

Presentation

The Model **170 ENT 110 02** and **170 ENT 110 01** Ethernet communication adapters for the Momentum I/O product line provide a direct connection to Ethernet-based networks for the entire family of Momentum I/O modules. This connectivity enables communications with a full range of Ethernet TCP/IP compatible control products that includes programmable controllers, industrial computers, motion controllers, operator control stations, host computers, and other controls. This communication network provides a flexible, cost-effective solution for communicating factory floor information to various layers of an integrated manufacturing facility.

The 100BASE-TX Ethernet communication adapter, the **170 ENT 110 01** (and the 10BASE-T adapter, the **170 ENT 110 02**) are single adapters designed to plug on to any of the Momentum Input/Output module bases, and conforms to the requirements of the Ethernet communication network.

The Ethernet IP addressing scheme allows an unlimited number of Momentum I/O modules or connections on the network. Using standard Ethernet hubs, routers, and bridges, the performance and distance capability of the Ethernet network can be tailored to meet the requirements of almost any control application.

The Ethernet communication adapter uses the standard Modbus message structure and control commands over the TCP/IP protocol, which simplifies implementation by control engineers while providing information that can be communicated over standard network media to all enterprise applications.

Since Modbus on TCP/IP over Ethernet is supported by Schneider Electric's Quantum and Premium controller families, Momentum I/O can be added to existing control systems where additional I/O capacity of a distributed I/O sub-network is needed.

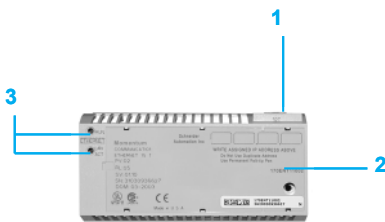
The Ethernet communication adapter requires connection to a BOOTP server for setting the module's IP parameters, including its own unique IP address, default gateway, and sub-net mask, all of which is stored in the communication adapter's flash memory. Schneider Electric's automation business offers BOOTP Lite Ethernet software as a free download from the Telemecanique Internet web site www.telemecanique.com.

Description

The **170 ENT 110 0●** Ethernet communication adapters comprises on the front panel:

- 1 Ethernet RJ45 connector for 100BASE-TX interface for **170 ENT 110 01**) or 10BASE-T interface for **170 ENT 110 02**).
- 2 Area for Label (label shipped with I/O base).
- 3 LED Status Indicators comprising for the **170 ENT 110 02**:
 - Run (green), module health,
 - LAN Active (green), Ethernet network status.

- LED Status Indicators comprising for the **170 ENT 110 01**:
- Run (green), module health,
 - 10T (green), 10 Mbit/s network activity,
 - 100T (amber), 100 Mbit/s network activity,
 - ST (green), Ethernet network status.



Characteristics		170 ENT 110 02	170 ENT 110 01
Model No		170 ENT 110 02	170 ENT 110 01
Communication network		Ethernet TCP/IP	
Media		Shielded twisted pair cable	
Communication rate		Mbit/s 10	10/100
Distance		m (ft) 100 (328) per segment	
Connectors		RJ45, 10BASE-T	RJ45, 100BASE-TX
Transparent Ready services	Class	A10	B20
	Standard Web server	–	"Rack Viewer" access to the product description and status and to base unit diagnostics "Data editor" access to the configuration functions and variables
Standard Ethernet TCP/IP communication services		Modbus Messaging (read/write data words) –	FDR client for automatic assignment of the IP address and network parameters SNMP agent, detection of the product by an SNMP manager
Adapter configuration		BOOTP server to assign IP parameters	
Flash memory		128 K for IP parameter storage	
Error checking		CRC-32 error check	
Error and fail states		Fail safe	
Addressing		Unique IEEE global address, IP address user assigned	
Mode of operation		Master slave, peer-to-peer	
Topology		Multi-drop bus, star	
Packaging		Standard momentum communications adapter enclosure - IP 20 environment	
Indicator lights		Run and activity lights	Run, 10 Mbit/s, 100 Mbit/s, and status lights
Power source		Power supply on-board the I/O base	
Hot swapping of modules		Yes	
Agency approvals		UL, CE, CSA, FM Class I, Div. II	UL, CE, CSA

References

Communication adapters

Description	Communication rate Transparent Ready Class (1)	Reference	Weight kg
Ethernet TCP/IP communication adapters	10 Mbit/s A10	170 ENT 110 02	0.070
	10/100 Mbit/s B20	170 ENT 110 01	0.070

Accessories

ConneXium cabling system	See page 48332/2	–
BOOTP Lite Ethernet Software	Download from www.telemecanique.com	–
Ethernet TCP/IP communication adapter user guide	See page 48242/3	–

(1) Transparent Ready Class A10 and B20, for more details, consult our catalogue "Transparent Ready, Ethernet TCP/IP and Web technologies"

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170 ENT 110 02

Transparent Ready