

MR-1800a

8 channels DI remote terminal Unit

■ Features

- Digital Input Module with 8 isolated channels
- Supports LED input indicator for every channel
- Wide input power range: +10 to +30 V_{DC}
- Supports dry and wet digital input types
- Short circuit protection
- 4 kV ESD protection
- 3750 V_{DC} intra-module isolation
- Wide operating temperature range: -25 to +75°C
- Supports Modbus RTU protocol



■ Introduction

The MR-1800a offers 8 isolated digital input channels. It also offers 8 LED indicators to monitor the status of the digital input. Either sink-type or source-type digital input can be selected via wire connections. The MR-1800a has industrial-grade safety design standards with 4 kV ESD protection and 3750 V_{DC} intra-module isolation. The MR-1800a also support for the Modbus RTU protocol.

■ Specifications

Digital Input

Number of Ports		8
Type	Dry contact	Source
	Wet contact	Sink/Source
Dry Contact	ON Voltage	Close to GND
	OFF Voltage	Open
	Effective Distance	Up to 500m
Wet Contact	ON Voltage	+3 to +50 V _{DC}
	OFF Voltage	+4 V _{DC} Max
Input Impedance		3 kΩ
LED Indicator		Yes

Serial Interface

Console Port	RS-485(D+, D-), RS-232(GND, Tx, Rx)
Number of Ports	2
Serial Standards	RS-485, RS-232
Data Transfer Rate	Up to 115.2 kbps
Data Format	(N, 8, 1), (N, 8, 2)
LED Indicator	Yes, Tx (Yellow), Rx (Green)

Software Feature

Protocols	Modbus RTU
Mode	Modbus RTU Slave
Configuration Option	Windows Utility

Power

Power Input	10 to 30 V _{DC}
Power Consumption	< 1W
LED Indicator	Yes, Pwr (Red)

Protection

Power Isolation	Yes
Digital Input	± 50 V _{DC} overvoltage protection
Intra-Module Isolation	3750 V _{DC} (Field-to-Logic)
ESD Protection (IEC 61000-4-2)	± 4 kV Contact for each Terminal
	± 8 kV Air for Random Point
Reverse Polarity Protection	Yes

