NEW

Industrial Ethernet to Serial Device Servers

OM-ES-511 and OM-ES-522

5 YEAR WARRANTY ℂ €

- ✔ **1 Serial Port (OM-ES-511) or 2 Serial Ports (OM-ES-522) Software Selectable as RS232, RS422/485 Full Duplex, or RS485 Half Duplex**
- ✔ **State-of-the-Art Autogating for Trouble Free RS485 Half Duplex Flow Control**
- ✔ **Maximum Baud Rate 1,000,000 (1 MegaBaud), Custom Baud Rates**
- ✔ **10/100Base TX Ethernet Port**
- ✔ **-30 to 80°C (-22 to 176°F) Temperature Range**
- ✔ **User Friendly Interface**
- ✔ **Web Configuration and RFC2217 Compliant Interface for Users Not Running Windows®**
- ✔ **IP-30 Rated Non-Conducting Polyamide Enclosure**
- ✔ **LED Status Indication**
- ✔ **Integrated DIN Rail Mounting Kit**
- ✔ **Serial Port Tunneling Allows Serial Cable Replacement Over Any Distance, No Software Required**

OM-ES-511 and OM-ES-522, shown smaller than actual size.

OM-ES-511 (1 serial port) and OM-ES-522 (2 serial ports) are software selectable as RS232, RS422/485 full duplex or RS422 half duplex and have removable screw terminals blocks for easy wiring, a slim 'end on' case and integral DIN rail mount. OM-ES-511 and OM-ES-522 have an operating temperature range of -30 to 80°C (-22 to 176°F) and with 5 to 30 Vdc dual input reverse polarity protected power supply making them perfect for industrial applications. Data transfer rates up to 1,000,000 baud, coupled with 1Mbit/s line drivers deliver uncompromising performance. OM-ES-511 and OM-ES-522 provide simple instant networked serial ports in demanding environments. Serial Port Tunneling allows serial cable replacement over any distance, no software required. Suitable to be wired into existing power and network infrastructure or can be used with a separate power supply.

Users of the Windows® Operating System
Our software drivers give you local COM ports, allowing you to retain your existing software applications and connect to your devices over the network. COM Port can be assigned from COM 1 to COM 255 and the ethernet to serial device remembers your COM port assignment on reboots.

Web Interface Users (Linux®/Android™)
A web interface allows secure configuration and control of the serial ports over a local network or the internet using any browser. You can access the device via TCP/IP sockets from any networked device like a tablet for Android, PC or phone.

OM-ES-511 and OM-ES-522 Factory Floor Applications
Factory floors can be harsh environments. Extreme temperatures can be generated in the manufacturing process, machinery can be noisy and dangerous and space is a premium.

However engineers still need to be able to access and maintain equipment safely and without downtime.

As factories expand and modernize older equipment and remote devices need to be networked, but cabling can be expensive and impractical, especially over larger areas.

Once your serial equipment is connected to a OM-ES-511 or OM-ES-522 Ethernet to Serial device you have the option of accessing it over a local network or connecting it to the internet. The devices can be fitted in areas where it would be dangerous for workers to monitor while the factory line is in operation.

Manufacturing process and performance across a large site can be monitored and potential faults detected before they cause serious downtime costs. Use two devices back to back for serial tunnelling over Ethernet, for when you need to extend the reach of your serial cables.

OM-ES-511 shown smaller than actual size.

Specifications

SERIAL PORTS

Ports: 1 port (OM-ES-511) or 2 ports (OM-ES-522) software selectable as RS232, RS422/485 full duplex, or RS485 half duplex

Connector: Removable screw terminal block connector–3.5 mm pitch

Power Input: Redundant DC dual power inputs, reverse polarity protected 5 to 30 Vdc

Power Consumption: 1.4 watt 60 mA @ 24V typical–2.9 watt maximum

Conductor Wire: 28 to 16 AWG, 0.14 to 1.5 mm (0.005 to 0.059") maximum

SERIAL PORT SETTINGS- Software Selectable as RS232, RS422/485 Full Duplex, or RS485 Half Duplex

Baud Rate: Any custom Baud rate between 60 to 1,000,000 (1 MegaBaud) can be selected

Data Bits: 5, 6, 7 or 8

Parity: Odd, even, none, mark or space

Stop Bits: 1, 1.5 or 2

Flow Control: XON/XOFF Software handshake or RTS/CTS hardware handshake

TX/RX MODES

RS232 Standard: RS232 allows point to point communication between 2 devices

RS422 Standard: RS422 allows one transmitter and up to 10 receivers with data transmitter rates up to 10 megabits per second for distances up to 40 feet and up to 100 Kilobits per second for distances up to 1219 m (4000'). To achieve good long distance noise immunity, 2 wires are used to carry each signal, configured as a twisted pair of cables. The TXD pair and RXD pair are used to carry the data while the RTS pair and CTS pair lines are used for handshaking. Thus 2 twisted pairs are used without handshaking and 4 twisted pair cable is used with handshaking both these schemes allow full duplex data communications.

