Technical Data

Original Instructions

1788 Linking Device Specifications

Catalog Numbers 1788-EN2DNROM, 1788-EN2DNR, 1788-EN2FFR, 1788-EN2PAR, 1788-CN2DN, 1788-CN2FFR, 1788-CN2PAR, 1788-FBJB4R, 1788-FBJB6

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Corrected terminal torque specifications in Table 7	6

1788-EN2DNR and 1788-EN2DNROM EtherNet/IP to DeviceNet Linking Devices

The 1788-EN2DNR and 1788-EN2DROM linking devices connect an EtherNet/IP™ network to a DeviceNet® network.

Table 1 - Technical Specifications - 1788-EN2DNR, 1788-EN2DNROM

Attribute	1788-EN2DNR	1788-EN2DROM
Power requirements	Input: 24V DC, 150 mA, Class 2/SELV DeviceNet: 24V DC, 60 mA, Class 2/SELV	Logic power supply: 24V DC SELV/PELV (-15...+20%), 100 mA, max at 24V DC DeviceNet power supply: 24V DC SELV/PELV, 20 mA max at 24V DC
Isolation voltage	30V (continuous), basic insulation type, power to system, Ethernet to system, DeviceNet to system, and USB to system. Type tested at 500V AC for 60 s.	–
EtherNet/IP connection	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.	–
DeviceNet connection(1)	0.52 mm^2 (20 AWG), 1485C-P1-Cxxx.	–
Power connection	Power: 0.25...2.5 mm^2 (22...14 AWG) solid or stranded copper wire that is rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation, max	–
Wiring category(2)	2 - on power ports 2 - on communication ports	3 - on USB ports 2 - on power ports 2 - on communications ports
Enclosure type rating	None (open-style)	Meets IP67 and NEMA 4/4X
North American temperature code	T4	–
ATEX temp code	T4	–
IEC temperature code	T4	–

(1) See the DeviceNet Media Design Installation Guide, publication DNET-UM072.
(2) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 2 - Environmental Specifications - 1788-EN2DNR, 1788-EN2DROM

Attribute	1788-EN2DNR	1788-EN2DROM
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)	-25...+60 °C (-13...+140 °F)	0...60 °C (32...140 °F)
Temperature, surrounding air, max	60 °C (140 °F)	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)	-40...+85 °C (-40...+185 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing	5...95% noncondensing
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g	30 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	50 g	30 g
Vibration IEC 60068-2-6 (Test Fc, Operating)	2 g @ 10...500 Hz	2 g @ 10...500 Hz
Emissions IEC 61000-6-4	IEC 61000-6-4	IEC 61000-6-4
ESD Immunity IEC 61000-4-2	6 kV contact discharge 8 kV air discharge	6 kV contact discharge 8 kV air discharge
Conducted RF Immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz

Table 2 - Environmental Specifications - 1788-EN2DNR, 1788-EN2DROM (Continued)

Attribute	1788-EN2DNR	1788-EN2DROM
Radiated RF Immunity IEC 61000-4-3	10V/m with 1 kHz sine wave 80% AM from 80...1000 MHz and 1400...2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 1V/m with 1 kHz sine wave 80% AM from 2000...2700 MHz	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
EFT/B Immunity IEC 61000-4-4	±3 kV at 5 kHz on power ports ±3 kV at 5 kHz on EtherNet/IP and DeviceNet ports	±3 kV at 5/100kHz on DC power ports ±3 kV at 5/100kHz on communication ports
Surge Transient Immunity IEC 61000-4-5	±500V line-line (DM) and ±1 kV line-earth (CM) on power ports ±2 kV line-earth (CM) on EtherNet/IP and DeviceNet ports	±500V line-line(DM) and ±1 kV line-earth(CM) on power ports ±2 kV line-earth(CM) on communications ports
Voltage variation IEC 61000-4-29	10 ms interruption on DC power port	10 ms interruption on DC power port

Table 3 - Certifications - 1788-EN2DNR, 1788-EN2DROM

Certification (when product is marked)(1)	1788-EN2DNR	1788-EN2DROM
cULus	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 E65584.
CE	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 and B) European Union 2011/65/EU RoHS, compliant with: • EN 50581; Technical Documentation	
RCM	Australian Radiocommunications Act, compliant with: • EN 61000-6-4; 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 Gc X • DEMKO13ATEX1355620X	–
KC	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.	
DeviceNet	ODVA conformance tested to DeviceNet specifications.	

