



FLEXHA 5000 I/O System Specifications

Catalog Numbers

Universal I/O Module	5015-U8IHFTXT
EtherNet/IP Adapter	5015-AENFTXT
Power Conditioner	5015-PB100FTXT
Adapter Base	5015-A2AXT
I/O Base	5015-A4IOXT
Media Landing Card	5015-MLTRXT
Backplane Interface Module	5015-BIMXT
Bank Expansion Bases	5015-BEBLXT, 5015-BEBRXT
Backplane Communication Extension Cable	5015-BECCOMXT
Backplane Power Extension Cable	5015-BECPWRXT
Fillers	5015-N2IOXT, 5015-N2SAXT, 5015-N2RTBXT
Back Plate Grounding Lug	5015-BPGNDXT
Mounting Plates	5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT
Removable Terminal Blocks	5015-RTBPWPXT, 5015-RTBPXT, 5015-RTBRPXT, 5015-RTBSAJXT, 5015-STBPXT
End Cap	5015-ECRXT

Topic	Page
Summary of Changes	2
I/O Modules	3
EtherNet/IP Adapters	17
Media Landing Cards	20
Power Conditioner	23
Accessories	27
Additional Resources	67

System Overview

A FLEXHA 5000™ I/O system is a fault-tolerant I/O system. An EtherNet/IP™ adapter pair and I/O modules in a Duplex configuration provide High Availability (HA) for communications and I/O portions of the system. A Simplex configuration of the I/O modules, where only one module obtains the field signal, maintains HA for the communications but does not provide HA in the I/O signal.

The HA concept uses device and network duplication to establish redundancy in the system and maintain control if an HA device faults. A faulted redundant system component can be serviced while the control application continues to operate.

Summary of Changes

This publication contains the following new or updated information.

Topic	Pages
Added a reference to the system user manual for more information on using line-load resistors to the Digital Inputs 2-wire Devices wiring diagram	7
Added a footnote to the Isolation Voltage specification for all catalog numbers that list the specification. The products were tested to voltage according to IEC/UL 61010-1.	Throughout
Corrected the current range for the Resolution specification when using a channel on the 5015-U8IHFTXT module in analog input mode. The correct range is 0...25 mA.	12

I/O Modules

5015-U8IHFTXT

The FLEXHA 5000 8-channel Universal I/O module is a fault-tolerant I/O module with eight isolated channels that can individually be configured to function as digital inputs, digital outputs, analog inputs, or analog outputs. For channels that are configured as analog input or analog output, HART functionality is also available. The I/O modules reside on an I/O base, catalog number 5015-A4IOXT.

Wiring Diagrams

This section provides the following example diagrams:

- [Analog Input Wiring Diagrams](#)
- [Analog Output Wiring Diagrams](#)
- [Digital Input Wiring Diagrams](#)
- [Digital Output Wiring Diagrams](#)

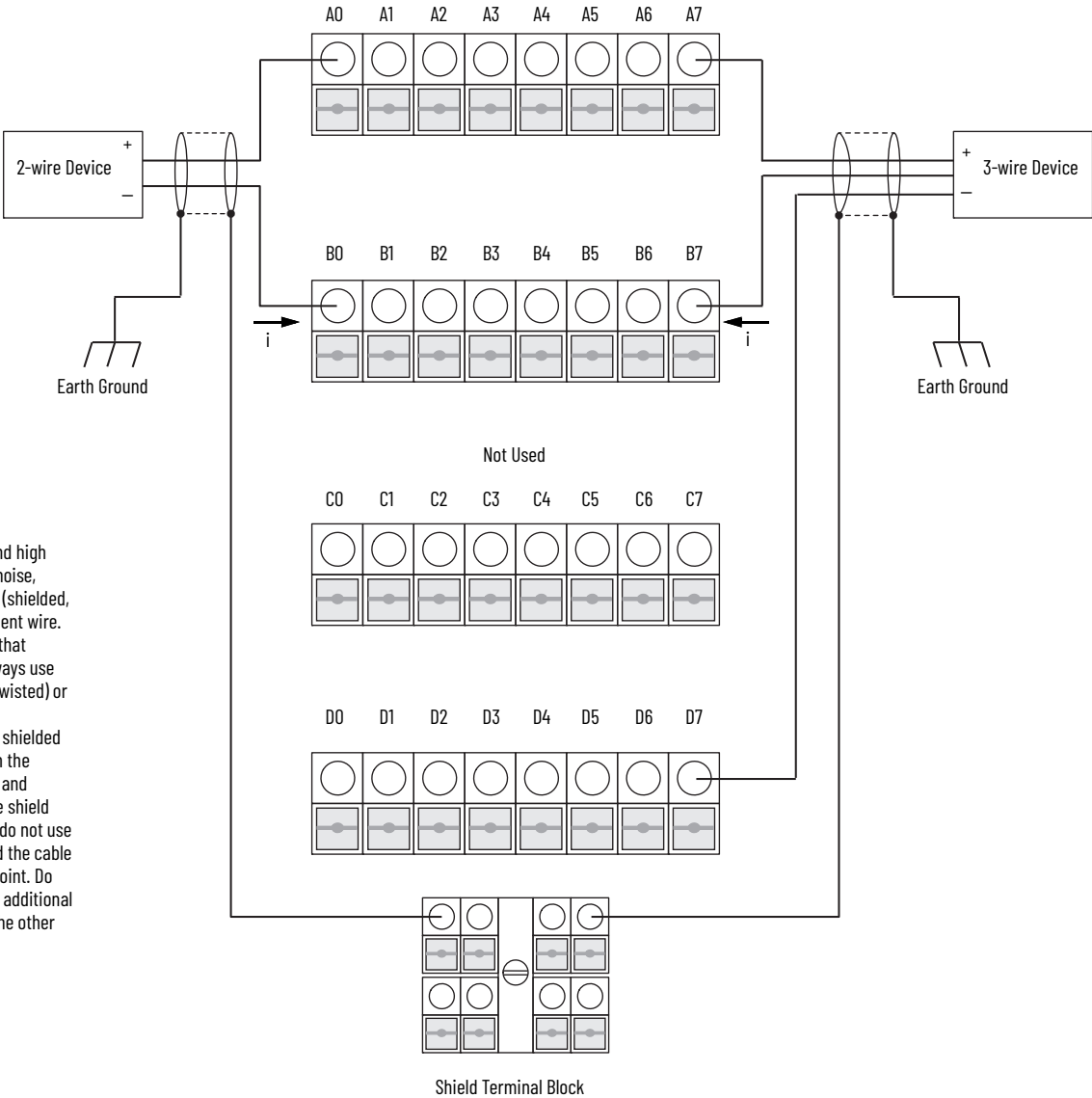
IMPORTANT

- Rows A...D are part of the I/O RTB. The STB, catalog number 5015-STBPXT, at the bottom of each diagram is the shield terminal block that is installed on the mounting plate chase below the I/O modules.
- You must use shielded wire with the I/O module.
- The FLEXHA 5000 I/O system uses shielding constructs identical to EtherNet/IP systems, for example, as used with DLR ports. The STB has eight individually isolated resistor-capacitor (RC) terminations that provide EMI noise mitigation. The STB introduces an embedded RC filter that improves shielding performance through termination at multiple points without introducing the risk of ground loops. The RC terminations **don't** earth the shield and you **can't** use them to claim conformance to any safety agencies.

For some installations, for example, Ex installations, more restrictive grounding can be required and the cable shields can be connected directly to the mounting plate screw chase. To connect the shields directly to the mounting screw chase, use an ST 4.8 screw and an appropriately sized wire crimp eyelet.

We recommend that all shielded cables be connected on the module side to the STB and connect the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at one point. Do not use the STB without additional ground termination at the other end.

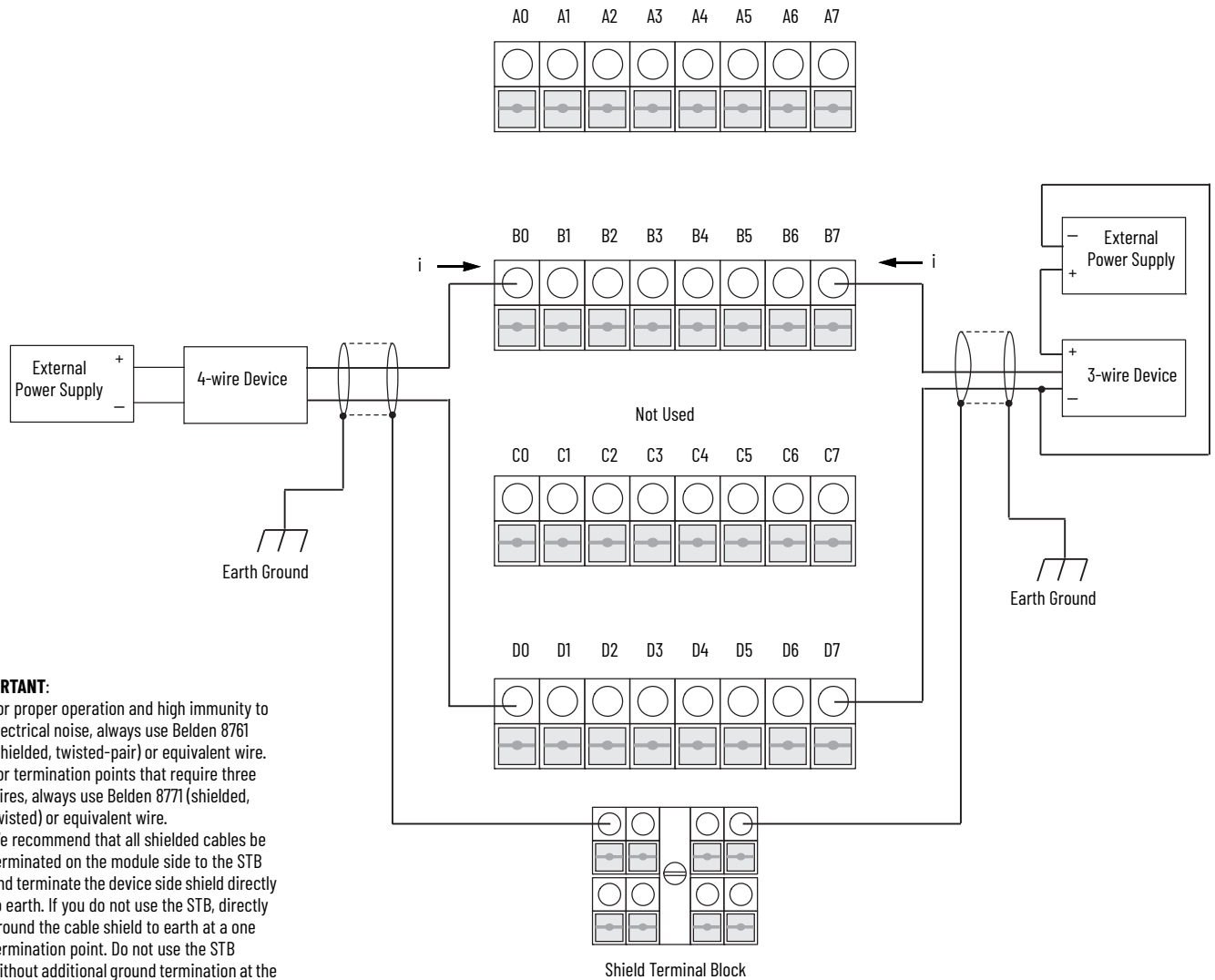
Figure 1 - Analog Inputs 2-wire and 3-wire Current Mode with Internal Loop Power



- IMPORTANT:**
- For proper operation and high immunity to electrical noise, always use Belden 8761 (shielded, twisted-pair) or equivalent wire. For termination points that require three wires, always use Belden 8771 (shielded, twisted) or equivalent wire.
 - We recommend that all shielded cables be connected on the module side to the STB and connect the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at one point. Do not use the STB without additional ground connection at the other end.

