

## 2.4. Serial Communication Module (900ES1-100)

Serial Communication module provide 2\* RS232 Port and 2\* RS485 port. Supporting Modbus Serial communication protocol and user defined protocol.

Item	Specification
Protocol support	Modbus ASCII Master Modbus ASCII Slave Modbus RTU Master Modbus RTU Slave User defined Protocol
Connector	2*RS232:9-Pin D-sub male connector, share the same isolator 2*RS485: Isolated from each other and from RS232 ports
Galvanic Isolation	2000 VDC
Maximum slave devices connected per RS485 port	32
Module status LED	Supported
Channel communication LED	Supported
Maximum communication module per CPM	6
Operation Temperature	0 ~ 60 degC
Storage Temperature	-40 ~ 85 degC
Baud rate	300bps to 115200bps, adjustable
Flow control	None, RTS-CTS, RTS
Parity	None, Odd, Even
Data Bits	None, Odd, Even
Stop Bits	7, 8 (7 is not supported on Modbus RTU protocol)
Experion Integration – Diagnostic	Supported
Maximum Length of User Defined Protocol	532 Bytes
Supported data types on User Defined Protocol	USINT, UINT, UDINT, LINT REAL, LREAL

Item	Module Number	Dimension	Weight
MOXA EDS-308 Ethernet Switch (8 Copper ports)	50008930-001	135mm H x 53.6mm W x 105mm D 5.31" H* x 2.11" W x 4.13" D	790g
MOXA EDS-316-MM-SC Ethernet Switch (14 Copper + 2 Multi-Mode ports)	50008930-002	135mm H x 80.1mm W x 105mm D 5.31" H* x 3.15" W x 4.13" D	1140g
MOXA EDS-316-SS-SC Ethernet Switch (14 Copper + 2 Single-Mode ports)	50008930-003	135mm H x 80.1mm W x 105mm D 5.31" H* x 3.15" W x 4.13" D	1140g
MOXA EDS-308-SS-SC Ethernet Switch (6 Copper + 2 Single-Mode ports)	50008930-004	135mm H x 53.6mm W x 105mm D 5.31" H* x 2.11" W x 4.13" D	790g
MOXA: IMC-101-M-SC Fiber Optic convertor, Multi-mode	50135395-001	135mm H x 53.6mm W x 105mm D 5.31" H* x 2.11" W x 4.13" D	630g
MOXA: IMC-101-S-SC Fiber Optic convertor, Single mode	50135395-002	135mm H x 53.6mm W x 105mm D 5.31" H* x 2.11" W x 4.13" D	630g
<p>Note:</p> <ol style="list-style-type: none"> <li>Surface mounting with 4 screws in back of rack. Installation Category II, Pollution Degree 2, IEC 60664, UL840 Installation coordination.</li> <li>Rear mounting plate extends height to 6.9" (175.3mm).</li> </ol>			

#### 4. Hardware Spacing Requirement

Item	Specification
Vertical Spacing (between rack to rack, rack to cell/floor)	165mm 6.5"
Horizontal Spacing	0mm 0"

#### 5. Environment Conditions

Item	Rated	Transportation & Storage
Ambient Temperature	32 to 140 °F 0 to 60 °C	-40 to 158 °F -40 to 70 °C
Ambient Relative Humidity	10% to 90 % RH non-condensing	5 % to 95 % RH non-condensing
Mechanical shock Acceleration Duration	1 g 30 ms	Not rated
Vibration	0 Hz to 14 Hz— amplitude 2.5 mm (peak-to-peak) 14 Hz to 250 Hz— acceleration 1 g	See below table
Harsh Environment*	Hardware including CPM, EPM, IO Modules, RTP, Communication Modules, PSM, and Backplanes have conformal coating that is suitable for operation in <b>G3</b> level of harsh environment.  *Power Supplies excluded	
RoHS*	Hardware including CPM, EPM, IO Modules, RTP, Communication Modules, PSM, and Backplanes compliant to RoHS directive  *Power supplies excluded	

The Test condition of random vibration

Frequency (Hz)	PSD (g <sup>2</sup> /Hz)	RMS (g)	Duration	Direction
10	0.0065	0.74	60min/direction	X, Y
20	0.0065			
120	0.0002			
121	0.003			
200	0.003			
240	0.0015			
340	0.00003			
500	0.00015	1.07		Z
5	0.01			
100	0.01			
300	0.00001			