(1) See the Product Certification link at rok.auto/certifications for declarations of conformity, certificates, and other certification details.

1788-CN2DN ControlNet to DeviceNet Linking Device

The 1788-CN2DN linking device connects a ControlNet® network to a DeviceNet network.

Table 4 - Technical Specifications - 1788-CN2DN

Attribute	1788-CN2DN
Power requirements	Input: 24V DC, 500 mA DeviceNet: 24V DC, 90 mA, Class 2
Isolation voltage	30V (continuous), basic insulation type, between all ports. Type tested at 720V DC for 60 s.
ControlNet connection	RG6
DeviceNet connection(1)	0.52 mm^2 (20 AWG), 1485C-P1-Cxxx.
Power connection	Power: 0.25…2.5 mm^2 (22…14 AWG) solid or stranded copper wire rated at 75 °C (167 °F), or greater, 1.2 mm (3/64 in.) insulation, max
Wiring category(2)	3 - on power ports 2 - on communication ports
Dimensions (H x W x D), approx.	120 x 200 x 87 mm (4 11/16 x 7 7/8 x 3 7/16 in.)
Enclosure type rating	None (open-style)
North American temperature code	T4A
IEC temperature code	T4

(1) See the DeviceNet Media Design Installation Guide, publication DNET-UM072.
(2) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 5 - Environmental Specifications - 1788-CN2DN

Attribute	1788-CN2DN
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 Damp Heat)	5…95% noncondensing
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	50 g
Vibration IEC 60068-2-6 (Test Fc, Operating)	2 g @ 10…500 Hz
Emissions CISPR 11 (IEC 61000-6-4)	Class A
ESD Immunity IEC 61000-4-2	6 kV contact discharge 8 kV air discharge
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz…80 MHz
Radiated RF immunity 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 @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 3V/m with 1 kHz sine wave 80% AM from 2000…2700 MHz
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on power ports ±3 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication ports

Table 6 - Certifications - 1788-CN2DN

Certification (when product is marked)[1]	1788-CN2DN
cULus	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.
CSA	CSA Certified Process Control Equipment. See CSA File LR54689C. CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations. See CSA File LR69960C.
CE	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 and B)
C-Tick	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 I 3 G Ex nA IIC T4X Gc
DeviceNet	ODVA conformance tested to DeviceNet specifications
CI	ControlNet Int'l conformance tested to ControlNet specifications.

(1) See the Product Certification link at rok.auto/certifications for declarations of conformity, certificates, and other certification details.

Linking Devices to FOUNDATION Fieldbus Networks

The 1788-EN2FFR linking device provides a gateway between EtherNet/IP and FOUNDATION Fieldbus networks.

The 1788-CN2FFR linking device provides a gateway between ControlNet and FOUNDATION Fieldbus networks.

Table 7 - Technical Specifications - 1788-EN2FFR, 1788-CN2FFR

Attribute	1788-EN2FFR, 1788-CN2FFR
Power requirements	Input: 24...32V DC, 0.75 A, Class 2/SELV Foundation Fieldbus (FF): 0.5 A @24V DC single trunk; 0.4 A @ 24V DC dual trunk Power is connected to the linking device by using the 2-way Phoenix connector.
Power consumption	260 mA at 24V (with no field devices attached)
Power dissipation	12.24 W at 24V DC
Isolation voltage	30V (continuous), basic insulation type, network channels to power, and network channels to network channels. No isolation between redundant network channels. Type tested at 500V DC for 60 s.
Ethernet conductors	CAT5 STP/UTP
Terminal torque	DC Power connections: 0.22...0.25 N•m (2...2.2 lb•in) Fieldbus connections: 0.21...0.25 N•m (1.9...2.2 lb•in)
Wire size	DC power and Foundation Fieldbus connections: 0.205...0.823 mm^2 (24...18 AWG) solid or stranded copper wire rated at 82 °C (180 °F) or greater 1.2 mm (3/64 in.) insulation max
Wiring category[1]	1 - on power ports 2 - on ControlNet, Ethernet, and Foundation Fieldbus ports
Enclosure type rating	None (open-style)
North American temperature code	T4
IEC temperature code	T4

(1) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 8 - Environmental Specifications - 1788-EN2FFR, 1788-CN2FFR