Figure 2 - Analog Inputs 3-wire and 4-wire Current Mode with External Power Loop

In this example, an external power supply provides power to the transmitter. You can also source power for the transmitter from the FLEXHA 5000 I/O system as described in [Figure 1](#).

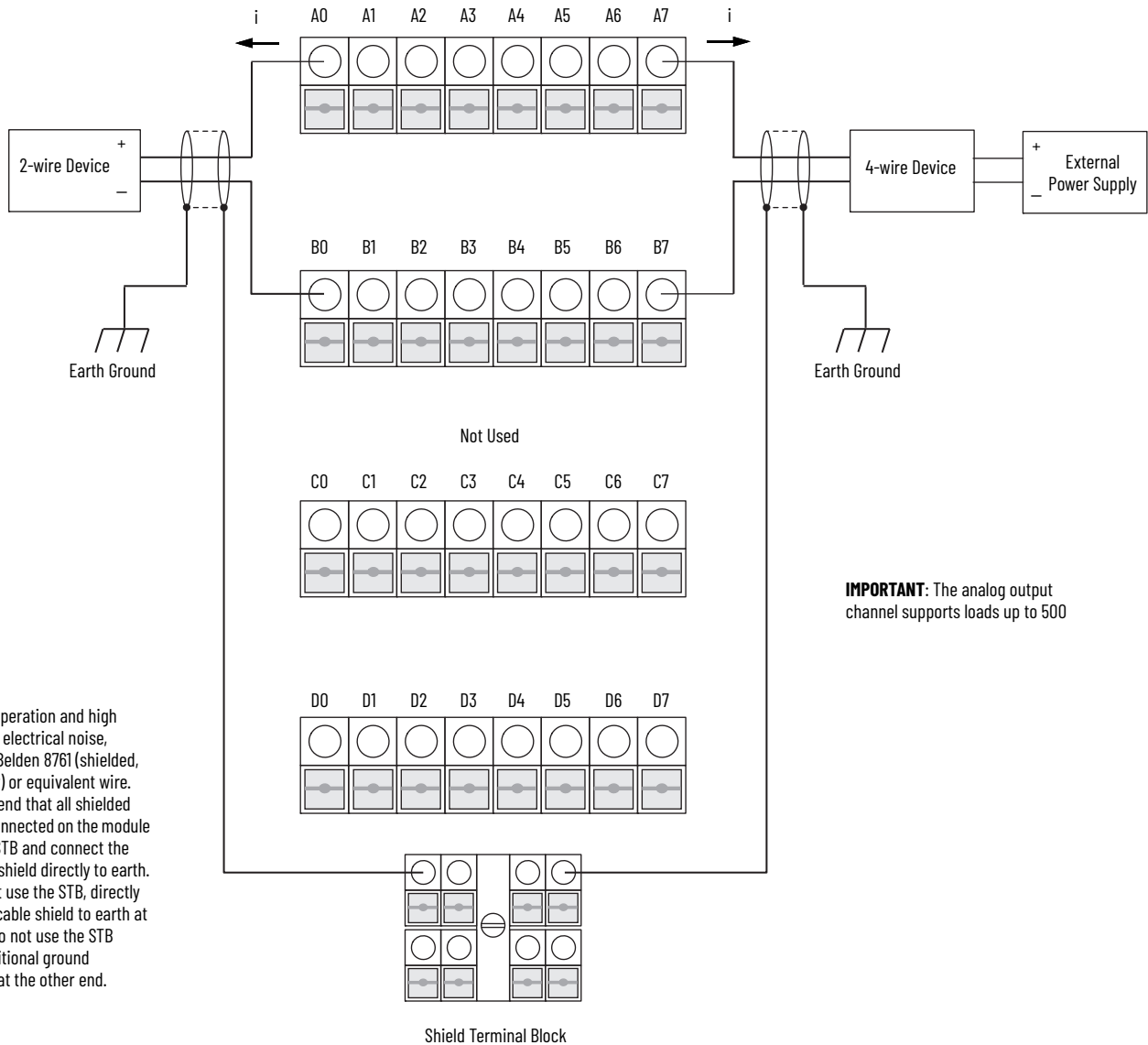


IMPORTANT:

- For proper operation and high immunity to electrical noise, always use Belden 8761 (shielded, twisted-pair) or equivalent wire. For termination points that require three wires, always use Belden 8771 (shielded, twisted) or equivalent wire.
- We recommend that all shielded cables be terminated on the module side to the STB and terminate the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at a one termination point. Do not use the STB without additional ground termination at the other end.

Analog Output Wiring Diagrams

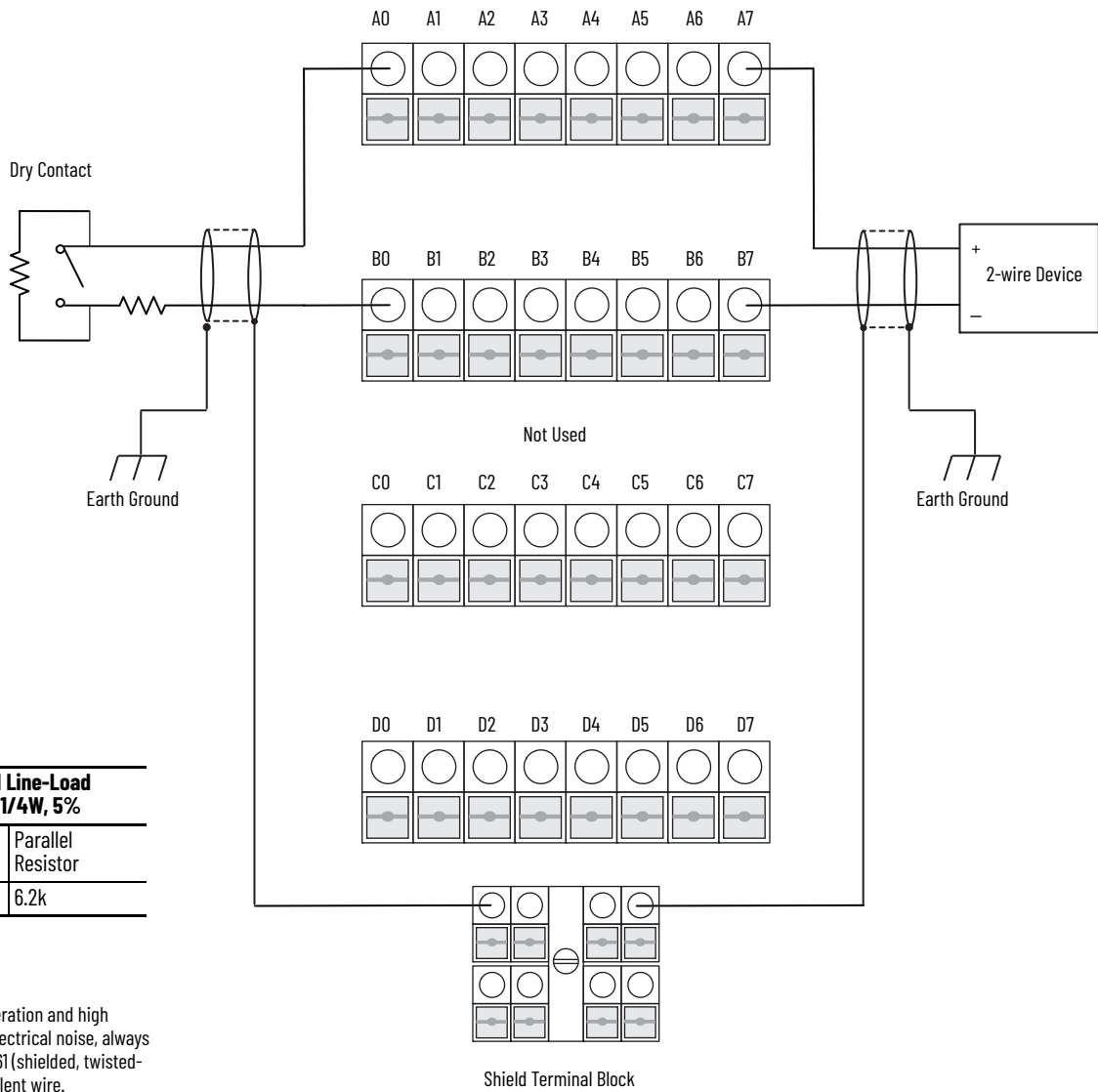
Figure 3 - Analog Outputs 2-wire and 4-wire Load



IMPORTANT: The analog output channel supports loads up to 500

- IMPORTANT:**
- For proper operation and high immunity to electrical noise, always use Belden 8761 (shielded, twisted-pair) or equivalent wire.
 - We recommend that all shielded cables be connected on the module side to the STB and connect the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at one point. Do not use the STB without additional ground connection at the other end.

Figure 4 - Digital Inputs 2-wire Devices



Recommended Line-Load Resistors Size 1/4W, 5%	
Series Resistor	Parallel Resistor
1.5k	6.2k

IMPORTANT:

- For proper operation and high immunity to electrical noise, always use Belden 8761 (shielded, twisted-pair) or equivalent wire.
- We recommend that all shielded cables be connected on the module side to the STB and connect the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at one point. Do not use the STB without additional ground connection at the other end.
- For more information on using line-load resistors in your application, see the FLEXHA 5000 I/O System User Manual, publication [5015-UM001](#).

Figure 5 - Digital Outputs 2-wire Devices

IMPORTANT:

- When the module is configured for digital output mode in a Duplex Pair, the minimum load current that is required is 20 mA.
- For proper operation and high immunity to electrical noise, always use Belden 8761 (shielded, twisted-pair) or equivalent wire.
- We recommend that all shielded cables be connected on the module side to the STB and connect the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at one point. Do not use the STB without additional ground termination at the other end.
- The 5015-U8IHFTXT module has built-in surge suppression to reduce the effects of high-voltage transients. However, this suppression device is not designed to tolerate the effects of voltage transients that interrupting current to an inductive device causes. You need an additional, external suppression device if an output controls inductive devices, such as relays, motor starters, solenoids, or motors. Add the suppression device directly across the coil of an inductive device. Pilot Duty certification testing was performed with Rockwell Automation catalog number 1492-J3DF.

IMPORTANT: System certification is the customer's responsibility.

The 5015-U8IHFTXT channels can tolerate 32V on the channel terminals without damage. Make sure that terminal voltage never exceeds these levels, including during operation or any failure of the field device.

- Additional suppression is especially important if your inductive device is in series with or parallel to hard contacts, such as push buttons or selector switches. Add a suppression device directly across the coil of an inductive device. The suppression device reduces the effects of voltage transients that are caused by interrupting the current to that device and to prolong the life of the switch contacts.

