Four Port Industrial Modbus Gateways

MESR424 Series

PRODUCT FEATURES

- Modbus TCP, ASCII & RTU
- Ruggedized for extreme applications
- UL Class 1/Division 2
- -40 to +80 C° operating temperature
- Shock and vibration tested
- Dual Ethernet ports with fiber options
- NEMA TS2 (Model# MESR424D)

The MESR424 series Modbus Gateways bridge devices on Modbus serial networks (RS-232, RS-422 or RS-485) with those on Modbus TCP networks, allowing seamless integration. The serial ports can be accessed over a LAN or WAN using Direct IP Mode connections. Supporting up to 16 masters and 32 slaves, the gateways feature auto-detecting10/100 copper and fiber optic options. The easy to use software is designed for Win XP, Vista, Win 7 and Windows 2003/2008 Server, features Modbus messaging priority control and allows management through multiple TCP/IP client sessions. Serial data rates up to 230 kbps ensure maximum network flexibility. Class 1/Division 2 rated MESR424 series gateways are built for industrial environments, featuring a slim IP30 DIN rail mountable case. They operate from a range of DC power supply voltages and have pluggable terminal block connectors.

MESR424 series gateways can be powered via a barrel connector or a terminal block. (An external power supply is required; sold separately.) An additional Ethernet port functions much like an Ethernet switch, allowing pass-through connectivity for other Ethernet devices. This port can also be used to “daisy chain” multiple gateways.

ORDERING INFORMATION

MODEL NUMBER	ETHERNET PORT 1	ETHERNET PORT 2	SERIAL PORTS
MESR424D †	RJ45	10/100 RJ45	RS-232/422/485 (DB9 male)
MESR424D-MT	RJ45	Multi-mode (ST)	RS-232/422/485 (DB9 male)
MESR424D-SC	RJ45	Single-mode (SC)	RS-232/422/485 (DB9 male)
MESR424T	RJ45	10/100 RJ45	RS-232/422/485 (Terminal Block)
MESR424T-MT	RJ45	Multi-mode (ST)	RS-232/422/485 (Terminal Block)
MESR424T-SC	RJ45	Single-mode (SC)	RS-232/422/485 (Terminal Block)

All Models 10/100 Mbps

† *NEMA TS2*

ACCESSORIES

MDR-40-24 - 24VDC, 40W, DIN rail mount, power supply

PS12VLB-INT-MED - 12 VDC power supply, locking barrel

232NM9 - Null modem crossover cable, 3.1 m (10 ft.)

C5UMB7FBG - Ethernet cable

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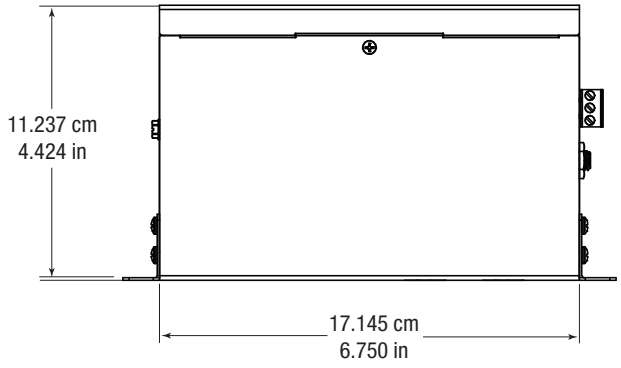
MESR424 series

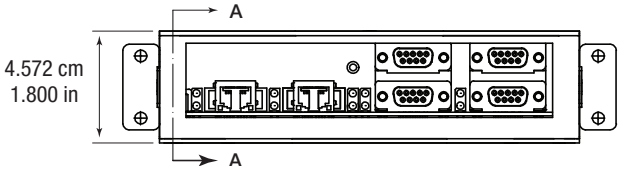
SPECIFICATIONS

POWER	
Source	**External**
Input Voltage	10 to 48 VDC (58 VDC max)
Connector	Removable terminal block (12 – 28 AWG) and barrel connector
Power Consumption	6 W
MECHANICAL	
LED Indicators	Serial Port, Ethernet Link, Speed
Switches	Reset Button
Dimensions	4.57 x 12.2 x 17.1 cm (1.8 x 4.4 x 6.75 in)
Enclosure	Panel Mount, Metal, IP 30, (Optional 35mm DIN Rail mount)
ENVIRONMENTAL	
Operating Temperature	-40 to 80°C (-40 to 176° F)
Operating Humidity	10 to 95% Non-condensing
Storage Temperature	-40 to 85°C
MTBF	70,273 hours
MTBF Calc Method	Parts Count Reliability Prediction
NETWORK	
Serial Memory	8 KB per port
Network Memory	8 KB
LAN	10/100 Mbps Auto-detecting , 10BaseT or 100BaseTX
Ethernet	IEEE 802.3 auto detecting & auto MDI/MDX, 10/100

SERIAL TECHNOLOGY		
RS-232 (DB9)	TD, RD, DTR, DSR, RTS, CTS, DCD plus Signal Ground	
RS-232 (terminal block)	TD, RD, RTS, CTS plus Signal Ground	
RS-485 2-Wire	Data A(-), Data B(+), GND	
RS-422/485 4-Wire	TDA(-), TDB(+), RDA(-), RDB(+), GND	
Serial Connector	DB9M or removable terminal blocks	
Data Rate	Up to 230.4 Kbps	
FIBER OPTIC TECHNOLOGY		
Type / Wavelength	Multi-mode / 1310 nm	Single-mode / 1310 nm
Output Power	(-)19 to (-) 14 dBm	(-) 15 to (-) 8 dBm
Receive Sensitivity	< (-) 32 dBm	<(-) 32 dBm
Cable	62.5 / 125 µm	9 / 125 µm
Connector	SC or ST	SC or ST
Range	2 km (1.2 mi)	12.4 miles (20 km)
PROTOCOLS		
Protocols	TCP, IPv4, UDP, ARP, HTTP 1.0, HTTP 1.1, ICMP/PING, DHCP/BOOTP	
IP Mode	Static, DHCP	
TCP	User definable	
OTHER		
Connection Mode	Server, Client, VCOM, Paired	
Search	Serial direct COM and Ethernet Auto Search or specific IP	
Diagnostics	Display PC IP, ping, save test config (text readable)	
Firmware Upgrade	Vlinx Manager	
SOFTWARE CONFIGURATION		
OS Compatibility	Windows XP (32/64 bit), 2003 Server (32/64 bit), Vista (32/64 bit), 2008 Server (32/64 bit), Win 7 (32/64 bit), Windows 2008 Server	
ETHERNET PASS-THROUGH PORT		
Standards	IEEE 802.3, 802.3u, 802.3x	
Processing Type	Store and Forward with 802.3x full duplex, non blocking flow control	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
APPROVALS / CERTIFICATIONS		
Approvals	FCC Part 15 Class A CE UL Class 1/Division 2 NEMA TS2 (Model# MESR424D)	
Shock	IEC60068-2-27	
Vibration	IEC60068-2-6	

MECHANICAL DIAGRAM





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