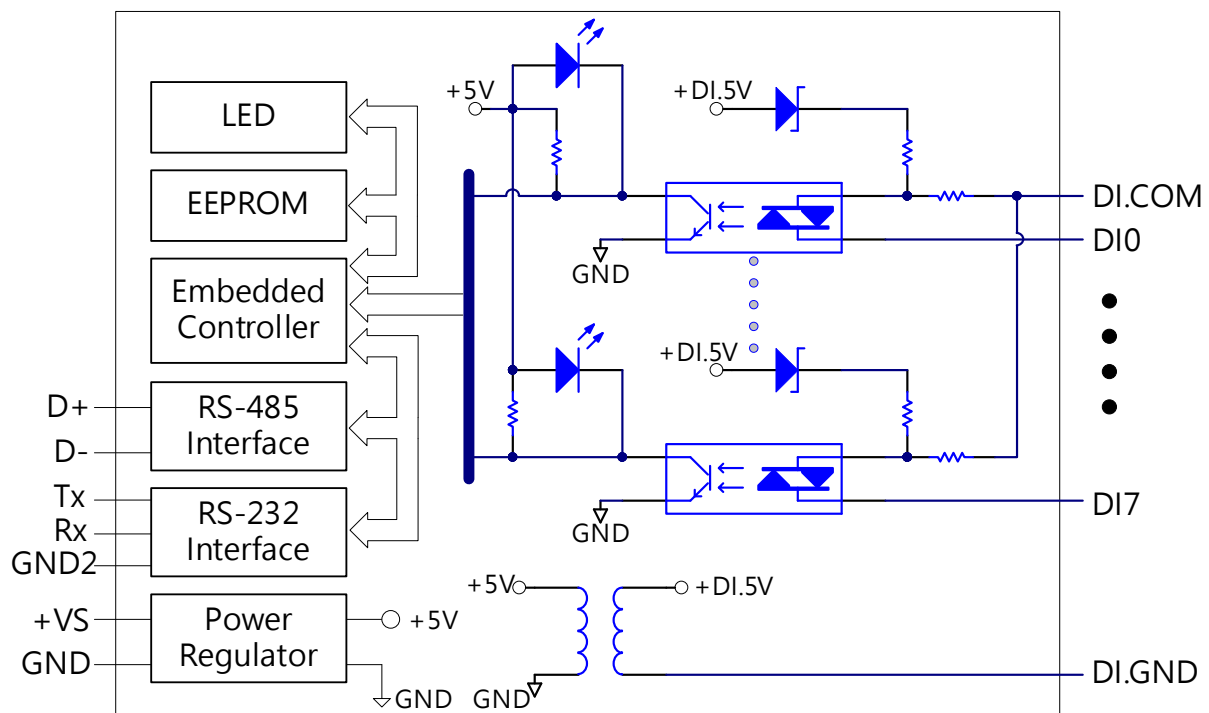
Mechanical

Dimensions (L x W x H)	114mm x 66 mm x 30 mm
Installation	DIN-Rail or Wall Mounting