Attribute	1788-EN2FFR, 1788-CN2FFR
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)	0...60 °C (32...140 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Vibration IEC 60068-2-6 (Test Fc, Operating)	0.5 g @ 10...500 Hz
Emissions CISPR 11 (IEC 61000-6-4)	Class A
ESD Immunity IEC 61000-4-2	6 kV contact discharge 8 kV air discharge
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz
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 3V/m with 1 kHz sine wave 80% AM from 2000...2700 MHz
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on power ports ±3 kV at 5 kHz on Ethernet and FF ports
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±1 KV line-earth (CM) on ControlNet ports ±2 kV line-earth (CM) on Ethernet and FF ports

Table 9 - Certifications - 1788-EN2FFR, 1788-CN2FFR

Certification (when product is marked)(1)	1788-EN2FFR, 1788-CN2FFR
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E320594. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E320595.
CE	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 and B)
RCM	Australian Radiocommunications Act, compliant with: • EN 61000-6-4; 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 Gc X
KC	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
FF	Foundation Fieldbus Test Campaign Number: CT0152FF

(1) See the Product Certification link at http://www.ab.com for declarations of conformity, certificates, and other certification details.

FOUNDATION Fieldbus Junction Boxes

The 1788-FBJB4R and 1788-FBJB6 junction boxes provide connections to FOUNDATION Fieldbus networks.

Table 10 - Technical Specifications - 1788-FBJB4R, 1788-FBJB6

Attribute	1788-FBJB4R	1788-FBJB6
Power requirements	Input: 12...32V DC, 0.5 A, Class 2/SELV Trunk output: 12...32V DC, 0.36 A, resistive only Drop output: 12...32V DC, 40 mA, resistive only	Input: 12...32V DC, 0.5 A, Class 2/SELV Trunk output: 12...32V DC, 0.48 A, resistive only Drop output: 12...32V DC, 40 mA, resistive only
Power consumption	40 mA at 24V, max	
Isolation voltage	No isolation between communication channels	
Conductor temperature rating	> 82 °C (180 °F)	
Terminal torque	0.5...0.6 N•m (4.4...5.3 lb•in)	
Wire size	DC power and Foundation Fieldbus connections: 0.205...0.823 mm^2 (24...18 AWG) solid or stranded copper wire rated at 82 °C (180 °F) or greater 1.2 mm (3/64 in.) insulation max	
Wiring category(1)	2 - on communication ports	
Enclosure type rating	None (open-style)	
North American temperature code	T4	
IEC temperature code	T4	

(1) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 11 - Environmental Specifications - 1788-FBJB4R, 1788-FBJB6

Attribute	1788-FBJB4R, 1788-FBJB6
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)	0...60 °C (32...140 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Vibration IEC 60068-2-6 (Test Fc, Operating)	0.5 g @ 10...500 Hz
Emissions CISPR 11 (IEC 61000-6-4)	Class A
ESD immunity IEC 61000-4-2	6 kV contact discharge 8 kV air discharge
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz
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 3V/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 communication ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication ports

Table 12 - Certifications - 1788-FBJB4R, 1788-FBJB6

Certification (when product is marked)(1)	1788-FBJB4R, 1788-FBJB6
cURus	UL Recognized Component Industrial Control Equipment, certified for US and Canada. See UL File E320594. UL Recognized Component Industrial Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for US and Canada. See UL File E320595.
CE	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 and B)
RCM	Australian Radiocommunications Act, compliant with: • EN 61000-6-4; 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 Gc X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: • Article 58-2 of Radio Waves Act, Clause 3

(1) See the Product Certification link at rok.auto/certifications for declarations of conformity, certificates, and other certification details.

Legacy Linking Devices to PROFIBUS PA Networks

The legacy 1788-EN2PAR linking device provides a gateway between EtherNet/IP and PROFIBUS PA networks.

The legacy 1788-CN2PAR linking device provides a gateway between ControlNet and PROFIBUS PA networks.

The 1788-EN2PAR and 788-CN2PAR linking devices are End of Life as of November 1, 2021. As a replacement, use the PROFIBUS PA A-PAL/B module available from Aparian. For more information, see https://www.aparian.com/products/palinkb#downloads.

