

Product Details and Certifications

Cross Reference RA Part Number: PN-138004

➔ **Product: 1734-AENTR**

Description: 2-Port EtherNet I/O Adapter Module



Representative Photo Only (actual product may vary based on configuration sections)

POWER SUPPLIES

Bulletin Number	1734 EtherNet I/O Terminal Adapter
Input Voltage Rating	24V DC @ 500mA, 12V DC @ 1.0A
Input Voltage Range	10...28.8V DC
Field Side Power, Max	24V DC @ 400 mA
Inrush Current, Max	6.0 A for 10 ms
Input Overvoltage Protection	Reverse polarity protected
POINTBus Output Current, Max	5V DC @ 0.8A
Interruption	Output voltage stays within specifications when input drops out for 10 ms @ 10V with max load
Fieldbus Power Range	

ETHERNET COMMUNICATIONS

EtherNet Communication Rate	10/100 Mbits/s, half or full-duplex
EtherNet Ports	2, configured as Embedded Switch
EtherNet Network Topologies Supported	Star, Tree, Daisy-Chain/Linear, and Ring
EtherNet Connectors	RJ-45, Category 5
EtherNet Cable	Category 5: Shielded or Unshielded

CERTIFICATIONS AND APPROVALS

UL

CE

C-Tick

Ex / ATEX

EtherNet/IP

For UL Certifications Directory:

<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

Specifications

General Specifications

The 1734-AENTR and 1738-AENTR adapters have the following general specifications.



General Specifications

Attributes	1734-AENTR	1738-AENTR
Expansion I/O capacity, max	<ul style="list-style-type: none"> •63 modules •Up to 5 rack-optimization (for digital modules only) and/or enhanced rack-optimization (for digital, analog, and specialty modules – applies to 1734-AENTR only) connections •31 direct connections⁽¹⁾ •Backplane current output = 0.8 A. •Actual number of modules can vary. •Add together the current requirements for the modules you want to use to make sure they do not exceed the amperage limit of 0.8 A for the adapter. •Backplane current can be extended beyond 0.8 A by using 1734 or 1738-EP24DC backplane extension power supplies and, as required, 1734 or 1738-FPD modules. •Add multiple 1738-EP24DC and 1738-FPD modules to reach the 63 module max. 	
POINTBus current requirements, max	<ul style="list-style-type: none"> •50 mA (Catalog number 1734-IB4D) •75 mA (Catalog numbers 1734-IB2, 1734-IB4, 1734-IB8, 1734-IV2, 1734-IV4, 1734-OB2, 1734-OB4, 1734-OB8, 1734-OB2E, 1734-OB2EP, 1734-OB4E, 1734-OB8E, 1734-OV2E, 1734-OV4E, 1734-232ASC, 1734-485ASC, 1734-ARM, 1734-IV8, 1734-OV8E, 1734-IE4C, 1734-IE8C, 1734-OE4C, 1734-IA4, 1734-IM4, 1734-OA4, 1734-IR2E, 1734-IE2C, 1734-OE2C, 1734-IE2V, 1734-OE2V, 1734-IA2, 1734-IM2, 1734-OA2) •80 mA (Catalog number 1734-OW2, 1734-OW4) •100mA (Catalog numbers 1734-OX2, 1734-8CFG, 1734-4IOL) •110mA (Catalog number 1734-SSI) •160mA (Catalog numbers 1734-IJ2, 1734-IK2) •175mA (Catalog number 1734-IT2I) •180mA (Catalog numbers 1734-VHSC5, 1734-VHSC24) •220 mA (Catalog number 1734-IR2, 1734-IR2E) 	<ul style="list-style-type: none"> 50 mA (Catalog number 1738-IB4DM12) •75 mA (Catalog numbers 1738-OB2EM12, 1738-OB8EM8, 1738-OB2EPM12, 1738-OB4EM8, 1738-OB4EM12, 1738-OB8EM12, 1738-OB8EM23, 1738-IB2M12, 1738-IB4M12, 1738-IB4M8, 1738-IB8M8, 1738-IB8M12, 1738-IB8M23, 1738-IB16DM12, 1738-8CFGM8, 1738-8CFGM23, 1738-8CFGDLXM8, 1738-8CFGDLXM12, 1738-8CFGDLXM23, 1738-OV4EM12, 1738-IV4M12, 1738-IV8M8, 1738-IV8M12, 1738-IV8M23, 1738-IA2M12AC3, 1738-IA2M12AC4, 1738-OA2M12AC3, 1738-IE2CM12, 1738-IE4CM12, 1738-IE2VM12, 1738-OE2CM12, 1738-OE4CM12, 1738-OE2VM12) •80 mA (Catalog numbers 1738-OW4M12, 1738-OW4M12AC) •100mA (Catalog numbers 1738-8CFGM8, 1738-8CFGM12, 1738-8CFGM23, 1738-8CFGDLXM8, 1738-8CFGDLXM12, 1738-8CFGDLXM23) •110mA (Catalog number 1738-VHSC24M23) •150 mA (Catalog numbers 1738-OB16E25DS, 1738-OB16E19M23, 1738-OB16EM12) •160mA (Catalog number 1738-IJM23) •175mA (Catalog number 1738-IT2IM12) •220 mA (Catalog number 1738-IR2M12)
Module location	Starter module – left side of the system.	