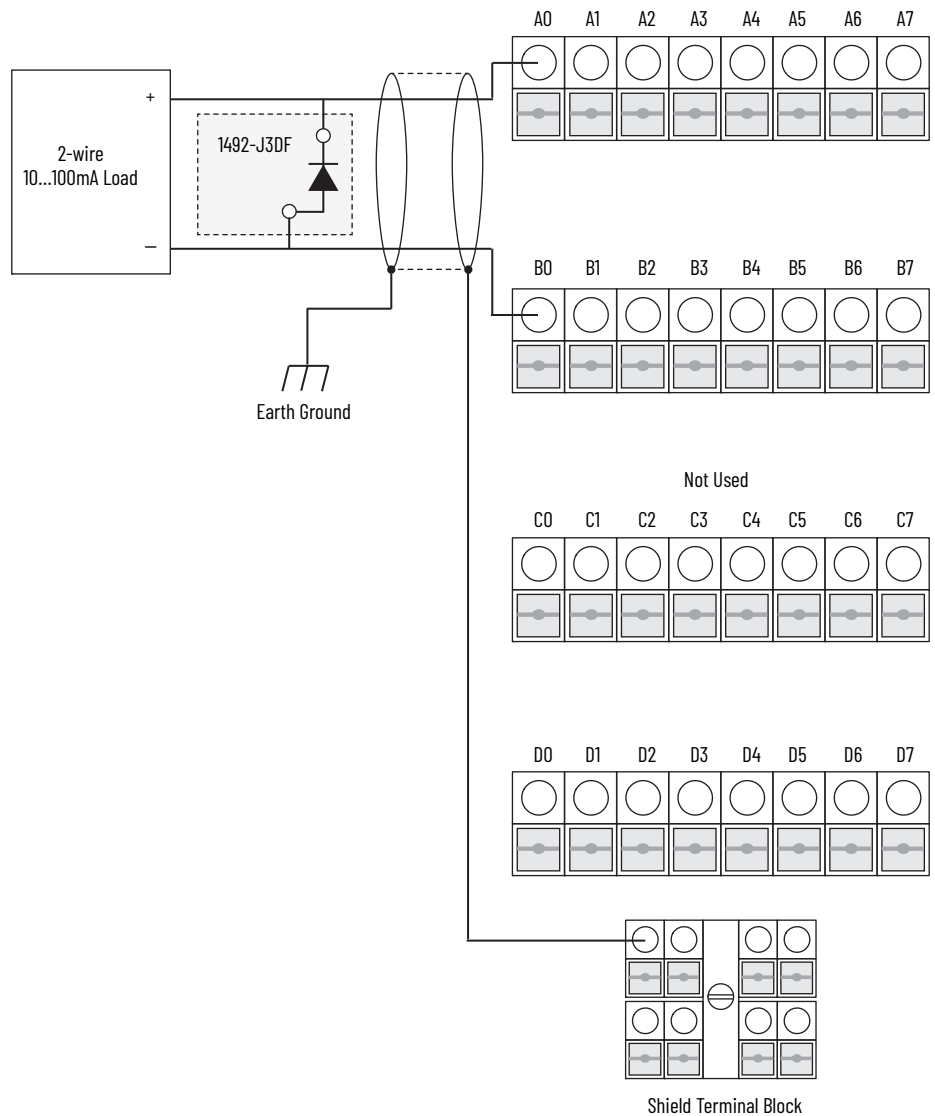
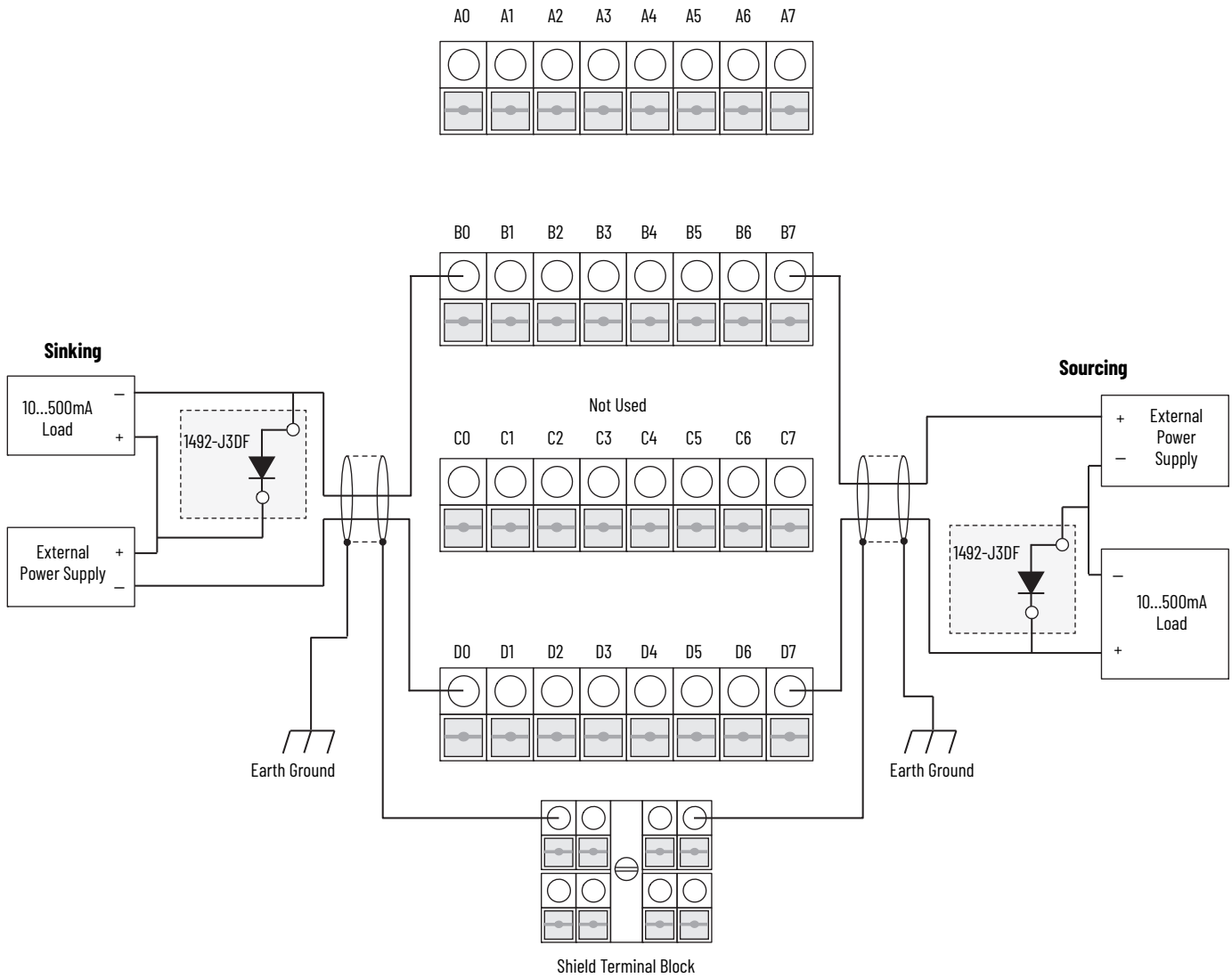


Figure 6 - Digital Outputs - External Power Source Mode



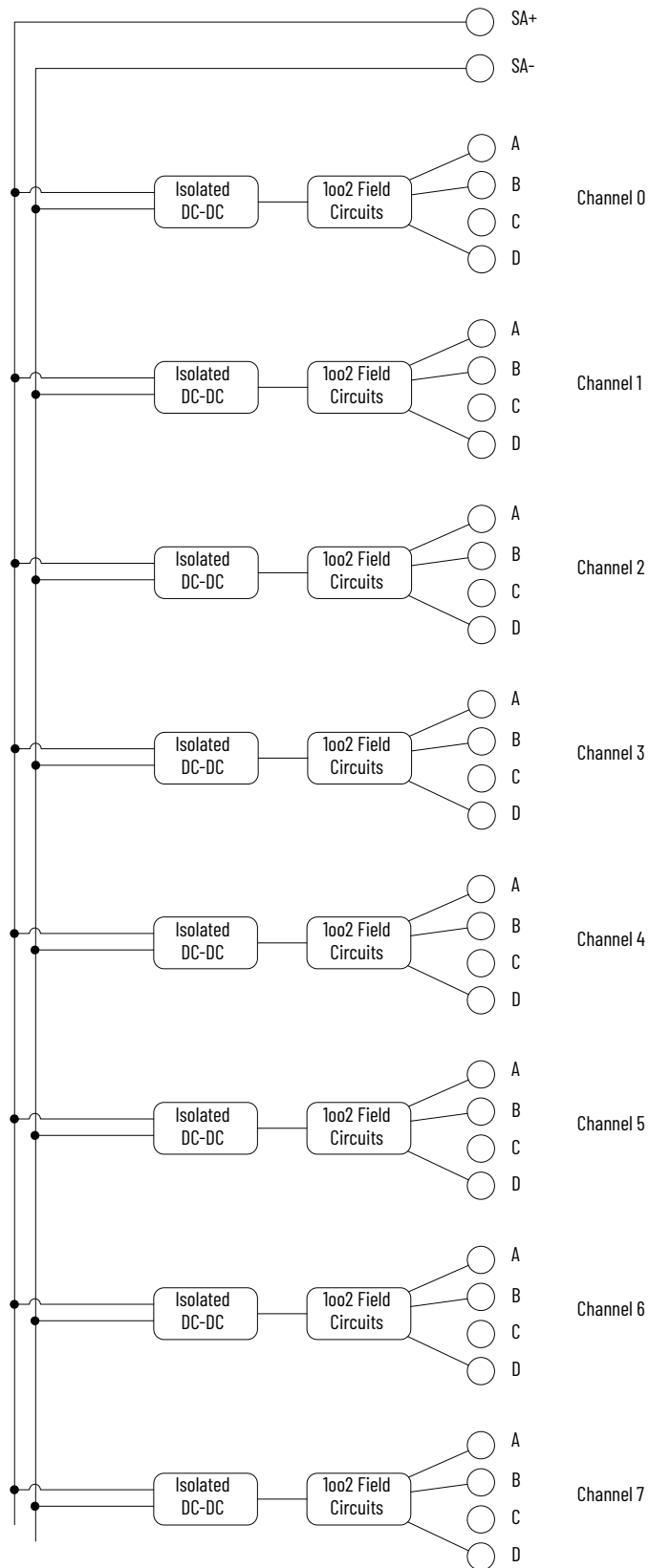
IMPORTANT:

- When the module is configured for digital output mode in a Duplex Pair, the minimum load current that is required is 20 mA.
- For proper operation and high immunity to electrical noise, always use Belden 8761 (shielded, twisted-pair) or equivalent wire.
- For termination points that require three wires, always use Belden 8771 (shielded, twisted) or equivalent wire.
- We recommend that all shielded cables be connected on the module side to the STB and connect the device side shield directly to earth. If you do not use the STB, directly ground the cable shield to earth at one point. Do not use the STB without additional ground termination at the other end.
- The 5015-U8IHFTXT module has built-in surge suppression to reduce the effects of high-voltage transients. However, this suppression device is not designed to tolerate the effects of voltage transients that interrupting current to an inductive device causes. You need an additional, external suppression device if an output controls inductive devices, such as relays, motor starters, solenoids, or motors. Add the suppression device directly across the coil of an inductive device. Pilot Duty certification testing was performed with Rockwell Automation catalog number 1492-J3DF. **IMPORTANT:** System certification is the customer's responsibility. The 5015-U8IHFTXT channels can tolerate 32V on the channel terminals without damage. Make sure that terminal voltage never exceeds these levels, including during operation or any failure of the field device.
- Additional suppression is especially important if your inductive device is in series with or parallel to hard contacts, such as push buttons or selector switches. Add a suppression device directly across the coil of an inductive device. The suppression device reduces the effects of voltage transients that are caused by interrupting the current to that device and to prolong the life of the switch contacts.

Functional Block Diagram

The following figure shows the 5015-U8IHFTXT universal I/O module functional block diagram.

5015-U8IHFTXT Functional Block Diagram



[Table 1](#) provide specifications that apply to the Universal I/O module regardless what mode it is configured for.

