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Industrial Modbus Ethernet to Serial Gateways

MESR900 Series - Fiber Models

B+B SMARTWORX

Powered by **ADVANTECH**

PRODUCT FEATURES

- Ethernet enable Modbus RS-232/422/485
- Modbus TCP, ASCII & RTU
- Modbus flexibility – serial & Ethernet, Masters & slaves
- Modbus messaging priority control
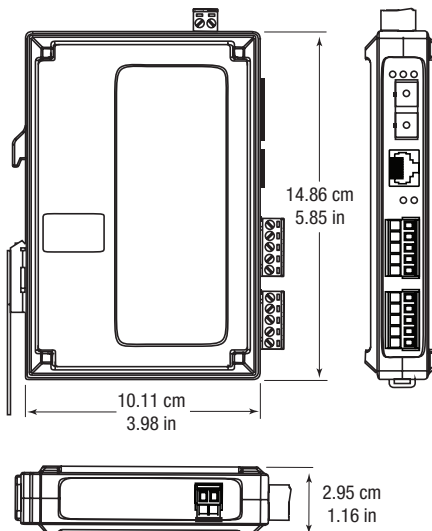- View messaging status in real time
- Easy configuration software

MESR92x 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. Serial ports can be accessed over a LAN or WAN using Direct IP Mode connections. Supporting up to 16 masters and 32 slaves, these gateways feature autodetecting 10/100 copper and fiber optic options. Easy-to-use software is designed for Windows 2000, 2003 Server, XP, Vista, 2008 Server and Windows 7. Serial data rates up to 230 kbps ensure maximum network flexibility. MESR92x gateways are built for use in 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. An external power supply, sold separately, is required. The units have an additional Ethernet port which 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	SERIAL PORTS	SERIAL CONNECTOR	ETHERNET PORTS	ETHERNET CONNECTOR
MESR921-MC	1	DB9 or Terminal Block	Multi-mode Fiber, Copper	(1) SC, (1) RJ45
MESR921-MT	1	DB9 or Terminal Block	Multi-mode Fiber, Copper	(1) ST, (1) RJ45
MESR921-SC	1	DB9 or Terminal Block	Single-mode Fiber, Copper	(1) SC, (1) RJ45
MESR921-ST	1	DB9 or Terminal Block	Single-mode Fiber, Copper	(1) ST, (1) RJ45
MESR922T-MC	2	Terminal Block	Multi-mode Fiber, Copper	(1) SC, (1) RJ45
MESR922T-MT	2	Terminal Block	Multi-mode Fiber, Copper	(1) ST, (1) RJ45
MESR922T-SC	2	Terminal Block	Single-mode Fiber, Copper	(1) SC, (1) RJ45

+ All serial ports are software configurable for RS-232, RS-422, or RS-485.

Copper options available.

MECHANICAL DIAGRAM - MESR92X MODELS

14.86 cm
5.85 in

10.11 cm
3.98 in

2.95 cm
1.16 in

ACCESSORIES

MDR-20-24 - DIN rail mount power supply 24VDC, 1.0 A output power

MDR-40-24 - DIN rail mount power supply 24VDC, 1.7 A output power

DRPM25 - 35mm DIN Rail to Panel Mount Bracket, 25mm wide

ERS35 - DIN Rail 1 Meter 35mm Steel

SPECIFICATIONS

SERIAL TECHNOLOGY

RS-232	TD, RD, RTS, CTS, DTR, DSR, DTD, GND
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, 12 to 28 AWG
Data Rate	Up to 230.4 Kbps

FIBER OPTIC TECHNOLOGY

	MESR9xx-Mx	MESR9xx-Sx
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 miles)	15 km (9.3 miles)

POWER

Source	External
Input Voltage	10 to 48 VDC (58 VDC Maximum)
Connector	Removable Terminal Block (12 – 28 AWG)

POWER CONSUMPTION

MESR90x	4.0 Watts
MESR92x	6.0 Watts

MECHANICAL

LED Indicators	Serial Port, Ethernet Link, Ready
Switches	Reset Button
Dimensions	MESR92x: 14.86 x 10.11 x 2.96 cm (5.85 x 3.98 x 1.16 in)
Enclosure	35mm DIN mount, Plastic, IP 30
Weight	MESR92x: 0.45 lbs (201.4 g)
eDrawing	Available on website

ENVIRONMENTAL

Operating Temperature	-40 to 80°C (-40 to 176°F)
Operating Humidity	0 to 95% Non-condensing
MTBF MESR90X	~ 132309 hours
MTBF MESR92X	~ 102593 hours
MTBF Calc Method	Parts Count Reliability Prediction

NETWORK

Serial Memory	8 KB per port
Network Memory	4 KB
IP Port Addresses	5300 – Heartbeat and configuration Setting in TCP Mode (paired mode) 8899 – MESR 9xx Update
LAN	10/100 Mbps Auto-detecting
Ethernet	IEEE 802.3 auto detecting & auto MDI/MDX 10/100

PROTOCOLS

TCP, IPv4, ARP, HTTP 1.0, ICMP/PING, DHCP/BOOTP	
IP Mode	Static, DHCP
TCP	User definable

OTHER

Mode	Modbus RTU Master / Slave Modbus ASCII Master / Slave
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

ETHERNET PASS-THROUGH PORT (MESR92X)

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
MAC Address Table	2K

CONFIGURATION SOFTWARE

Vlinx Manager	Windows 2000, XP (32/64 bit), 2003 Server (32/64 bit), Vista (32/64 bit), 2008 Server (32/64 bit), Win 7 (32/64 bit)

REGULATORY

Compliance	FCC, CE, NEMA TS2
	UL Listed, File E222870 UL Class 1 Division 2 Groups A, B, C, D (HAZLOC), File E245458