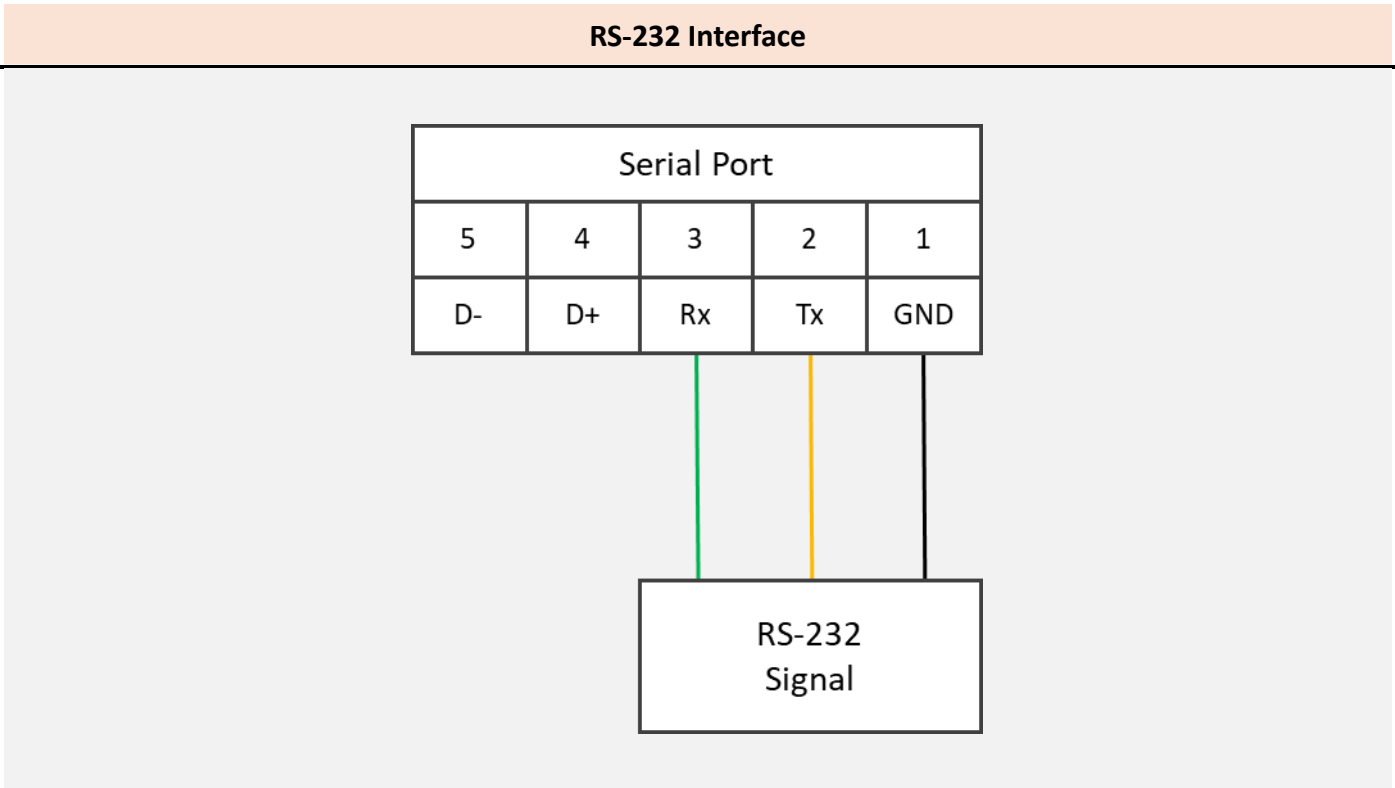
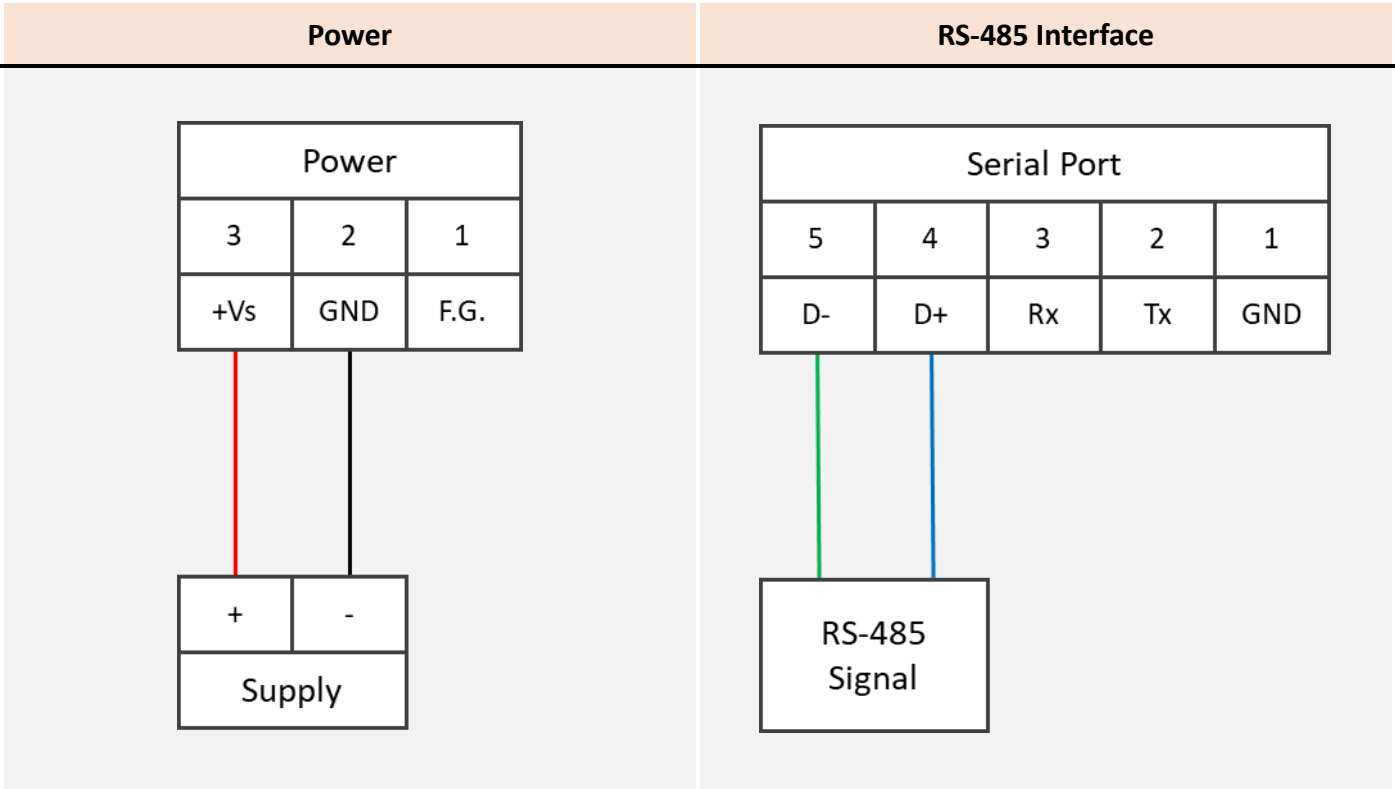
Environment

Operating Temperature	-25°C to 75 °C
Storage Temperature	-30°C to 85 °C
Humidity	10% to 95% RH, Non-condensing