(1) Maximum 31 direct connections for standard I/O or maximum 20 direct connections if any safety I/O module resides in the backplane.

General Specifications



Attributes	1734-AENTR	1738-AENTR
Status indicators	3 red/green status indicators on CPU: <ul style="list-style-type: none"> • Module Status • Network Status (Ports 1 and 2 combined) • POINTBus Status 1 green/yellow status indicator on CPU: <ul style="list-style-type: none"> • Network Activity (Ports 1 and 2) 2 green/yellow status indicators on base: <ul style="list-style-type: none"> • Link 1 Activity/Status • Link 2 Activity/Status 2 green power supply status indicators on DC-DC Converter: <ul style="list-style-type: none"> • System Power (5V DC to POINTBus Out) • Field Power (24V DC from Field In) 	3 red/green status indicators on CPU: <ul style="list-style-type: none"> • Module Status • Network Status (Ports 1 and 2 combined) • POINTBus Status 1 green/yellow status indicator on CPU: <ul style="list-style-type: none"> • Network Activity (Ports 1 and 2) 2 green/yellow status indicators on base: <ul style="list-style-type: none"> • Link 1 Activity/Status • Link 2 Activity/Status 2 green power supply status indicators on DC-DC Converter: <ul style="list-style-type: none"> • System Power (5V DC to POINTBus Out) • Adapter Power (24V DC from Field In)
Wire Size	Power connections: 0.34... 2.1 mm ² (22...14 AWG) solid or stranded copper wire rated @ 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max or 90 °C (194 °F) for ControlLogix. Ethernet wiring: RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e min cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702.	
Power consumption, max	10.4 W @ 28.8V DC	
Wiring category ⁽¹⁾	1 – on communications ports 1 – on power ports	
Power dissipation, max	6.3 W @ 28.8V DC	
Input overvoltage protection	Reverse polarity protected	
Thermal dissipation, max	21.5 BTU/hr @ 28.8V DC	
Isolation voltage	50V (continuous), Reinforced Insulation Type, between all circuits. Type tested @ 500V AC for 60 s	50V (continuous), Basic Insulation Type. Type Tested @ 500V AC for 60 s: <ul style="list-style-type: none"> • Comm to system • Comm to user power • User power to system • User power to ground • System to ground
Field power supply	10...28.8V DC @ 10A	10...28.8V DC @ 10A
Field power output	10...28.8V DC @ 9A	10...28.8V DC @ 9A
Module input	10...28V DC @ 1000 mA	10...28V DC @ 1000 mA
Dimensions (HxWxD), approx.	76.2 x 73.0 x 133.4 mm (3.0 x 2.87 x 5.25 in.)	112 x 123 x 67 mm (4.41 x 4.84 x 2.64 in.)
Mounting type	-	Metal panel

