

IS-MS3180

Tiny Modbus/TCP to RTU/ASCII Gateway



The IS-MS3180 module is a Modbus gateway that enables a Modbus TCP/UDP host to communicate with serial Modbus RTU/ASCII devices through an Ethernet network, and eliminates the cable length limitation of legacy serial communication devices. The module can be used to create a pair-connection application (as well as serialbridge or serial-tunnel application), and can then route data over TCP/IP between two serial Modbus RTU/ASCII devices, which is useful when connecting mainframe computers, servers or other serial devices that use Modbus RTU/ASCII protocols and do not themselves have Ethernet capability.



Key features

- ▶ Supports Modbus TCP/UDP master and slave
- ▶ Supports Modbus RTU/ASCII master and slave
- ▶ Max. TCP connections (masters) per serial port: 32
- ▶ Read-cache ensures faster Modbus TCP/UDP response
- ▶ Supports UDP responder for device discovery (UDP Search)
- ▶ Static IP or DHCP network configuration
- ▶ Easy firmware update via the Ethernet (BOOTP, TFTP)
- ▶ Tiny Web server for serial and network configuration (HTTP)
- ▶ Redundant power inputs: PoE and DC jack
- ▶ 10/100 Base-TX Ethernet, RJ-45 x 1 (Auto-negotiating, auto MDI/MDIX, LED Indicators)
- ▶ Allows automatic RS-485 direction control
- ▶ 3000 VDC isolation and +/-4 kV ESD protection
- ▶ Male DB-9 or terminal block connector for easy wiring
- ▶ Tiny form-factor and low power consumption
- ▶ Cost-effective device servers
- ▶ 12~48 VDC power input
- ▶ -25~75°C operating temperature

Specification

System

CPU	32-bit ARM
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Communication Interface

Ethernet	10/100 Base-TX, 8-pin RJ-45 x 1 (Auto-negotiating, Auto-MDI/MDIX, LED indicator), PoE (IEEE 802.3af, Class 1)	
COM	3-wire RS-232, 2-wire RS-485, 4-wire RS-422	
Self-Tuner	Yes, automatic RS-485 direction control	
RS-485	Bias Resistor	Yes, 1 K Ω
	Node	254 (max.)
UART	16c550 or compatible	
Isolation	3000 VDC	
ESD Protection	+/-4 kV	

COM Port Format

Baud Rate	115200 bps Max.
Data Bit	5, 6, 7, 8
Parity	None, Odd, Even, Mark, Space
Stop Bit	1, 2

Power

Power Input	PoE: IEEE 802.3af, Class 1 DC jack: +12 ~ 48 VDC
Power Consumption	0.07 A @ 24 VDC

Mechanism

Connector	10-Pin Removable Terminal Block x 1
Mounting	DIN-Rail
Case	Metal

Software

Configuration Options	Web
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Physical Characteristics

Housing	SECC (0.8 mm)
Weight	150 g (TBD)
Dimensions	52 (D) x 26 (W) x 77.5 (H) mm

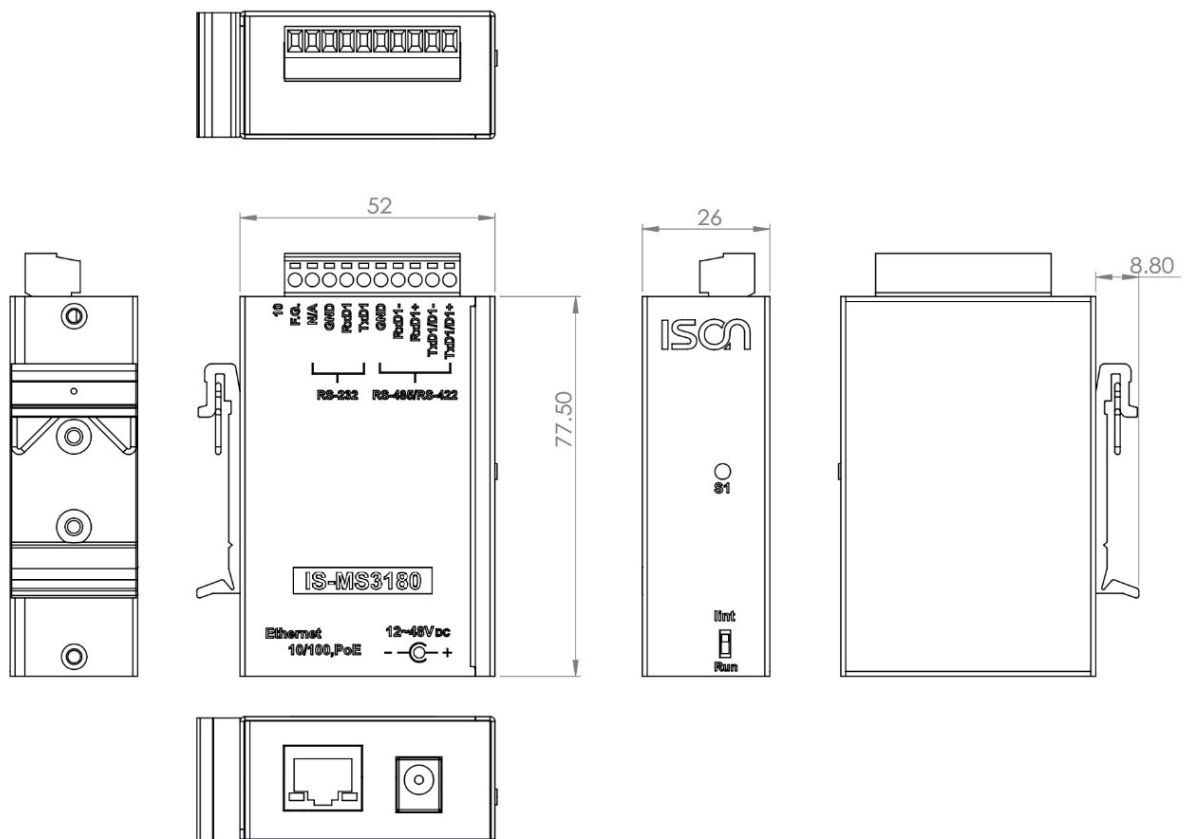
Environmental Limits

Operating Temperature	-25 to 75°C
Storage Temperature	-30 to 80°C
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Vibration, shock, free fall	IEC-60068-2-6, -27, -32
Certification Compliance	CE, FCC
Electrical Safety	CE, UL 60950-1, CSA C22.2 No. 60950-1, EN 60950-1
EMC	FCC Part 15, CISPR 22 (EN55022) Class A IEC-61000-4-2, -3, -4, -5, -6 (Level 3)
RoHS & WEEE	RoHS (Pb free) and WEEE Compliant
MTBF	>25 years

Dimension Diagram



Ordering Information

Available Models	Description	100Mb FX
IS-MS3180	Industrial Tiny Modbus/TCP to RTU/ASCII Gateway, -25~75°C	1

Accessories

None

Package Checklist

1. IS-MS3180
2. DIN-Rail kit
3. Quick Installation Guide (Printed)