Internal I/O Structure

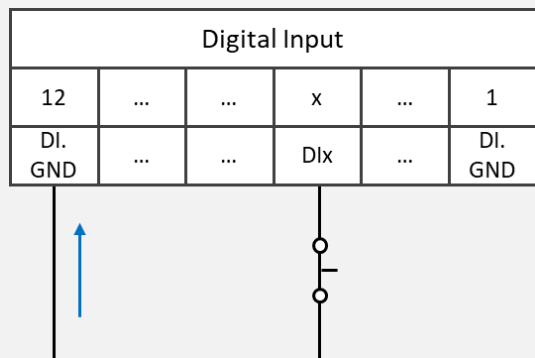


■ Terminal Assignments

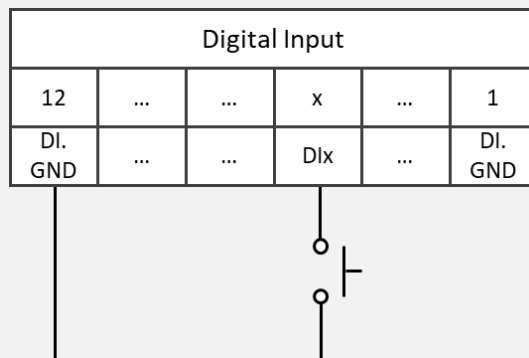


Digital Input (Dry Contact)

ON (Close to GND)

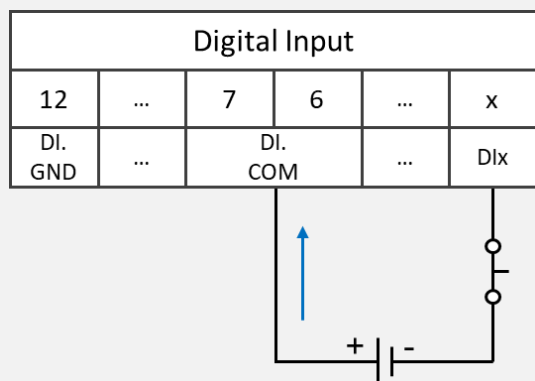


OFF (Open)

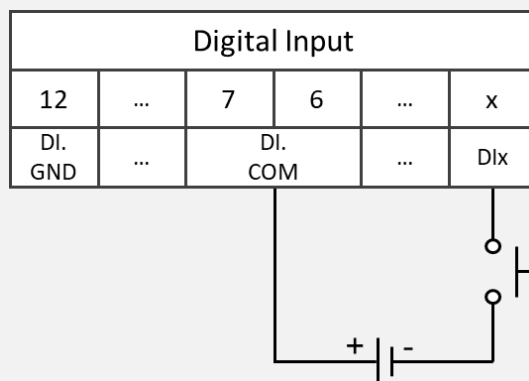


Digital Input (Wet Contact, Sink)

ON (+10 to +50 V_{DC})

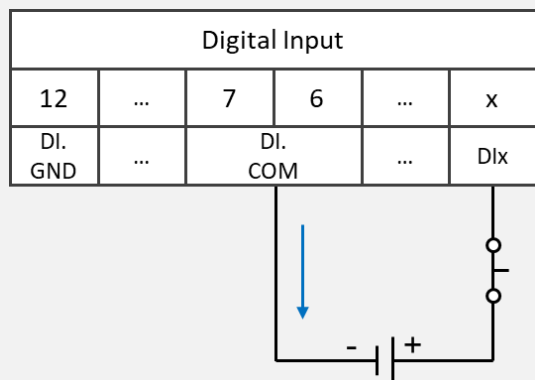


OFF (4 V_{DC} Max.)