Table 1 - General Specifications - 5015-U8IHFTXT

Attribute	5015-U8IHFTXT
Voltage and current ratings	
Backplane power (BP)	76.6 mA @ 15V DC
Sensor actuator power (SA)	1.5 A @ 24V DC
Analog Input (AI), HART (SINK/SOURCE) channel type	4...20 mA/50 mA max
Analog Output (AO), HART (SINK/SOURCE) channel type	4...20 mA/25 mA max
Digital Input (DI), (SINK/SOURCE) channel type	24V DC, 2.5 mA/30 mA
Digital Output (DO), (SINK/SOURCE) channel type	24V DC, 0.5 A/100 mA
Digital Output (DO) Pilot Duty (SINK/SOURCE)	24V DC, 1 A/200 mA
Surge current on SA power	2 A max for 100 ms, repeatable every 2 seconds ⁽¹⁾
Power dissipation, max	7.5 W
Thermal dissipation, max	25.59 BTU/hr
Overvoltage protection, max	+/- 32V DC IMPORTANT: If negative voltage is connected to the I/O module channel and the channel is operating, damage can occur.
Over temperature detection	Yes
Isolation voltage	250V (continuous), Basic Insulation Type ⁽²⁾ , isolation Channel to Channel 250V (continuous), Basic Insulation Type ⁽²⁾ , isolation Backplane to Field
Supported mounting orientation	Horizontal and vertical
Module keying	Mechanical
Wire size	Any of the following: <ul style="list-style-type: none"> • 0.34...4 mm² (22...12 AWG) solid copper wire, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max • 0.14...2.5 mm² (26...14 AWG) stranded copper wire, with ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max^{(3), (4)} • 0.34...2.5 mm² (22...14 AWG) stranded copper wire, without ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max⁽⁵⁾
Insulation-stripping length	8...10 mm (0.31...0.39 in.)
Wiring category (RTBs on I/O base) ⁽⁶⁾	2 - signal ports (USB) (Via RTB on I/O base)
Dimensions	140 x 38 x 118 mm (5.51 x 1.50 x 4.65 in.) D x W x H ⁽⁷⁾
RTBs	<ul style="list-style-type: none"> • 5015-RTBPXT (Push-in Simplex)⁽⁸⁾ • 5015-RTBRPXT (Push-in Duplex)⁽⁹⁾
Weight, approx.	245 g (0.54 lb)
Enclosure type	None (open-style)
Temp code	T4

(1) This can limit the number of channels that can see a simultaneous surge. You must keep the inrush/surge below this level to avoid possible I/O module damage.

(2) Tested to Voltage according to IEC/UL 61010-1.

(3) Ferrule according to DIN 46 228/1.

(4) You can use ferrules with or without plastic sleeves.

(5) Requires that you push in the release actuator to insert the wire.

(6) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(7) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

(8) For more information on this RTB, see [page 38](#).

(9) For more information on this RTB, see [page 40](#).

[Table 2](#) provides specifications that apply when channels on the Universal I/O module are used as analog inputs.

Table 2 - Technical Specifications - 5015-U8IHFTXT - Analog Inputs

Attribute	5015-U8IHFTXT
Channels	Eight individually isolated HART (Sinking and sourcing)
Input impedance	
Simplex mode	Non-HART: <ul style="list-style-type: none"> • 50 Ω, min • 55 Ω, nom HART: <ul style="list-style-type: none"> • 230 Ω, min • 275 Ω, nom
Duplex mode	Non-HART: <ul style="list-style-type: none"> • 25 Ω, min • 28 Ω, nom HART: <ul style="list-style-type: none"> • 230 Ω, min • 275 Ω, nom
Requested packet interval (RPI), min	Simplex mode: 10 ms Duplex mode: 20 ms
CIP Sync™	Yes
HART handheld compliance	Yes
HART scan time	Typically 1 s Additional device variables, configured commands, pass through messages, handheld communicators, secondary masters, communication errors, or configuration changes can significantly increase the update time.
Onboard data alarming	Yes
Scaling to engineering units	Yes
Data format	IEEE 754, 32-bit floating point
Step response time	Filter selection and filter time dependent: ⁽¹⁾ <ul style="list-style-type: none"> • 10 Hz: 425 ms + (2 x RPI) • 20 Hz: 245 ms + (2 x RPI) • 50 Hz: 125 ms + (2 x RPI)
Overcurrent protection	25 mA
Accuracy	0.15% of range @ 25 °C (77 °F) 0.3% of range over temperature
Data value during overrange condition	Full-scale, overrange flag, Data fault
Data value during underrange condition	Low-scale, underrange flag, Data fault
Filtering	One of the following (user-configured): <ul style="list-style-type: none"> • 10 Hz • 20 Hz • 50 Hz
Scan time per channel	Once per RPI (new data)
Real-time channel sampling	Yes 16-bit rolling time (ms)
Time stamp of inputs	Yes, rolling time stamp per channel
Sourcing voltage	18...32V DC
Channel bandwidth	Dependent on filter selection
Resolution	15.2-bit ADC effective resolution 0...25 mA
Common mode noise rejection	75 dB @ 50/60 Hz, filter dependent
Normal mode noise rejection	70 dB @ 50/60 Hz, filter dependent

(1) These values represent the 63% settled value. For more information, see the FLEXHA 5000 I/O System User Manual, publication [5015-UM001](#).

[Table 3](#) provides specifications that apply when channels on the Universal I/O module are used as analog outputs.

Table 3 - Technical Specifications - 5015-U8IHFTXT - Analog Outputs

Attribute	5015-U8IHFTXT
Channels	Eight individually isolated HART (Sinking and sourcing)
Requested packet interval (RPI), min	Simplex mode - 10 ms Duplex mode - 20 ms
CIP Sync	Yes
HART handheld compliance	Yes
HART scan time	Typically 1 s Additional device variables, configured commands, pass through messages, handheld communicators, secondary masters, communication errors, or configuration changes can significantly increase the update time.
Onboard data alarming	Yes
Scaling to engineering units	Yes
Data format	IEEE 754, 32-bit floating point
Resolution	16 bit 0...25 mA: 0.381 μ A/bit
Step response time	63% of desired output within 1 ms (HART disabled)
Drive capability	500 Ω , max
Accuracy	0.1% of range @ 25 $^{\circ}$ C (77 $^{\circ}$ F) 0.4% of range over temperature
Readback accuracy at 25 $^{\circ}$ C (77 $^{\circ}$ F)	1% full-scale
Repeatability	0.05% of range
Output control in communication fault state per point	0 mA
Output states in program mode per point	0 mA
Output states in final fault mode per point	0 mA

[Table 4](#) provides specifications that apply when channels on the Universal I/O module are used as digital inputs.

Table 4 - Technical Specifications - 5015-U8IHFTXT - Digital Inputs

Attribute	5015-U8IHFTXT
Channels	Eight individually isolated Sourcing digital input
On-state current	Simplex - Limited to 2.5 mA @ 24V DC Duplex - Limited to 5 mA @ 24V DC
Off/on voltage	User-defined
Requested packet interval (RPI), min	Simplex mode - 10 ms Duplex mode - 20 ms
CIP Sync	Yes
Input delay time	RPI + user-configured filter value
Time stamp of inputs	No

[Table 5](#) provides specifications that apply when channels on the Universal I/O module are used as digital outputs.

Table 5 - Technical Specifications - 5015-U8IHFTXT - Digital Outputs

Attribute	5015-U8IHFTXT
Channels	Eight individually isolated Sourcing and sinking 200% inrush capable
Requested packet interval (RPI), min	Simplex mode - 10 ms Duplex mode - 20 ms
CIP Sync	Yes
Off-state voltage, max	5V DC
On-state voltage, nom	24V DC (sinking and sourcing)
On-state current, min	Simplex: 10 mA Duplex: 20 mA
On-state current, max	Simplex mode <ul style="list-style-type: none"> • 10...100 mA per channel with internal power (sourcing) • 10...500 mA per channel with external power (sinking and sourcing) Duplex mode <ul style="list-style-type: none"> • 20...100 mA per channel with internal power (sourcing) • 20...500 mA per channel with external power (sinking and sourcing)
Off-state leakage current per point, max	0.5 mA per point
External power supply, power rating	24V DC, nom 20.8...28.8V DC, full range
Surge current per point	120% for 10 ms, repeatable every 2 seconds. 120 mA with internal power (sourcing), 600 mA with external power (sinking and sourcing)
Inductive load, max	2.2 mH An external kickback diode is required. For more information, see Figure 5 and Figure 6 .
Pilot duty	
External power (sinking and sourcing)	24V DC, 1 A
Internal power (sourcing)	24V DC, 200 mA
Output delay time, max	
Time: Off to On	Simplex: 12.2 ms + RPI Duplex: 22.2 ms + RPI
Time: On to Off	Simplex - 10.1 ms + RPI Duplex - 20.1 ms + RPI
Output control in network (connection timeout) fault state per point	Off
Output states in program mode per point	Off
Duration of fault mode per point Go to another defined state after duration has expired	Off
Scheduled outputs	No

Table 6 - Environmental Specifications - 5015-U8IHFTX

Attribute	5015-U8IHFTX
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-30 °C ≤ Ta ≤ +70 °C (-22 °F ≤ Ta ≤ +158 °F) - If the I/O module is installed in an I/O base that is mounted horizontally. -30 °C ≤ Ta ≤ +60 °C (-22 °F ≤ Ta ≤ +140 °F) - If the I/O module is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the I/O module is installed in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the I/O module is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6 According to test of Level 3 when Short Circuit Rising and Falling Thresholds are set to 22.5V. For more information, see the FLEXHA 5000 I/O System User Manual, publication 5015-UM001 .	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 7 - Certifications - 5015-U8IHFTXT

Attribute	5015-U8IHFTXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products CCC 2023122309116323, 2023122309116325
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

EtherNet/IP Adapters

5015-AENFTXT

Redundant EtherNet/IP adapters are used in a FLEXHA 5000 I/O system. Each adapter facilitates communication between the FLEXHA 5000 I/O system and other devices, such as, ControlLogix® 1756-EN4TR communication modules, across an EtherNet/IP network. The EtherNet/IP adapters reside in the adapter base.

Table 8 - General Specifications - 5015-AENFTXT

Attribute	5015-AENFTXT
Backplane power (BP)	550 mA @ 15V DC IMPORTANT: This value represents the total backplane power for the FLEXHA 5000 EtherNet/IP adapter and FLEXHA 5000 media landing card.
Power dissipation, max	8.25 W
Thermal dissipation, max	28.15 BTU/hr
EtherNet/IP communication rate	10 Mbps 100 Mbps 1 Gbps
USB port	One 2.0 port with Type B connector (Behind the door)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽¹⁾ , isolation USB to backplane
Keying	Mechanical
Wiring category ⁽²⁾	2 - signal ports (USB)
Dimensions	127 x 50 x 118 mm (5.00 x 2.00 x 4.65) D x W x H ⁽³⁾
Weight, approx.	418 g (0.92 lb)
Temp code	T4

(1) Tested to Voltage according to IEC/UL 61010-1.

(2) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(3) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 9 - Environmental Specifications - 5015-AENFTXT

Attribute	5015-AENFTXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F)
Temperature, surrounding air, max	70 °C (158 °F)
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases

Table 10 - Certifications - 5015-AENFTXT

Attribute	5015-AENFTXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: UK, European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
EtherNet/IP	ODVA conformance tested to EtherNet/IP specifications
CCC	CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products CCC 2023122309116323, 2023122309116325
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Media Landing Cards

5015-MLTRXT

Redundant 5015-MLTRXT media landing cards (MLCs) are used in a FLEXHA 5000 I/O system--one for each EtherNet/IP adapter. An MLC connects the EtherNet/IP adapter to up to two Ethernet cables via two Ethernet RJ45 connections. The MLCs reside in the adapter base.

