

# 4-2 RS-422/485 Repeaters

#### tM-7510U NEW

Isolated RS-485 Repeater











#### Features >>>>

- 2-way 2500 V<sub>DC</sub> Isolation Protection
- ESD Protection for RS-485 Data Line
- Power Input, +10 ~ +30 V<sub>DC</sub>
- Low power consumption
- Long-cable application

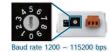
- Power and data flow indicator for troubleshooting
- Easy-to-use rotary switch for baud rate setting, 1200 ~ 115200 bps
- Operating Temperatures, -25 °C ~ +75 °C
- Tiny packaging fits on your DIN-Rail Mounting



#### Introduction

The tM-7510U repeater simply amplifies, or boosts, existing RS-485 signals to enable them to cover longer distances. It extends the communication distance by 4000 ft. (1200 m) or increases the maximum number of bus nodes. The module provides 2500 V<sub>DC</sub> of isolation allowing you to separate and protect critical segments of the system from the rest of the RS-485 network.

The tM-7510U provides 2 modes of baud rate setting, one is Self-Tuner mode and the other is Fixed baud rate mode. The Self-Tuner mode can support multiple baud rate and multiple data format. The Self-Tuner design is exactly the same as I-7510 series. The Fixed baud rate mode offers a better quality for data transmission over long or lossy lines or electrically noisy environments.



## Comparison Table of Repeater

Mode name	tM-7510U	I-7510	
RS-485 Direction Control	Fixed baud rate setting and Automatic RS-485 Direction	Automatic DC 40E Direction Control (Colf Tunor)	
RS-485 Direction Control	Control (Self-Tuner, default)	Automatic RS-485 Direction Control (Self-Tuner)	
Baud rate	300 ~ 115200 bps for Self-Tuner	300 ~ 115200 bps	
	1200 ~ 115200 bps for Fixed baud rate setting		
Dimensions (W x H x D)	52 mm x 95 mm x 27 mm	72 mm x 122 mm x 35 mm	
Domarka	Entry-level	Entry-level	
Remarks	Long-cable application		

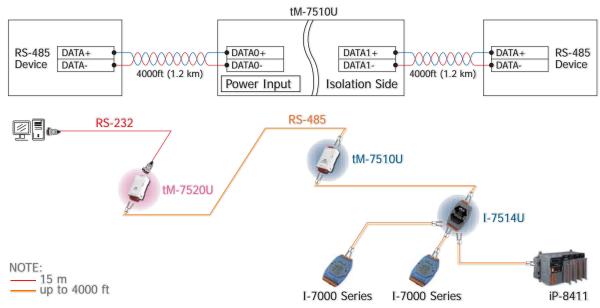


### - System Specifications

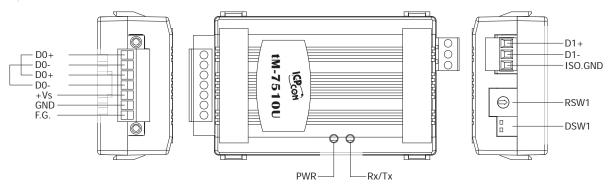
Interface			
Serial Interface	RS-485	Data+, Data-	
Transmission Distance		Max. 1,200 m at 9.6 kbps; Max. 400 m at 115.2 kbps	
		(Belden 9841 2P twisted-pair cable, if different cables are used, the transmission distance may change)	
2500 Vpc Isolated Vo	oltage	2-way Isolation	
Connector		Removable 7-Pin Terminal Block x 1; Removable 3-Pin Terminal Block x 1	
LED Indicators			
Power/Communication		Yes	
Power			
Input Voltage Range		+10 Vpc ~ +30 Vpc (Non-isolated)	
Power Consumption		0.6 W	
Environment			
Operating Temperate	rating Temperature -25 °C ~ +75 °C		
Storage Temperature $-30  ^{\circ}\text{C}  \sim  +75  ^{\circ}\text{C}$		-30 °C ~ +75 °C	
Humidity		10 ~ 90% RH, non-condensing	

## **Applications**

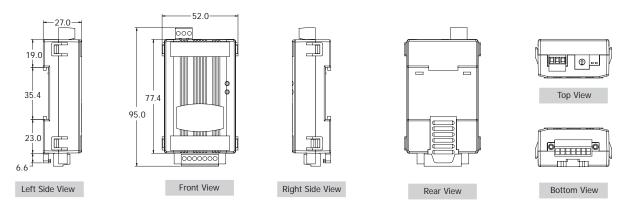
#### RS-485 to RS-485 Repeater (Only for half duplex application)



## Pin Assignments



## - Dimensions (Unit: mm)



## **Ordering Information**

	ĺ	tM-7510U CR	Isolated RS-485 Repeater (RoHS)
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## **Accessories**

GPSU06U-6	24 Vbc/0.25 A, 6 W Power Supply
DIN-KA52F	24 Vbc/1.04 A, 25 W Power Supply with DIN-Rail Mounting