General Specifications

Enclosure type rating	None (open-style)	Meets IP65/66/67/69K (when marked)
Terminal base screw torque	0.8 Nm (7 lb-in)	0.8 Nm (7 lb-in)
Weight, approx.	0.28 Kg (0.62 lb)	0.33 Kg (0.72 lb)

(1) Use this Conductor Category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-IN041](#) and to the appropriate System Level Installation Manual.

Power Supply

The **1734-AENTR** and 1738-AENTR modules have the following power supply specifications:

Power Supply Specifications

Attributes	1734-AENTR	1738-AENTR
Input voltage rating	24V DC@ 500mA, 12V DC@ 1.0A	24V DC@ 500mA, 12V DC@ 1.0A
Input voltage, range	10...28.8V DC	10...28.8V DC
Field side power, max	24V DC@ 400mA	24V DC@ 400mA
Inrush current, max	6 A for 10 ms	6 A for 10 ms
Input overvoltage protection	Reverse polarity protected	Reverse polarity protected
POINTBus output current, max	5V DC @ 0.8A	5V DC @ 0.8A
Interruption	Output voltage stays within specifications when input drops out for 10 ms @ 10V with max load	
Auxiliary power cable ⁽¹⁾	Standard cordset (single-ended), for example Allen-Bradley part number 889N-F4AFC-6F or 889N-R4AFC-6F. Standard patchcord (double-ended), for example, Allen-Bradley part number 889N-F4AFNU-6F or 889N-F4AFNV-6F.	

(1) Refer to publication [M117-CA001A-EN-P](#) for more information.

EtherNet Communication

The **1734-AENTR** and 1738-AENTR adapter modules have the following EtherNet communication specifications.

EtherNet Communication Specifications

Attributes	Description
Ethernet communication rate	10/100 Mbps/s, half or full-duplex
Ethernet ports	2, configured as Embedded Switch
Ethernet network topologies supported	Star, Tree, Daisy-chain/Linear, and Ring



EtherNet Communication Specifications

Attributes	Description
Ethernet connectors	1734-AENTR – RJ-45, Category 5 1738-AENTR – M12
Ethernet cable	Category 5: shielded or unshielded
Ethernet wire connections, max	See Wire Size on page 90

Environmental Specifications

The 1734-AENTR and 1738-AENTR Dual Port EtherNet/IP Adapter modules have the following environmental specifications.

Environmental Specifications

Attributes	1734-AENTR	1738-AENTR
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): -20...55 °C (-4...131 °F)	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): -20...60 °C (-4...140 °F)
Temperature, nonoperating	IEC60068-2-1 (Test Ab, Unpackaged Nonoperating Cold) IEC60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat) IEC60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock): -40...85 °C (-40...185 °F)	
Temperature, surrounding air, max	55 °C (131 °F)	60 °C (140 °F)
Relative humidity	IEC 60068-2-30 (Test Db, Unpackaged Damp Heat): 5...95% non-condensing	
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 g @ 10...500 Hz	
Shock, operating	IEC60068-2-27 (Test Ea, Unpackaged Shock): 30 g	
Shock, nonoperating	IEC60068-2-27 (Test Ea, Unpackaged Shock): 50 g	
Emissions	CISPR 11: Group 1, Class A	CISPR 11: Group 1, Class A
ESD immunity	IEC61000-4-2: 6 kV contact discharges 8 kV air discharges	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 @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz	
EFT/B immunity	IEC 61000-4-4: ±4 kV @ 5 kHz on power ports ±3 kV @ 5 kHz on communications ports	IEC 61000-4-4: ±4 kV @ 2.5 kHz on power ports ±3 kV @ 5 kHz on communications ports