Table 11 - General Specifications - 5015-MLTRXT

Attribute	5015-MLTRXT
Backplane power (BP)	550 mA @ 15V DC IMPORTANT: This value represents the total backplane power for the FLEXHA 5000 media landing card and the FLEXHA 5000 EtherNet/IP adapter, catalog number 5015-AENFTXT.
Isolation voltage	250V (continuous), Basic Insulation Type ⁽¹⁾ , isolation Ethernet ports to backplane 250V (continuous), Basic Insulation Type ⁽¹⁾ , isolation Ethernet port to Ethernet
Wiring category ⁽²⁾	2 - signal ports (Ethernet)
Ethernet ports	Two RJ45 ports
EtherNet/IP communication rate	10 Mbps 100 Mbps 1 Gbps
Keying	None
Dimensions	83 x 37 x 77 mm (3.27 x 1.46 x 3.03 in.) D x W x H ⁽³⁾
Weight, approx.	76 g (0.17 lb)
Temp code	T4

(1) Tested to Voltage according to IEC/UL 61010-1.

(2) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(3) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 12 - Environmental Specifications - 5015-MLTRXT

Attribute	5015-MLTRXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F)
Temperature, surrounding air, max	70 °C (158 °F)
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases

IMPORTANT The MLC is used with the EtherNet/IP adapter. The MLC is tested to the standards listed in [Table 13](#) with the EtherNet/IP adapter. The MLC is not tested alone.

Table 13 - Certifications - 5015-MLTRXT

Attribute	5015-MLTRXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: UK, European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" Ex ec IIC T4 Gc UL 22 ATEX 2745X UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> IEC 60079-0; General Requirements IEC 60079-7; Explosive Atmospheres, Protection "e" EX ec IIC T4 Gc IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
EtherNet/IP	ODVA conformance tested to EtherNet/IP specifications
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Power Conditioner

5015-PB100FTXT

The Power Conditioners monitor power conditions in the system. You can install a 5015-RTBPXT beneath the power conditioner and wire 2-wire dry contact devices to the diagnostic inputs that monitor power conditions. [Figure 7](#) shows 2-wire contacts. Consider the following:

- The maximum wire length from a two-wire device to an RTB terminal is 10 m (32.8 ft).
- Shielded cable is optional. In this example, the devices that are connected to the A and B terminals do not use shielded cable. The devices that are connected to the C and D terminals do use shielded cable.
- If shielded cable is used, you must complete one of the following:
 - Connect the device side of the cable to an earth ground and the module side of the cable to the STB as shown in the Dry contact example.
 - Connect the device side of the cable to an earth ground and do not connect the module side of the cable to anything as shown in the Switch example.

In this case, apply a crimp eyelet to the drain wire to allow connection to the mounting plate with ST4.8 screw that is torqued to 0.7 +/- 0.11 Nm (6 +/- 1 in•lb).

IMPORTANT: You cannot connect both ends of the shielded cable to earth ground.

Figure 7 - 2-wire Devices Connected to a 5015-RTBPXT

You are not required to use resistors with the power conditioner. If you use resistors, we recommend that you use the following.

Recommended Line-Load Resistors Size 1/4W, 5%	
Series Resistor	Parallel Resistor
1.5k	6.2k

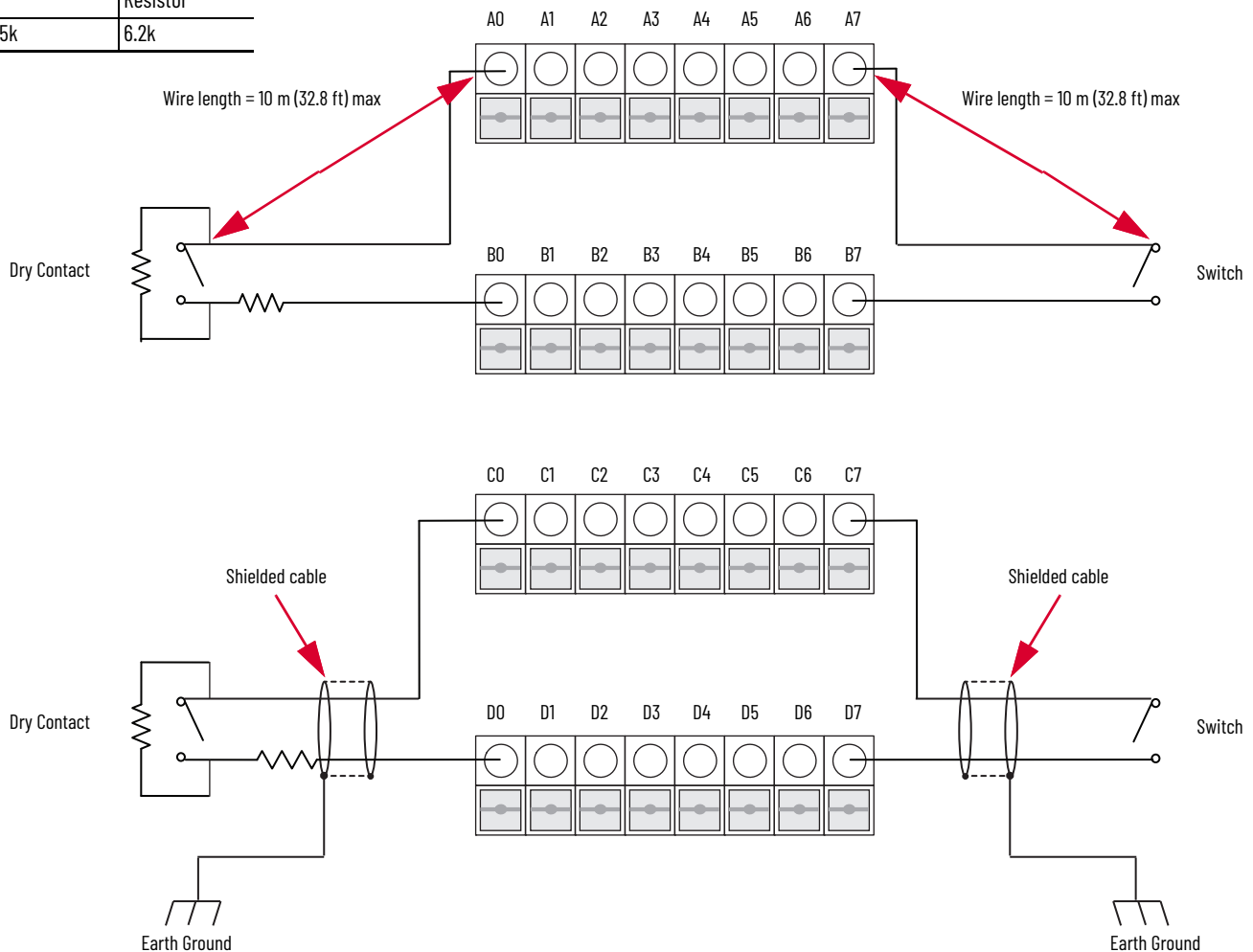


Table 14 - General Specifications - 5015-PB100FTXT

Attribute	5015-PB100FTXT
Voltage and current ratings	
Input: Module power (MP)	24V DC, 120 W max
Output: Backplane power (BP)	6.6 A @ 15V DC 100 W max
Isolation voltage	250V (continuous), Basic Insulation Type ⁽¹⁾ , isolation Module power to backplane 250V (continuous), Basic Insulation Type ⁽¹⁾ , isolation Diagnostic I/O to backplane
Keying	Mechanical
Wire size (5015-RTBPXT RTB)	Any of the following: <ul style="list-style-type: none"> • 0.34...4 mm² (22...12 AWG) solid copper wire, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max • 0.14...2.5 mm² (26...14 AWG) stranded copper wire, with ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max^{(2), (3)} • 0.34...2.5 mm² (22...14 AWG) stranded copper wire, without ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max⁽⁴⁾
Insulation-stripping length	8...10 mm (0.31...0.39 in.)
Wiring category (5015-RTBPXT RTB) ⁽⁵⁾	2 - power ports (via RTBs on I/O base)
RTBs	5015-RTBPWPXT - MOD power ⁽⁶⁾ 5015-RTBPXT - Diagnostic inputs
Dimensions	140 x 38 x 118 mm (5.51 x 1.50 x 4.65 in.) D x W x H ⁽⁷⁾
Weight, approx.	266 g (0.59 lb)
Temp code	T4

(1) Tested to Voltage according to IEC/UL 61010-1.

(2) Ferrule according to DIN 46 228/1.

(3) You can use ferrules with or without plastic sleeves.

(4) Requires that you push in the release actuator to insert the wire.

(5) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(6) Two RTBs are needed—one to connect MOD power A and one to connect MOD power B.

(7) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 15 - Environmental Specifications - 5015-PB100FTXT

Attribute	5015-PB100FTXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F)
Temperature, surrounding air, max	70 °C (158 °F)
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±2 kV at 5 kHz on signal ports
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 16 - Certifications - 5015-PB100FTXT

Attribute	5015-PB100FTXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products CCC 2023122309116323, 2023122309116325
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Accessories

This section describes the accessories that are used in a FLEXHA 5000 I/O system.

IMPORTANT FLEXHA 5000 I/O accessories are tested to the Environmental Specifications and Certification standards that are listed in each section with their parent components. Accessories are not tested individually.
The parent for each accessory is the component (or components) with which it is used. For example, the adapter base is tested with the power conditioners and EtherNet/IP adapters.

Bases

Adapter Base - 5015-A2AXT

The 5015-A2AXT adapter base is used to install the following:

- Power conditioners
- MOD Power and diagnostic RTBs
- EtherNet/IP adapters
- MLCs
- BIMs

IMPORTANT You must install an adapter base in the horizontal orientation.

Table 17 - General Specifications - 5015-A2AXT

Attribute	5015-A2AXT
Input: Module power (MP)	20.8...28.8V DC SELV/PELV 32V DC fault voltage, max 5.8 A DC, max
Output: Backplane power (BP)	15V DC, nom 6.6 A DC, max
Wiring category ⁽¹⁾	2 - signal ports (Diag. In) 2 - power ports (power) (Via RTBs on adapter base)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽²⁾
Temp code	T4
Dimensions	220 x 240 x 56 mm (8.66 x 9.45 x 2.20 in.) D x W x H ⁽³⁾
Weight, approx.	767 g (1.69 lb)

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(2) Tested to Voltage according to IEC/UL 61010-1.

(3) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 18 - Environmental Specifications - 5015-A2AXT

Attribute	5015-A2AXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F)
Temperature, surrounding air, max	70 °C (158 °F)
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases

Table 19 - Certifications - 5015-A2AXT

Attribute	5015-A2AXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEx UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436

Table 19 - Certifications - 5015-A2AXT

Attribute	5015-A2AXT
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 - Electromagnetic Compatibility Regulations 2016 No. 1101 - Electrical Equipment (Safety) Regulations 2016 No. 1107 - Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 - Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

I/O Base - 5015-A4IOXT

The 5015-A4IOXT I/O base is used to install the following (not all are required):

- I/O modules
- BIMs
- SA power RTBs
- SA power jumpers
- Duplex RTBs
- Simplex RTBs
- Slot fillers
- End cap

Table 20 - General Specifications - 5015-A4IOXT

Attribute	5015-A4IOXT
Input/Output: Backplane power (BP)	15V DC, nom 6.6 A DC, max
Input/Output: Sensor actuator power (SA)	20.8V...28.8V DC SELV/PELV 32V DC fault voltage, max 20 A, max/power terminal ⁽¹⁾ 2 A/I/O terminal
Current rating	20 A - Temperature-controlled environment The RTB is derated based on system conditions. For more information, see the FLEXHA 5000 I/O System Installation Instructions, publication 5015-IN001 .
Wiring category ⁽²⁾	2 - signal ports (I/O) (Via RTBs on I/O base)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽³⁾
Dimensions	220 x 198 x 56 mm (8.66 x 7.80 x 2.20 in.) D x W x H ⁽⁴⁾
Weight, approx.	650 g (1.43 lb)

- (1) When used in a temperature-controlled environment. The RTB is derated based on system conditions. For more information, see the FLEXHA 5000 I/O System Installation Instructions, publication [5015-IN001](#).
- (2) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.
- (3) Tested to Voltage according to IEC/UL 61010-1.
- (4) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 21 - Environmental Specifications - 5015-A4IOXT

Attribute	5015-A4IOXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the I/O base is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the I/O base is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the I/O base is mounted horizontally. 60 °C (140 °F) - If the I/O base is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 22 - Certifications - 5015-A4IOXT

Attribute	5015-A4IOXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEx UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Backplane Interface Module

5015-BIMXT

The 5015-BIMXT backplane interface modules (BIMs) facilitate, and participate in, backplane communication and slot addressing. There are two BIMs in every base.

