Isolated Industrial Modbus Ethernet to Serial Gateways

MESR321 Series

PRODUCT FEATURES

- Three-way isolation
- Ethernet-enable Modbus RS-232/422/485
- Modbus TCP, ASCII & RTU
- Modbus flexibility – serial & Ethernet, masters & slaves
- View messaging status in real time
- Ethernet fiber options
- Easy configuration software

Vlinx™ MESR321 series Modbus Gateways connect Modbus devices to Ethernet networks and let you monitor and control your Modbus devices from anywhere on your Ethernet LAN or WAN. Supporting up to 16 masters and 32 slaves, the gateways feature auto-detecting SP 10/100 copper and/or fiber optic options that include multi-mode LC and single-mode LC. The data ports are isolated from one another and also from the power supply.

The easy to use Vlinx software is compatible with Windows 2003 Server, XP, Vista, Win 7 and Windows Server 2008. It features Modbus messaging priority control and allows management through multiple TCP/IP client sessions. Serial data rates of up to 230 kbps ensure maximum network flexibility.

Featuring a slim IP30 DIN rail mountable case, MESR321 series gateways are built for use in industrial environments. They can be powered via a barrel connector or a terminal block. (An external power supply is required; sold separately.) The MESR321 has 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 PORT WITH DB9 AND TERMINAL BLOCK	ETHERNET PORTS	FIBER PORTS
MESR321	1	2 (RJ45)	0
MESR321-ML	1	1 (RJ45)	1 LC multi-mode optical
MESR321-SL	1	1 (RJ45)	1 LC single-mode optical

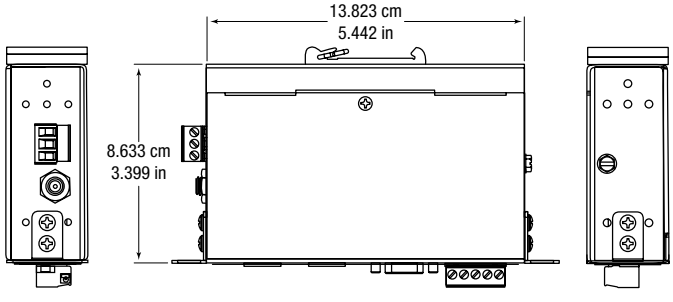
ACCESSORIES

C5UMB7FBG - Category 5e, 7 ft. (2.1 m), Grey cable

PS12VLB-INT-MED - Power Supply 12Vdc, Medical Grade - US, EU, UK

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

MECHANICAL DIAGRAM



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SPECIFICATIONS

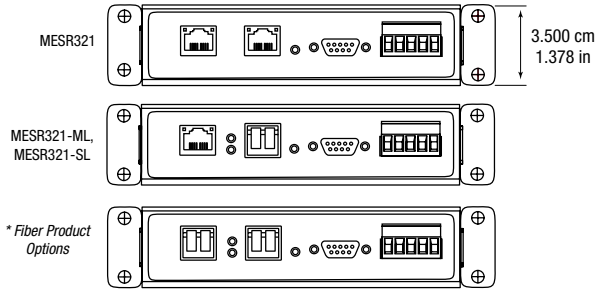
PORT TO PORT ISOLATION	
Serial to Ethernet	2 kV
Serial to Power	2 kV
Ethernet to Power	1.5 kV
POWER	
Source	External
Input Voltage	10 to 48 VDC (58 VDC Maximum)
Connector	Removable Terminal Block (12 – 28 AWG and barrel connector
Power Consumption	4 W
MECHANICAL	
LED Indicators	Ready, Power, Serial Data, Ethernet Speed, Ethernet Link
Switches	Reset Button (Mode)
Dimensions	13.823 x 8.633 x 3.500 cm (5.442 x 3.399 x 1.378 in)
Enclosure	IP 30, Metal
WEIGHT	**635 G (1.4 LBS)**
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	86,882 hours
MTBF Calc Method	Based on MIL 217F using Parts Count Reliability Prediction
NETWORK	
Serial Memory	8 KB per port
Network Memory	8 KB
IP Port Addresses	Setting in TCP Mode (paired mode) 8899 – MESR321x Update
LAN	10/100 Mbps Auto-detecting, 10BaseT or 100BaseTX
Ethernet	IEEE 802.3 auto detecting & auto MDI/MDX, 10BaseT and 100Base TX
PROTOCOLS	
Protocols	TCP, IPv4, UDP, ARP, HTTP 1.0, ICMP/PING, DHCP/BOOTP
IP Mode	Static, DHCP
TCP	User definable
OTHER	
Connection 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, test VCOM, save test config (text readable)
Firmware Upgrade	Vlinx Manager

SOFTWARE CONFIGURATION	
Vlinx Manager	Win 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
MAC Address Table	2K
SERIAL TECHNOLOGY	
RS-232	TD, RD, RTS, CTS, DTR, DSR, DTD, Signal Ground
RS-485 2-Wire	Data A(-), Data B(+), Signal Ground
RS-422/485 4-Wire	TDA(-), TDB(+), RDA(-), RDB(+), Signal Ground
Serial Connector	DB9M RS-232, Terminal Block Rs-422/485
Data Rate	Up to 230.4 Kbps

APPROVALS / CERTIFICATIONS		
Emissions	FCC Class B, CISPR Class B (EN55022)	
CE	EN61000-6-2:2005	(Heavy Industrial)
	EN61000-4-2:2008	(ESD)
	EN61000-4-3:2006	(RI)
	EN61000-4-4:2004	(EFT Burst)
	EN61000-4-5:2005	(Surge)
	EN61000-4-6:2005	(CI)
	EN61000-4-8:2001	(Magnetic)
Shock	IEC60068-2-27	50G peak, 11ms, 3 axes
Vibration	IEC60068-2-6	10-500Hz, 4G, 3 axes
Freefall (Drop)	IEC60068-2-32	10 total drops from sides, corner and edges, 1M

FIBER OPTIC SPECIFICATIONS

MODE AND DISTANCE	WAVELENGTH	OUTPUT POWER	RECEIVE SENSITIVITY
Multi-mode (2 km)	1310 nm	-23 to -14 dBm	</= -31 dBm
Single-mode (15 km)	1310 nm	15 to -8 dBm	</= -34 dBm
Single-mode (40 km)	1310 nm	-5 to 0 dBm	</= -35 dBm
Single-mode (80 km)	1550 nm	-5 to 0 dBm	</= -34 dBm



*** Full Fiber Product Options**

These options are possible for large projects:

- Models with 2 fiber optic ports
- Models with long-range fiber optic ports such as 40km and 80km single-mode

Contact B&B Electronics for more information.

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