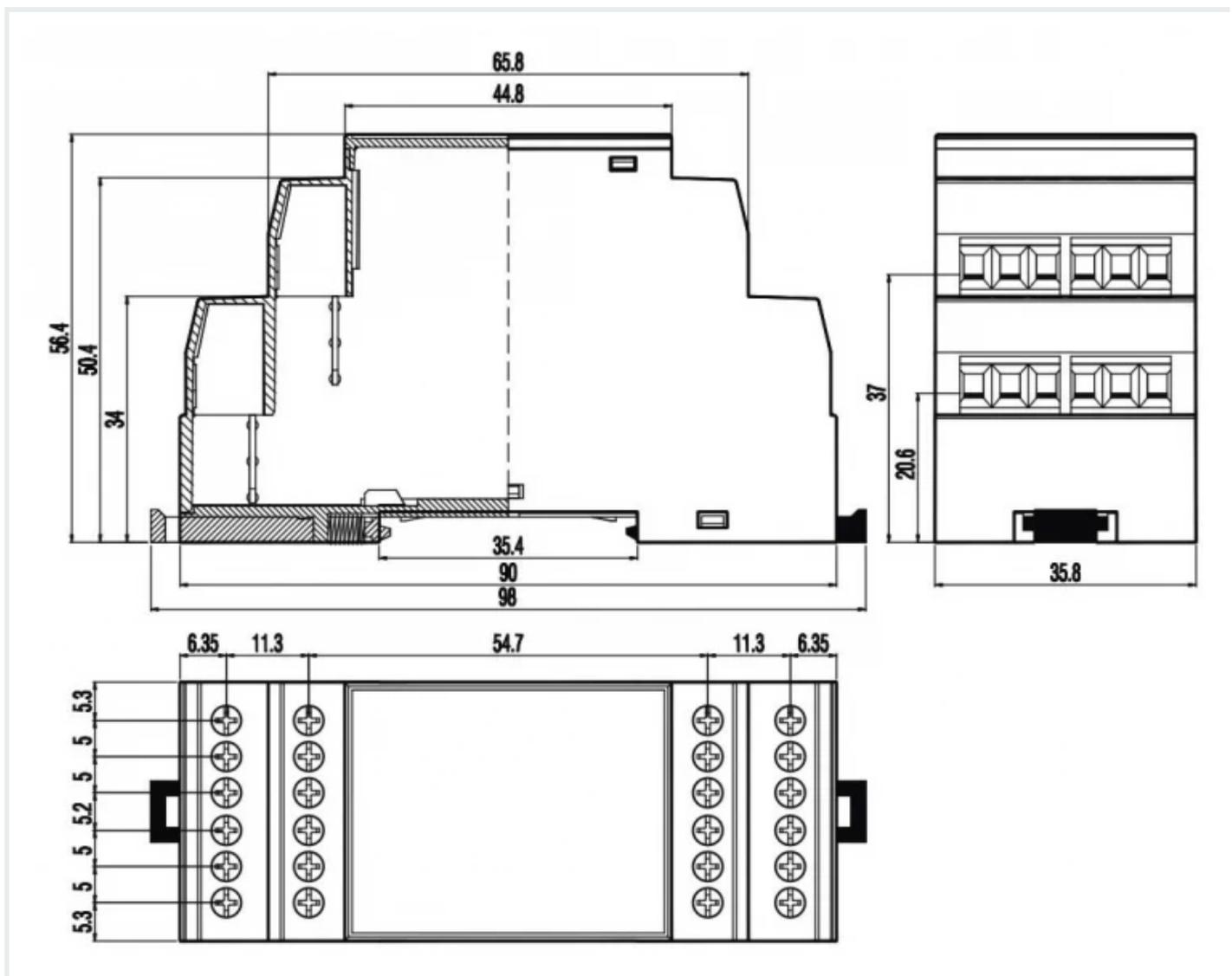
<p>C05  <a href="#">Image (7).webp</a> or type unknown</p>	<p>C06  <a href="#">Image (8).webp</a> or type unknown</p>
<p>C07  <a href="#">Image (9).webp</a> or type unknown</p>	<p>C08  <a href="#">Image (10).webp</a> or type unknown</p>

# Enclosure dimensions

2U Module Enclosure

98 x 35.8 x 56.4

Units: mm



# Additional notes

### Related information and links

[Ordering information](#)

[Accessories](#)

[Similar products](#)

## Products family sample photo



<https://redisage.com>

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