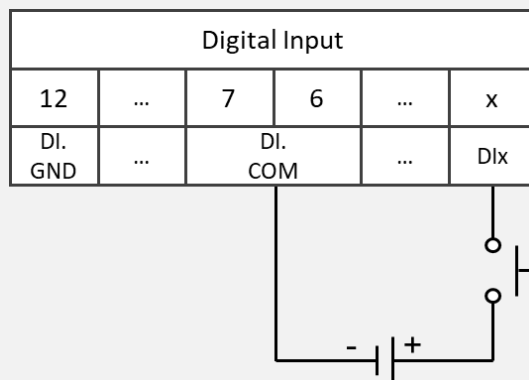


Digital Input (Wet Contact, Source)

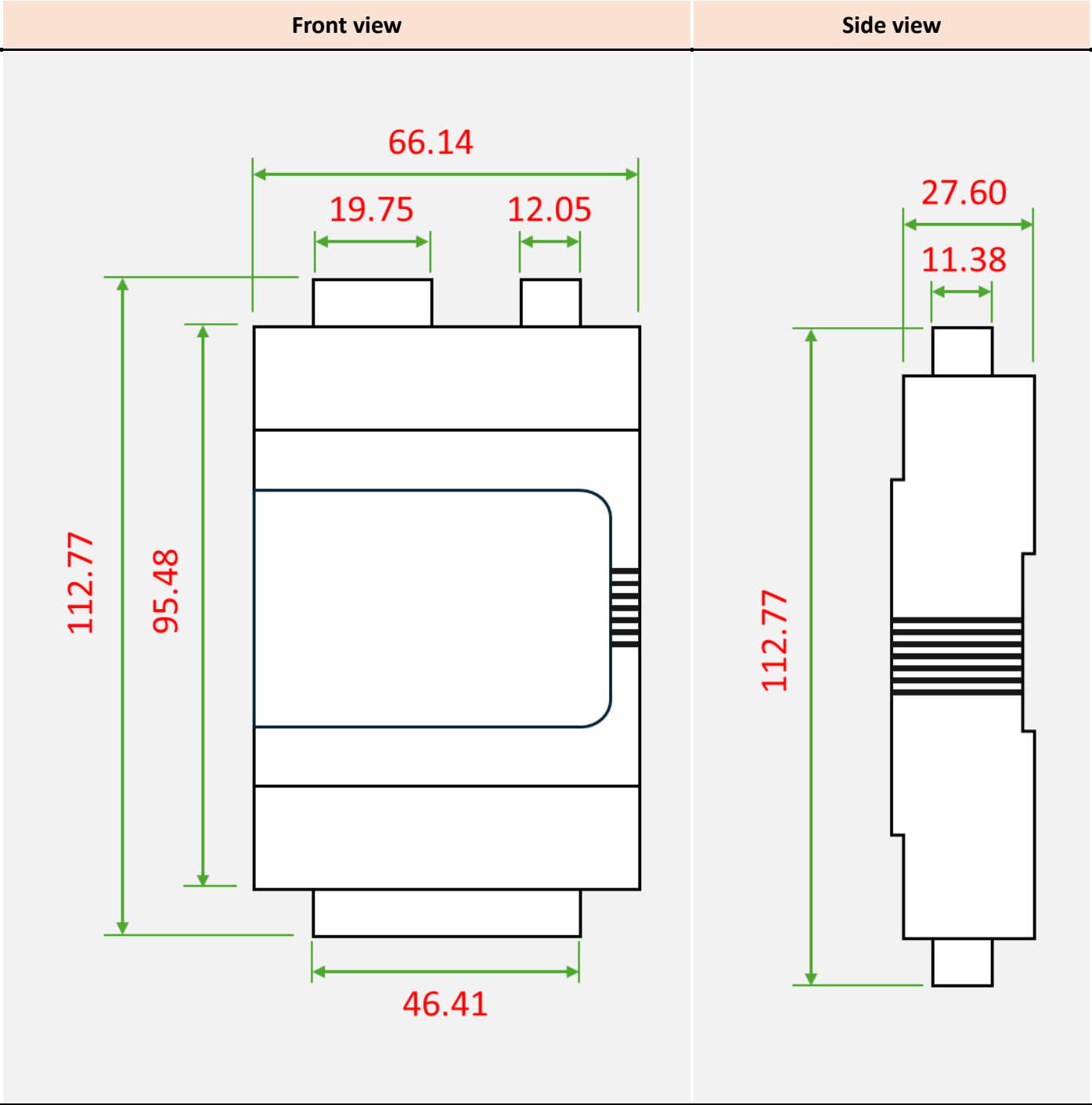
ON (+10 to +50 V_{DC})



OFF (4 V_{DC} Max.)



■ Dimensions



Unit: mm

■ Appendix



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