Table 23 - General Specifications - 5015-BIMXT

Attribute	5015-BIMXT
Backplane power (BP)	134 mA @ 15V DC
Power dissipation, max	2 W
Thermal dissipation, max	6.82 BTU/hr
Keying	Mechanical
Dimensions	14 x 45 x 84 mm (0.55 x 1.77 x 3.31 in.) D x W x H
Weight, approx.	41 g (0.09 lb)
Temp code	T4

Table 24 - Environmental Specifications - 5015-BIMXT

Attribute	5015-BIMXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the BIM is installed in an adapter base or I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the BIM is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the BIM is installed in an adapter base or it is in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the BIM is installed in an I/O base that is mounted horizontally.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz 20V/m with 1 kHz sine-wave from 80 MHz to 1 GHz)
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 25 - Certifications - 5015-BIMXT

Attribute	5015-BIMXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Removable Terminal Blocks

You can use the following RTBs in a FLEXHA 5000 I/O system:

- Removable Terminal Block for MOD Power/SA Power, Push-in (5015-RTBPWPXT)
- Removable Terminal Block, Push-in, Simplex or Diagnostic Input (5015-RTBPXT)
- Removable Terminal Block, Push-in, Duplex (5015-RTBRPXT)
- Shield RTB, Push-in (5015-STBPXT)
- Removable Terminal Block, Jumper for SA Power (5015-RTBSAJXT)

Removable Terminal Block for MOD power/SA power, Push-in - 5015-RTBPWPXT

You use this RTB for the following purposes:

- Connect MOD power to the adapter base
- Connect SA power to an I/O Base

Table 26 - General Specifications - 5015-RTBPWPXT

Attribute	5015-RTBPWPXT
RTB keying	None
Voltage rating	24V DC, nom 20.8...28.8V DC
Current rating	20 A - Temperature-controlled environment The RTB is derated based on system conditions. For more information, see the FLEXHA 5000 I/O System Installation Instructions, publication 5015-IN001 .
Wiring category ⁽¹⁾	2 - power ports (Via RTB on adapter base or I/O base)
Wire size	<ul style="list-style-type: none"> • 4 mm² (12 AWG) solid copper wire, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max • 4 mm² (12 AWG) stranded copper wire, without ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max • 2.5 mm² (14 AWG) stranded copper wire, with ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max^{(2), (3)} • 2.5 mm² (14 AWG) stranded copper wire, without ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max⁽⁴⁾ • 2.5 mm² (14 AWG) solid copper wire, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max
Insulation-stripping length	8...10 mm (0.31...0.39 in.)
Torque (to secure to base)	0.7 Nm (6 in•lb)
Dimensions	63 x 6.6 x 44 mm (2.48 x 0.26 x 1.73 in.) D x W x H ⁽⁵⁾
Weight, approx.	98 g (0.22 lb)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽⁶⁾
Temp code	T4

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(2) Ferrule according to DIN 46 228/1.

(3) You can use ferrules with or without plastic sleeves.

(4) Requires that you push in the release actuator to insert the wire.

(5) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

(6) Tested to Voltage according to IEC/UL 61010-1.

Table 27 - Environmental Specifications - 5015-RTBPWPXT

Attribute	5015-RTBPWPXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the RTB is installed in an adapter base or in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the RTB is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the RTB is installed in an adapter base or in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the RTB is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 28 - Certifications - 5015-RTBPWPXT

Attribute	5015-RTBPWPXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" Ex ec IIC T4 Gc UL 22 ATEX 2745X UL22UKEX2258X

Table 28 - Certifications - 5015-RTBPWPXT

Attribute	5015-RTBPWPXT
IECEX	IECEX System, compliant with: <ul style="list-style-type: none">• IEC 60079-0; General Requirements• IEC 60079-7; Explosive Atmospheres, Protection "e"• EX ec IIC T4 Gc• IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none">• Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Removable Terminal Block, Push-in, Simplex or Diagnostic Input - 5015-RTBPXT

You can use this RTB for the following purposes:

- Connect field devices to Simplex I/O modules
- Connect to the adapter base to monitor system power conditions, for example, to connect to power supply and field power redundancy device (FPRD) contacts

Table 29 - General Specifications - 5015-RTBPXT

Attribute	5015-RTBPXT
Voltage rating	24V DC, nom 28.8V DC, max 32V DC, fault voltage
Current rating	2 A/terminal
RTB keying	None
Wiring category ⁽¹⁾	2 - signal ports (Via RTB on adapter base or I/O base)
Wire size	<ul style="list-style-type: none"> • 0.34...4 mm² (22...12 AWG) solid copper wire, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max • 0.14...2.5 mm² (26...14 AWG) stranded copper wire, with ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max^{(2), (3)} • 0.34...2.5 mm² (22...14 AWG) stranded copper wire, without ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max⁽⁴⁾
Insulation-stripping length	8...10 mm (0.31...0.39 in.)
Torque (to secure to base)	0.7 Nm (6 in-lb)
Dimensions	67 x 44 x 46 mm (2.64 x 1.73 x 1.81 in.) D x W x H ⁽⁵⁾
Weight, approx.	98 g (0.22 lb)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽⁶⁾
Temp code	T4

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(2) Ferrule according to DIN 46 228/1.

(3) You can use ferrules with or without plastic sleeves.

(4) Requires that you push in the release actuator to insert the wire.

(5) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

(6) Tested to Voltage according to IEC/UL 61010-1.

Table 30 - Environmental Specifications - 5015-RTBPXT

Attribute	5015-RTBPXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the RTB is installed in an adapter base or in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the RTB is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the RTB is installed in an adapter base or in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the RTB is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication signals ±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 31 - Certifications - 5015-RTBPXT

Attribute	5015-RTBPXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" Ex ec IIC T4 Gc UL 22 ATEX 2745X UL22UKEX2258X

Table 31 - Certifications - 5015-RTBPXT

Attribute	5015-RTBPXT
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Removable Terminal Block, Push-in, Duplex - 5015-RTBRPXT

You use this RTB to connect field devices to duplex I/O module pairs.

Table 32 - General Specifications - 5015-RTBRPXT

Attribute	5015-RTBRPXT
Voltage category	24V DC, nom 28.8V DC, max 32V DC, fault voltage
Current rating	2 A/terminal
RTB keying	None
Wiring category ⁽¹⁾	2 - signal ports (I/O) (Via RTB on I/O base)
Wire size	<ul style="list-style-type: none"> • 0.34...4 mm² (22...12 AWG) solid copper wire, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max • 0.14...2.5 mm² (26...14 AWG) stranded copper wire, with ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max^{(2), (3)} • 0.34...2.5 mm² (22...14 AWG) stranded copper wire, without ferrule, max, rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max⁽⁴⁾
Insulation-stripping length	8...10 mm (0.31...0.39 in.)
Torque (to secure to base)	0.7 Nm (6 in•lb)
Dimensions	67 x 89 x 46 mm (2.64 x 3.50 x 1.81 in.) D x W x H ⁽⁵⁾
Weight, approx.	130 g (0.29 lb)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽⁶⁾
Temp code	T4

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(2) Ferrule according to DIN 46 228/1.

(3) You can use ferrules with or without plastic sleeves.

(4) Requires that you push in the release actuator to insert the wire.

(5) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

(6) Tested to Voltage according to IEC/UL 61010-1.

Table 33 - Environmental Specifications - 5015-RTBRPXT

Attribute	5015-RTBRPXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the RTB is installed in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the RTB is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the RTB is installed in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the RTB is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 34 - Certifications - 5015-RTBRPXT

Attribute	5015-RTBRPXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Removable Terminal Block Jumper for SA Power, Push-in - 5015-RTBSAJXT

You use this jumper to connect SA Power between I/O bases when SA Power is not provided independently on I/O bases via separate SA Power RTBs.

Table 35 - General Specifications - 5015-RTBSAJXT

Attribute	5015-RTBSAJXT
Voltage category	24V DC, nom 28.8V DC, max
Current rating	19 A - Temperature-controlled environment The RTB is derated based on system conditions. For more information, see the FLEXHA 5000 I/O System Installation Instructions, publication 5015-IN001 .
Wiring category ⁽¹⁾	2 - power ports (Via RTB on I/O base)
RTB keying	None
Dimensions	63 x 19 x 43 mm (2.48 x 0.75 x 1.69 in) D x W x H ⁽²⁾
Weight, approx.	15 g (0.03 lb)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽³⁾
Temp code	T4

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(2) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

(3) Tested to Voltage according to IEC/UL 61010-1.

Table 36 - Environmental Specifications - 5015-RTBSAJXT

Attribute	5015-RTBSAJXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the jumper is installed across I/O bases that are mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the jumper is installed across I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the jumper is installed across I/O base that is mounted horizontally. 60 °C (140 °F) - If the jumper is installed across I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases

Table 36 - Environmental Specifications - 5015-RTBSAJXT

Attribute	5015-RTBSAJXT
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous $\pm 10\%$, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 37 - Certifications - 5015-RTBSAJXT

Attribute	5015-RTBSAJXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" Ex ec IIC T4 Gc UL 22 ATEX 2745X UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> IEC 60079-0; General Requirements IEC 60079-7; Explosive Atmospheres, Protection "e" EX ec IIC T4 Gc IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Shield RTB, Push-in - 5015-STBPXT

You use this terminal block to terminate I/O cable shields.

Table 38 - General Specifications - 5015-STBPXT

Attribute	5015-STBPXT
Current rating	2 A/terminal
Voltage rating	30V DC, max
RTB keying	None
Wiring category ⁽¹⁾	2 - signal ports (I/O) (I/O signals on I/O base)
Wire size	<ul style="list-style-type: none"> 0.34...4 mm² (22...12 AWG) solid copper wire, max, rated at 105 °C (221 °F) or greater, 1.2 mm (3/64 in.) insulation max 0.14...2.5 mm² (26...14 AWG) stranded copper wire, with ferrule, max, rated at 105 °C (221 °F) or greater, 1.2 mm (3/64 in.) insulation max^{(2), (3)} 0.34...2.5 mm² (22...14 AWG) stranded copper wire, without ferrule, rated at 105 °C (221 °F) or greater, 1.2 mm (3/64 in.) insulation max⁽⁴⁾
Insulation-stripping length	8...10 mm (0.31...0.39 in.)
Torque (to secure to base)	2 +/-0.11 Nm (18 +/-1 in•lb)
Dimensions	30 x 35 x 45 mm (1.18 x 1.38 x 1.77 in.) D x W x H ⁽⁵⁾
Weight, approx.	45 g (0.10 lb)
Isolation voltage	250V (continuous), Basic Insulation Type ⁽⁶⁾
Temp code	T4

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [I770-4.1](#), for more installation information.