RS485 Standard: RS485, based on the RS422 standard allows up to 32 driver/receivers pairs on a standard load or 128 low load devices per port can be connected. While only one of these should be transmitting data at any time, the rest can all simultaneously listen to the data. Handshaking is performed by software protocol. Two twisted pairs form a full duplex system. Often only one twisted pair cable is used as the TXD and RXD lines are tied together; this is known as half duplex mode.

OM-ES-511 and OM-ES-522 implement a state of the art hardware autogating circuit ensuring error free communications in half duplex configurations.

Industrial Ethernet to Serial RS485: Receivers are 1/8th load allowing up to 256 nodes on the bus. Fail safe open circuit and short circuit protection, protects the Industrial ethernet to serial device server against wiring faults.

PORT SETTINGS–ETHERNET

Data Rate: 10/100 Mbps

Cabling: Normal/crossover auto-sensing (Auto-MDIX)

LED INFORMATION

Status LED

Green: Device ready

Flashing Yellow: Changing settings

Flashing Between Red and Green: Querying IP

Flashing Green/Red: User performing hard reset

Flashing Between Green and Red/Yellow: IP address diagnostic

Flashing Between Green and Yellow: Initialization diagnostic

SERIAL PORTS LEDs

Green Light On: Port open

Flashing Green: Data RX/TX

NETWORK LED

Green Light On: Link established

Flashing Green: Data RX/TX

ENVIRONMENTAL

Operating Temperature: -30 to 80°C (-22 to 176°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% RH (non-condensing)

Housing: NEMA 1 (IP-30) rated non-conducting polyamide case with integrated DIN rail mount

Weight: 21 g (0.74 oz)

Dimensions: 114.5 L x 22.6 W x 99 mm H (4.5 x 0.89 x 3.9")

SOFTWARE

Network Protocols: ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, HTTP, RFC2217

Configuration Options: Windows operating system, Web Interface

OS Compatibility: Windows 2000, Windows XP, Windows Vista®, Windows 7, and Windows 8; Windows Server®

Connection to Network: Ethernet 10 Base T/100 Base TX

Performance: Throughput guaranteed minimum of 95% of theroretical bi-direction full duplex band width at 1 MBaud

INPUT

CTS False to Transmitter Stop: 3 characters maximum, 1.5 typical

XOFF Received to Transmitter Stop: 3 characters maximum, 1.5 typical

RS485 Autogating Turn Around Time: <1 bit time

Android is a trademark of Google, Inc.

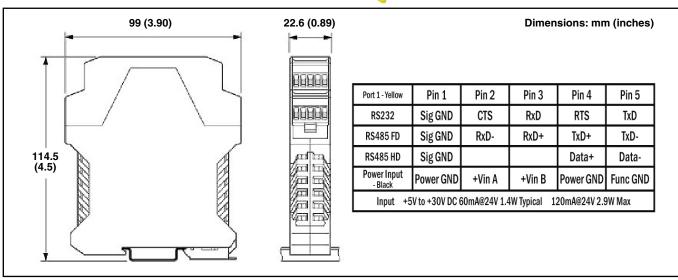*Windows, Windows Vista, and Windows Server are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.*

Linux® is a registered trademark of Linus Torvalds in the U.S. and other countries.

NEW

OM-ES-522, shown actual size.

99 (3.90)   **22.6 (0.89)**   **Dimensions: mm (inches)**

114.5 (4.5)

Port 1 - Yellow	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
RS232	Sig GND	CTS	RxD	RTS	TxD
RS485 FD	Sig GND	RxD-	RxD+	TxD+	TxD-
RS485 HD	Sig GND			Data+	Data-
Power Input - Black	Power GND	+Vin A	+Vin B	Power GND	Func GND
Input	+5V to +30V DC 60mA@24V 1.4W Typical 120mA@24V 2.9W Max				

To Order

Model No.	Description
OM-ES-511	Industrial ethernet to serial device server 1 port RS232/RS422/RS485
OM-ES-522	Industrial ethernet to serial device server 2 port R4232/RS422/RS485
RAIL-35-1	35 mm DIN rail, 1 m (3.3') length
RAIL-35-2	35 mm DIN rail, 2 m (6.6') length
iDRN-PS-1000	Power supply (switching), 95 to 240 Vac input, 24 Vdc output @ 850 mA

Comes complete with utility software and operator's manual on CD.
Ordering Example: OM-ES-511, *industrial ethernet to serial device server 1 port RS232/RS422/RS485.*