MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ALLEN-BRADLEY

1769-AENTR

DUAL PORT ETHERNET/IP ADAPTER

Used with the applicable CompactLogix configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Rockwell Automation 1769-TD007, CompactLogix communication specifications

Table 2 - Environmental Specifications - 1769 Communication Modules

Attribute	1769-AENTR	1769-SDN, 1769-ADN
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	0…60 °C (32…140 °F)	
Temperature, surrounding air, max.	60 °C (140 °F)	
Temperature, nonoperating IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock)	-40…85 °C (-40…185 °F)	
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Nonoperating Damp Heat)	5…95% noncondensing	
Vibration IEC 60068-2-6 (Test Fc, Operating)	2 g @ 10…500 Hz	
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g	30 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g	50 g
Emissions	CISPR 11 (IEC 61000-6-4): Class A	CISPR 11 (IEC 61000-6-4): Group 1, Class A
ESD Immunity	IEC 61000-4-2: 6 kV contact discharges 8 kV air discharges	
Radiated RF Immunity	IEC 61000-4-3: 10V/m with 1 kHz sine-wave 80% AM from 80…2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz	IEC 61000-4-3: 10V/m with 1 kHz sine-wave 80% AM from 30…2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 1V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz
EFT/B Immunity	IEC 61000-4-4: ±3 kV at 5 kHz on communications ports	IEC 61000-4-4: ±2 kV at 5 kHz on communications ports
Surge Transient Immunity	IEC 61000-4-5: ±2 kV line-earth(CM) on communications ports	
Conducted RF Immunity	IEC 61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz	IEC 61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz

Communication Connections

A ControlLogix system uses connections to establish communication links between devices. The types of connections include:

- controller-to-local I/O modules or local communication modules.
- controller-to-remote I/O or remote communication modules.
- controller-to-remote I/O (rack-optimized) modules.
- produced and consumed tags.
- messages.
- controller access by RSLogix 5000 programming software.
- controller access by RSLinx software for HMI or other applications.

You indirectly determine the number of connections the controller uses by configuring the controller to communicate with other devices in the system. The limit of connections may ultimately reside in the communication module you use for the connection. If a message path routes through a communication module, the connection related to the message also counts towards the connection limit of that communication module.

EtherNet/IP Network

The Ethernet Industrial network protocol (EtherNet/IP) is an open industrial-networking standard that supports both real-time I/O messaging and message exchange. The EtherNet/IP network uses off-the-shelf Ethernet communication chips and physical media.

If your application	Select for a 1769-L23*x* controller	Select for a 1769-L3*x* controller	Select for a 1769-L4*x*, 1769-L4*x*S controller	Select for a CompactLogix 5370 controller
• Controls standard and safety I/O modules and drives • Requires an adapter for distributed 1756 I/O on EtherNet/IP links • Communicates with other EtherNet/IP devices (messages and HMI) • Bridges EtherNet/IP links to route messages to devices on other networks	1769-L23E-QB1B or 1769-L23E-QBFC1B controller with integrated EtherNet/IP port	1769-L32E or 1769-L35E controller with integrated EtherNet/IP port	1768-ENBT bridge	All CompactLogix 5370 L1, L2 and L3 controllers
• Requires remote access via an Internet browser to tags in a local controller • Support custom web pages • Bridges EtherNet/IP links to route messages to devices on other networks (no I/O support)	—	—	1768-EWEB web server	—
Uses 1769-I/O as remote I/O via EtherNet	1769-L23E-QB1B or 1769-L23E-QBFC1B controller with integrated EtherNet/IP port and 1769-AENTR	1769-L32E or 1769-L35E controller with integrated EtherNet/IP port and 1769-AENTR	1769-AENTR	1769-AENTR

For controller specifications, see CompactLogix Controllers Specifications, publication 1769-TD005.

Table 3 - Technical Specifications - 1768 and 1769 EtherNet/IP Modules

Attribute	1768-ENBT, 1768-EWEB	1769-AENTR[1]
EtherNet/IP communication rate	10/100 Mbps	10/100 Mbps
Logix communication connections	128	128
TCP/IP communication connections	64	96
Current draw @ 5V DC	N/A	500 mA
Current draw @ 5.2V DC	834 mA	N/A
Current draw @ 24V DC	0 mA	N/A
Power consumption	4.34 W	N/A
Power dissipation	4.38 W	N/A
Isolation voltage	30V (continuous), functional insulation type, Ethernet to system Tested at 710V DC for 60 s	50V (continuous), basic insulation type Tested at 710V DC for 60 s
Weight, approx.	0.213 kg (7.5 oz)	0.280 kg (0.61 lb)
Dimensions (HxWxD), approx.	132 x 56.7 x 105.1 mm (5.20 x 2.23 x 4.12 in.)	118 x 50 x 87 mm (4.65 x 1.97 x 3.43 in.)
Slot width	1	1
Module location	DIN rail or panel mount	DIN rail or panel mount
Mounting screw torque	1.16 N•m (10 lb•in) - use M4 or #8 screws	1.16 N•m (10 lb•in) - use M4 or #8 screws
Ports	1 Ethernet RJ45 Category 5	2 Ethernet RJ45 Category 5
Wire size	Ethernet connections: RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702.	
Wire category	2 - on communication ports[2]	1 - on communication ports[1]
North American temperature code	T4A	T3C
Enclosure type rating	None (open-style)	None (open-style)

(1) The 1769-AENTR adapter must be used with one of the following Rockwell Automation power supply models: 1769-PA2, 1769-PB2, 1769-PA4, or 1769-PB4.

(2) Use this conductor category information for planning conductor routing as described in the system-level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 4 - Certifications - 1768 and 1769 EtherNet/IP Modules

Certification[1]	1768-ENBT, 1768-EWEB	1769-AENTR
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E322657. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E334470.
CE	European Union 2004/108/IEC EMC Directive, compliant with: EN 61326-1; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)	European Union 2004/108/EC EMC Directive, compliant with: EN 61326-1; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
RCM	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions
Ex	European Union 94/9/EC ATEX Directive, compliant with: EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T4 X	N/A
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EtherNet/IP	ODVA conformance tested to EtherNet/IP specifications	ODVA conformance tested to EtherNet/IP specifications

(1) When marked. See the Product Certification link at http://www.ab.com for Declarations of Conformity, Certificates, and other certification details.

Important User Information

Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid-state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

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