(2) Ferrule according to DIN 46 228/1.

(3) You can use ferrules with or without plastic sleeves.

(4) Requires that you push in the release actuator to insert the wire.

(5) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

(6) Tested to Voltage according to IEC/UL 61010-1.

Table 39 - Environmental Specifications - 5015-STBPXT

Attribute	5015-STBPXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the STB is installed on a mounting plate that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the STB is installed on a mounting plate that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the STB is installed on a mounting plate that is mounted horizontally. 60 °C (140 °F) - If the STB is installed on a mounting plate that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz

Table 39 - Environmental Specifications - 5015-STBPXT

Attribute	5015-STBPXT
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous $\pm 10\%$, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 40 - Certifications - 5015-STBPXT

Attribute	5015-STBPXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" Ex ec IIC T4 Gc UL 22 ATEX 2745X UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> IEC 60079-0; General Requirements IEC 60079-7; Explosive Atmospheres, Protection "e" EX ec IIC T4 Gc IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Bank Expansion/Backplane Extension Components

You can use the following bank expansion/backplane extension components in a FLEXHA 5000 I/O system:

- Bank expansion base
- Backplane communication extension cables
- Backplane power extension cables

These components are used in pairs. The specifications are listed for one component of each type.

Bank Expansion Bases - 5015-BEBLXT, 5015-BEBRXT

The 5015-BEBLXT, 5015-BEBRXT bank expansion bases are used to extend backplane communication and power from one base to another via backplane communication extension cables and backplane power extension cables, respectively. The data A and data B ports on the modules are keyed so that only specific ends of the backplane communication extension cables fit into the ports.

Table 41 - General Specifications - 5015-BEBLXT, 5015-BEBRXT

Attribute	5015-BEBLXT, 5015-BEBRXT
Backplane power	6 A @ 15V DC
Cable rating	5015-BECCOMXT cable - UL AWM style 20276 80C 30V VW1 5015-BECPWRXT - UL AWM style 2103 105C 300V VW-1
Wiring category ⁽¹⁾	3 - signal ports (Data) 3 - power ports (Power)
Dimensions	220 x 57 x 32 mm (8.66 x 2.24 x 1.26 in.) D x W x H ⁽²⁾
Weight, approx.	214 g (0.47 lb)
Temp code	T4

(1) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual. Also refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for more installation information.

(2) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 42 - Environmental Specifications - 5015-BEBLXT, 5015-BEBRXT

Attribute	5015-BEBLXT, 5015-BEBRXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the Bank Expansion Base is installed in an adapter base or in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the Bank Expansion Base is installed in an adapter base or in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the Bank Expansion Base is installed in an adapter base or in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the Bank Expansion Base is installed in an adapter base or in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports ±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-50	±2 kV line-earth (CM) on communication signals ±2 kV line-earth (CM) on shielded signals

Table 42 - Environmental Specifications - 5015-BEBLXT, 5015-BEBRXT

Attribute	5015-BEBLXT, 5015-BEBRXT
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous $\pm 10\%$, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 43 - Certifications - 5015-BEBLXT, 5015-BEBRXT

Attribute	5015-BEBLXT, 5015-BEBRXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> EN IEC 60079-0; General Requirements EN IEC 60079-7; Explosive Atmospheres, Protection "e" Ex ec IIC T4 Gc UL 22 ATEX 2745X UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> IEC 60079-0; General Requirements IEC 60079-7; Explosive Atmospheres, Protection "e" EX ec IIC T4 Gc IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Backplane Communication Extension Cable - 5015-BECCOMXT

The 5015-BECCOMXT backplane communication extension cables are connected to bank expansion bases and are used to extend backplane communication from one base to another.

General Specifications - 5015-BECCOMXT

Attribute	5015-BECCOMXT
Voltage rating	30V DC, min
Bend radius	42 mm (1.65 in.), min
Length	2 m (6.5 ft.)
Weight, approx.	120 g (0.26 lb)
Temp code	T4

Table 44 - Environmental Specifications - 5015-BECCOMXT

Attribute	5015-BECCOMXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the Backplane Communication Extension cable is connected to Bank Expansion Bases that are installed horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the Backplane Communication Extension cable is connected to Bank Expansion Bases that are installed vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the Backplane Communication Extension cable is connected to Bank Expansion Bases that are installed horizontally. 60 °C (140 °F) - If the Backplane Communication Extension cable is connected to Bank Expansion Bases that are installed vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-50	±2 kV line-earth (CM) on communication signals ±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 45 - Certifications - 5015-BECCOMXT

Attribute	5015-BECCOMXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Backplane Power Extension Cable - 5015-BECPWRXT

The 5015-BECPWRXT backplane power extension cables are connected to backplane extension modules and are used to extend backplane power from one base to another.

Table 46 - General Specifications - 5015-BECPWRXT

Attribute	5015-BECPWRXT
Current rating	6 A at steady state
Backplane surge current, max	7.5 A for 100 ms repeatable every 1 s
Voltage rating	30V DC, min
Voltage drop	<0.6V DC with 6 A load
Bend radius	35 mm (1.38 in.), min
Length	2 m (6.5 ft.)
Weight, approx.	234 g (0.52 lb)
Temp code	T4

Table 47 - Environmental Specifications - 5015-BECPWRXT

Attribute	5015-BECPWRXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the Backplane Power Extension cable is connected to Bank Expansion Bases that are installed horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the Backplane Power Extension cable is connected to Bank Expansion Bases that are installed vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the Backplane Power Extension cable is connected to Bank Expansion Bases that are installed horizontally. 60 °C (140 °F) - If the Backplane Power Extension cable is connected to Bank Expansion Bases that are installed vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports
Surge transient immunity IEC 61000-4-50	±2 kV line-earth (CM) on line-earth (CM) shielded ports
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 48 - Certifications - 5015-BECPWRXT

Attribute	5015-BECPWRXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Slot Fillers

The FLEXHA 5000 I/O system uses the following slot fillers to protect unused connectors from unintended electrical contact, mechanical damage, and corrosive elements in the environment:

- I/O slot filler
- SA power filler
- Removable terminal block (RTB) filler

I/O Slot Filler - 5015-N2IOXT

The 5015-N2IO I/O slot filler is used instead of an I/O module.

Table 49 - General Specifications - 5015-N2IOXT

Attribute	5015-N2IOXT
Dimensions	140 x 38 x 118 mm (5.51 x 1.50 x 4.65 in.) D x W x H ⁽¹⁾
Weight, approx.	108 g (0.24 lb)
Temp code	T4

(1) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 50 - Environmental Specifications - 5015-N2IOXT

Attribute	5015-N2IOXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the I/O slot filler is installed in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the I/O slot filler is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the I/O slot filler is installed in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the I/O slot filler is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 51 - Certifications - 5015-N2IOXT

Attribute	5015-N2IOXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

SA Power Filler - 5015-N2SAXT

The 5015-N2SAXT SA Power filler is installed on the right side of an I/O base when the system does not use the SA Power RTB or SA power jumper on the right side.

Table 52 - General Specifications - 5015-N2SAXT

Attribute	5015-N2SAXT
Dimensions	61 x 7 x 29 mm (2.40 x 0.28 x 1.14 in.) D x W x H ⁽¹⁾
Weight, approx.	4 g (0.01 lb)
Temp code	T4

(1) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 53 - Environmental Specifications - 5015-N2SAXT

Attribute	5015-N2SAXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the SA Power filler is installed in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the SA Power filler is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the SA Power filler is installed in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the SA Power filler is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 54 - Certifications - 5015-N2SAXT

Attribute	5015-N2SAXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Removable Terminal Block Filler - 5015-N2RTBXT

One 5015-N2RTBXT RTB filler is used instead of a Simplex RTB when a module is not used. Two RTB fillers are used instead of a Duplex RTB when a Duplex Pair is not used.

Table 55 - General Specifications - 5015-N2RTBXT

Attribute	5015-N2RTBXT
Dimensions	67 x 44 x 46 mm (2.64 x 1.73 x 1.81 in.) D x W x H ⁽¹⁾
Weight, approx.	30 g (0.07 lb)
Temp code	T4

(1) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the base.

Table 56 - Environmental Specifications - 5015-N2RTBXT

Attribute	5015-N2RTBXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the RTB filler is installed in an I/O base that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the RTB filler is installed in an I/O base that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the RTB filler is installed in an I/O base that is mounted horizontally. 60 °C (140 °F) - If the RTB filler is installed in an I/O base that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on communication ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on communication signals ±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 57 - Certifications - 5015-N2RTBXT

Attribute	5015-N2RTBXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Backplane Grounding Lug

5015-BPGNDXT

The 5015-BPGNDXT backplane grounding lug facilitates the connection of the mounting plate to installation ground.

Table 58 - General Specifications - 5015-BPGNDXT

Attribute	5015-BPGNDXT
Current rating	30 A
Ground wire size	3.26...4.11 mm ² (8...6 AWG)
Torque (to secure to chase)	2 +/-0.11 Nm (18 +/-1 in•lb)
Dimensions	31 x 15 x 24 mm (1.22 x 0.59 x 0.94 in.) D x W x H ⁽¹⁾
Weight, approx.	41 g (0.09 lb)
Temp code	T4

(1) Depth represents the distance from the top of the component to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the component to where it touches the mounting plate.

Table 59 - Environmental Specifications - 5015-BPGNDXT

Attribute	5015-BPGNDXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the ground lug is installed on a mounting plate that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the ground lug is installed on a mounting plate that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the ground lug is installed on a mounting plate that is mounted horizontally. 60 °C (140 °F) - If the ground lug is installed on a mounting plate that is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Table 60 - Certifications - 5015-BPGNDXT

Attribute	5015-BPGNDXT
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
UK and CE	UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions • EN 61000-6-4; Industrial Emissions
Ex	UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN IEC 60079-0; General Requirements • EN IEC 60079-7; Explosive Atmospheres, Protection "e" • Ex ec IIC T4 Gc • UL 22 ATEX 2745X • UL22UKEX2258X
IECEX	IECEX System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-7; Explosive Atmospheres, Protection "e" • EX ec IIC T4 Gc • IECEX UL 22.033X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3
Morocco	Arrêté ministériel n° 6404-15 du 29 ramadan 1436
CCC	CCC 2023122309116323, 2023122309116325 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products
UKCA	2016 No. 1091 – Electromagnetic Compatibility Regulations 2016 No. 1101 – Electrical Equipment (Safety) Regulations 2016 No. 1107 – Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2012 No. 3032 – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations
INMETRO	ABNT NBR IEC 60079-0: 2013; General Requirements ABNT NBR IEC 60079-7: 2018; Explosive Atmospheres, Protection "e"

Mounting Plates

5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT

The 5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT mounting plates are connected to the cabinet and support the FLEXHA 5000 I/O system.

Table 61 - General Specifications - 5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT

Attribute	5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT
Current rating	30 A
Torque (to connect to cabinet)	Based on screw type used: <ul style="list-style-type: none"> • M4 screws: 1.3 Nm (11.5 in•lb) • #10...24 screws: 2.2 Nm (19 in•lb) • #10...32 screws: 3.3 Nm (29 in•lb)
Dimensions	
5015-MP300XT	192 x 300 x 15 mm (7.56 x 11.81 x 0.59 in.) D x W x H ⁽¹⁾
5015-MP700XT	192 x 700 x 15 mm (7.56 x 27.56 x 0.59 in.) D x W x H ⁽¹⁾
5015-MP900XT	192 x 900 x 15 mm (7.56 x 35.43 x 0.59 in.) D x W x H ⁽¹⁾
5015-MP1250XT	192 x 1250 x 15 mm (7.56 x 47.24 x 0.59 in.) D x W x H ⁽¹⁾
Weight, approx.	
5015-MP300XT	742 g (1.63 lb)
5015-MP700XT	1729 g (3.81 lb)
5015-MP900XT	2228 g (4.91 lb)
5015-MP1250XT	3094 g (6.82 lb)
Temp code	T4

(1) Depth represents the distance from the top of the mounting plate to the bottom. Width represents the distance from side to side. Height represents the distance from the front of the base to where it touches the cabinet.