Table 13 - Technical Specifications - Legacy 1788-EN2PAR, 1788-CN2PAR

Attribute	Legacy 1788-EN2PAR, 1788-CN2PAR
Power requirements	Input: 24...32V DC, 0.75 A, Class 2/SELV PA: 0.5 A @ 24V DC single trunk; 0.4 A @ 24V DC dual trunk Power is connected to the linking device by using the 4-way Phoenix connector.
Power consumption	260 mA at 24V (with no field devices attached)
Power dissipation	12.24 W at 24V DC
Isolation voltage	30V (continuous), basic insulation type, network channels to power, and network channels to network channels. No isolation between redundant network channels. Type tested at 500V DC for 60 s.
Ethernet conductors	CAT5 STP/UTP
Terminal torque	DC Power connections: 0.22...0.25 N•m (2...2.2 lb•in) PROFIBUS PA connections: 0.5...0.6 N•m (4.4...5.3 lb•in)
Wire size	DC power and PROFIBUS PA connections: 0.205...0.823 mm^2 (24...18 AWG) solid or stranded copper wire rated at 82 °C (180 °F) or greater 1.2 mm (3/64 in.) insulation max
Wiring category(1)	1 - on power ports 2 - on ControlNet, Ethernet, and Foundation Fieldbus ports
Enclosure type rating	None (open-style)
North American temperature code	T4
IEC temperature code	T4

(1) Use this Conductor Category information for planning conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 14 - Environmental Specifications - 1788-EN2PAR, 1788-CN2PAR

Attribute	1788-EN2PAR, 1788-CN2PAR
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)	0...60 °C (32...140 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Vibration IEC 60068-2-6 (Test Fc, Operating)	0.5 g @ 10...500 Hz
Emissions CISPR 11 (IEC 61000-6-4)	Class A
ESD immunity IEC 61000-4-2	6 kV contact discharge 8 kV air discharge
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz
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 3V/m with 1 kHz sine wave 80% AM from 2000...2700 MHz
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on power ports ±3 kV at 5 kHz on Ethernet and FF ports
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±1 KV line-earth (CM) on ControlNet ports ±2 kV line-earth (CM) on Ethernet and FF ports

Table 15 - Certifications - 1788-EN2PAR, 1788-CN2PAR

Certification (when product is marked)(1)	1788-EN2PAR, 1788-CN2PAR
cULus	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E320594. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E320595.
CE	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 and B)
RCM	Australian Radiocommunications Act, compliant with: • EN 61000-6-4; 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 Gc X
KC	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

(1) See the Product Certification link at rok.auto/certifications for declarations of conformity, certificates, and other certification details.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
EtherNet/IP to DeviceNet Linking Device User Manual, publication 1788-UM059	Provides information on installing and using the 1788-EN2DNR linking device.
ControlNet-to-DeviceNet Linking Device Installation Instructions, publication 1788-IN052	Provides information on installing and using the 1788-CN2DN linking device.
EtherNet/IP and ControlNet to FOUNDATION Fieldbus Linking Devices User Manual, publication 1788-UM057	Provides information on the installation and operation of the 1788-EN2FFR and 1788-CN2FFR linking devices.
EtherNet/IP and ControlNet to PROFIBUS PA Linking Device User Manual, publication 1788-UM058	Provides information on the installation and operation of the 1788-EN2PAR and 1788-CN2PAR linking devices.
EtherNet/IP Network Devices User Manual, ENET-UM006	Describes how to configure and use EtherNet/IP devices to communicate on the EtherNet/IP network.
Ethernet Reference Manual, ENET-RM002	Describes basic Ethernet concepts, infrastructure components, and infrastructure features.
System Security Design Guidelines Reference Manual, SECURE-RM001	Provides guidance on how to conduct security assessments, implement Rockwell Automation products in a secure system, harden the control system, manage user access, and dispose of equipment.
UL Standards Listing for Industrial Control Products, publication CMPNTS-SR002	Assists original equipment manufacturers (OEMs) with construction of panels, to help ensure that they conform to the requirements of Underwriters Laboratories.
American Standards, Configurations, and Ratings: Introduction to Motor Circuit Design, publication IC-AT001	Provides an overview of American motor circuit design based on methods that are outlined in the NEC.
Industrial Components Preventive Maintenance, Enclosures, and Contact Ratings Specifications, publication IC-TD002	Provides a quick reference tool for Allen-Bradley industrial automation controls and assemblies.
Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Control, publication SGI-1.1	Designed to harmonize with NEMA Standards Publication No. ICS 1.1-1987 and provides general guidelines for the application, installation, and maintenance of solid-state control in the form of individual devices or packaged assemblies incorporating solid-state components.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications.	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at rok.auto/literature.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	rok.auto/pcdc

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Rockwell Automation maintains current product environmental compliance information on its website at rok.auto/pec.

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