Table 62 - Environmental Specifications - 5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT

Attribute	5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the mounting plate is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the mounting plate is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the mounting plate is mounted horizontally. 60 °C (140 °F) - If the mounting plate is mounted vertically.
Temperature, nonoperating 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)
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4

Table 62 - Environmental Specifications - 5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT

Attribute	5015-MP300XT, 5015-MP700XT, 5015-MP900XT, 5015-MP1250XT
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

End Cap

5015-ECRXT

The 5015-ECRXT end cap covers the last base-to-base connector of an I/O bank to protect the connector.

Table 63 - General Specifications - 5015-ECRXT

Attribute	5015-ECRXT
Dimensions	50 x 10 x 19 mm (1.97 x 0.39 x 0.75 in.) D x W x H
Weight, approx.	3 g (0.01 lb)
Temp code	T4

Table 64 - Environmental Specifications - 5015-ECRXT

Attribute	5015-ECRXT
Temperature, operating IEC 60068-2-14 (Test Na and Nb, Non Operating and Operating Thermal Shock)	-40 °C ≤ Ta ≤ +70 °C (-40 °F ≤ Ta ≤ +158 °F) - If the end cap is installed on a system that is mounted horizontally. -40 °C ≤ Ta ≤ +60 °C (-40 °F ≤ Ta ≤ +140 °F) - If the end cap is installed on a system that is mounted vertically.
Temperature, surrounding air, max	70 °C (158 °F) - If the end cap is installed on a system that is mounted horizontally. 60 °C (140 °F) - If the end cap is installed on a system that is mounted vertically.
Temperature, nonoperating 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)

Table 64 - Environmental Specifications - 5015-ECRXT

Attribute	5015-ECRXT
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
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	15 g
Emissions	IEC 61000-6-4
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 MHz to 6 GHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±2 kV line-earth (CM) on shielded signals
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Magnetic field immunity IEC 61000-4-8	30 A/m long duration at 50 Hz and 60 Hz
Corrosive atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases
Conducted LF Marine	2 W max (3V min) from 50 Hz...10 kHz on DC supply ports
External power supply	Three interruptions during 5 minutes Switching-off time 30 s each case
Voltage variation	Voltage tolerance continuous ±10%, 15 minutes Voltage cyclic variation 5%, 5 minutes Voltage ripple 10%, 15 minutes

Minimum Spacing Requirements

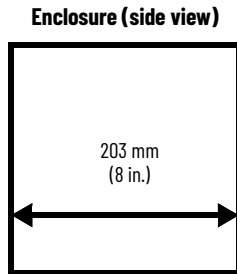
This section provides minimum distances of the enclosure and between the FLEXHA 5000 I/O system. Before you install a FLEXHA 5000 I/O system in a cabinet, make sure you use a cabinet that is sized correctly. To do so, you must calculate an enclosure size that is based on the power dissipation of the system and the ambient temperature.

The following requirements are used to maintain spacing in the FLEXHA 5000 I/O system.

- Minimum enclosure depth
- Minimum distance from I/O system banks to enclosure walls, wireways, and adjacent equipment.
- Minimum distance between I/O system banks in a multi-bank system.

FLEXHA 5000 I/O System Spacing - Recommended Enclosure Depth

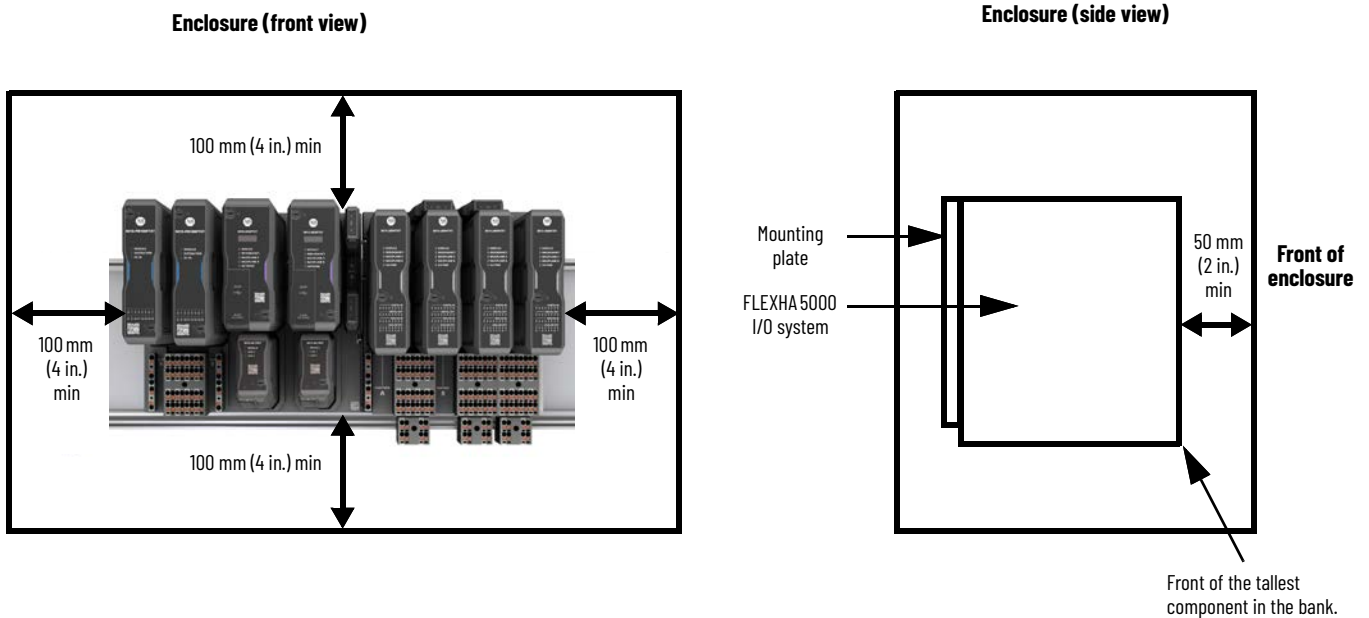
The enclosure must be a minimum of 203 mm (8 in.) deep.



FLEXHA 5000 Spacing - Single Bank

The sides of a system bank must be at least 100 mm (4 in.) from enclosure walls, wireways, and adjacent equipment. The left, right, top and bottom distance is measured from the Adapter Base and I/O Base edges, not the mounting plate, or system components, such as the I/O modules.

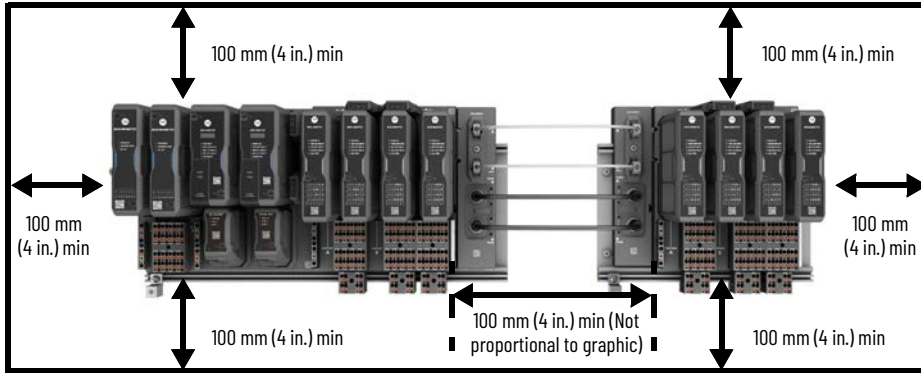
The front of a system bank must be at least 50 mm (2 in.) from the front of the enclosure. The distance is from the front of the bank components to the enclosure.



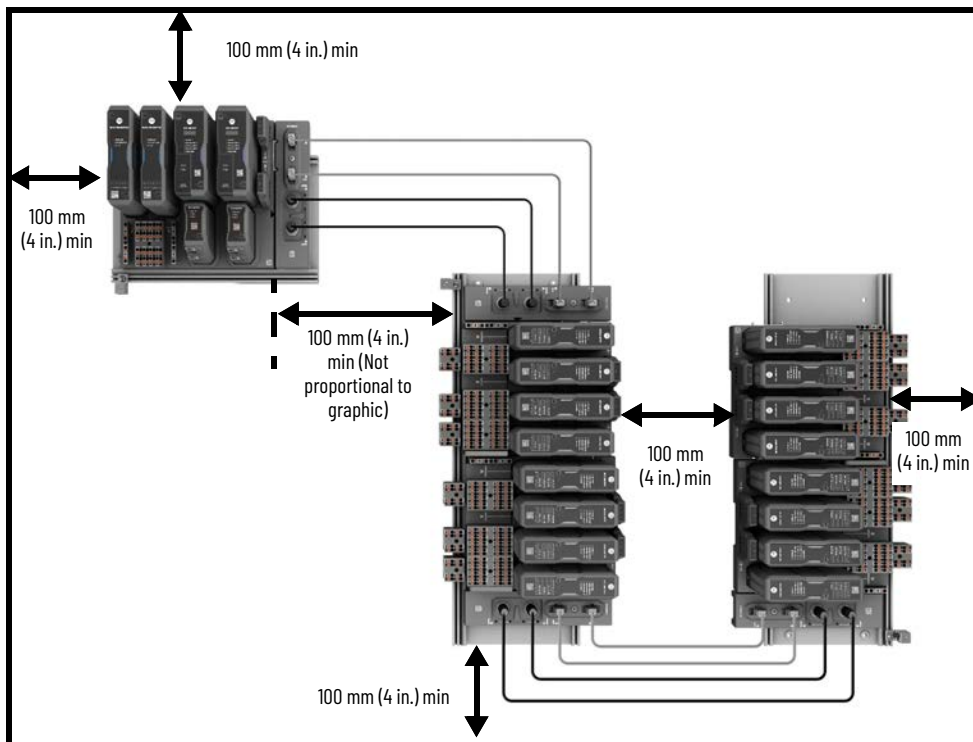
FLEXHA 5000 Spacing - Multiple Banks

When you install multiple banks, not only must you maintain a minimum distance of 100 mm (4 in.) from enclosure walls, wireways, and adjacent equipment. You must maintain a minimum of 100 mm (4 in.) between banks, as shown in the examples. The distance is measured from the Adapter Base and I/O Base edges, not the mounting plate or system components, such as the I/O modules.

Enclosure (front view)



Enclosure (front view)



Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
FLEXHA 5000 I/O System Installation Instructions, publication 5015-IN001	Describes how to install a FLEXHA 5000 I/O system.
FLEXHA 5000 I/O System User Manual, publication 5015-UM001	Describes how to use a FLEXHA 5000 I/O system.
EtherNet/IP Network Devices User Manual, publication ENET-UM006	Describes how to configure and use EtherNet/IP devices to communicate on the EtherNet/IP network.
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 Selection and Configuration tools, rok.auto/systemtools	Helps configure complete, valid catalog numbers and build complete quotes based on detailed product information.
Rockwell Automation Global SCCR tool, rok.auto/sccr	Provides coordinated high-fault branch circuit solutions for motor starters, soft starters, and component drives.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

Rockwell Automation Support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Technical Documentation Center	Quickly access and download technical specifications, installation instructions, and user manuals.	rok.auto/techdocs
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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