Installation Instructions

Original Instructions

Micro870 24-point Programmable Controllers

Catalog Numbers 2080-LC70-24QWB, 2080-LC70-24QWBK, 2080-LC70-24QBB, 2080-LC70-24QBBK, 2080-LC70-24AWB

Catalog numbers with the suffix 'K' are conformal coated and their specifications are the same as non-conformal coated catalogs.

Summary of Changes

This publication was revised to include information about the Micro870® controller catalog 2080-LC70-24AWB.

Environment and Enclosure

ATTENTION: This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating. This equipment is considered Group 1, Class A industrial equipment according to IEC/CISPR 11. Without appropriate precautions, there may be difficulties with electromagnetic compatibility in residential and other environments due to conducted and radiated disturbances.

This equipment is supplied as open-type equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The enclosure must have suitable flame-retardant properties to prevent or minimize the spread of flame, complying with a flame spread rating of 5VA or be approved for the application if nonmetallic. The interior of the enclosure must be accessible only by the use of a tool. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, Rockwell Automation publication 1770-4.1, for more installation requirements.
- NEMA Standard 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure.

Prevent Electrostatic Discharge

ATTENTION: This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
- Wear an approved grounding wriststrap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- Use a static-safe workstation, if available.
- Store the equipment in appropriate static-safe packaging when not in use.

North American Hazardous Location Approval

The following information applies when operating this equipment in hazardous locations.	**Informations sur l'utilisation de cet équipement en environnements dangereux.**
Products marked "CL I, DIV 2, GP A, B, C, D" are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.	Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I Division 2 Groupes A, B, C, D dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.
WARNING: **Explosion Hazard –** • Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. • Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product. • Substitution of components may impair suitability for Class I, Division 2. • If this product contains batteries, they must only be changed in an area known to be nonhazardous.	**AVERTISSEMENT:** **Risque d'Explosion –** • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. Fixer tous les connecteurs externes reliés à cet équipement à l'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens fournis avec ce produit. • La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2. • S'assurer que l'environnement est classé non dangereux avant de changer les piles.

WARNING:

- If you connect or disconnect the serial cable with power applied to this module or the serial device on the other end of the cable, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
- If you connect or disconnect the Ethernet communications cable with power applied to this module or any device on the network, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
- When used in a Class I, Division 2, hazardous location, this equipment must be mounted in a suitable enclosure with proper wiring method that complies with the governing electrical codes.
- The local programming terminal port is intended for temporary use only and must not be connected or disconnected unless the area is assured to be nonhazardous.
- The USB port is intended for temporary local programming purposes only and not intended for permanent connection. If you connect or disconnect the USB cable with power applied to this module or any device on the USB network, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
  The USB port is a nonincendive field wiring connection for Class I, Division2 Groups A, B, C and D.
- Exposure to some chemicals may degrade the sealing properties of materials used in the Relays. It is recommended that the User periodically inspect these devices for any degradation of properties and replace the module if degradation is found.
- If you insert or remove the plug-in module while backplane power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
  Refer to the Wiring Diagram for each plug-in module for additional details regarding removal or insertion under power
- When you connect or disconnect the Removable Terminal Block (RTB) with field side power applied, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
- When you change switch settings while power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.
- The USB and serial cables are not to exceed 3.0 m (9.84 ft).
- Do not wire more than 2 conductors on any single terminal.
- Do not remove the Removable Terminal Block (RTB) until power is removed.

ATTENTION:

- To comply with the CE Low Voltage Directive (LVD), this equipment must be powered from a source compliant with the following: Safety Extra Low Voltage (SELV) or Protected Extra Low Voltage (PELV).
- To comply with UL restrictions, this equipment must be powered from a Class 2 or Limited Voltage Limited Current Source (LVLC).
- For Class I Division 2 applications, use only Class I Division 2 listed or recognized accessories and modules approved for use within the Micro800™ platform.

ATTENTION:

- Electrostatic discharge can damage semiconductor devices inside the module. Do not touch the connector pins or other sensitive areas.
- Do not remove the protective debris strips until after the controller and all other equipment in the panel near the module are mounted and wired. Remove strips before operating the controller. Failure to remove strips before operating can cause overheating.
- Be careful when stripping wires. Wire fragments that fall into the controller could cause damage. Once wiring is complete, make sure the controller is free of all metal fragments.

Additional Resources

Resource	Description
Micro830, Micro850,and Micro870 Programmable Controllers User Manual, publication 2080-UM002	A more detailed description of how to install and use your Micro830®, Micro850®, and Micro870 programmable controllers.
Micro870 Programmable Controllers 24V DC Expansion Power Supply Installation Instructions, publication 2085-IN008	Information on wiring and installing the 24V DC expansion power supply.
Micro800 Plug-in Modules User Manual, publication 2080-UM004	Installation, wiring descriptions, and specifications for the Micro800 plug-in modules.
Micro850 Expansion I/O Modules User Manual, publication 2080-UM003	Installation, wiring descriptions, and specifications for the Micro850 expansion I/O modules.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	More information on proper wiring and grounding techniques.

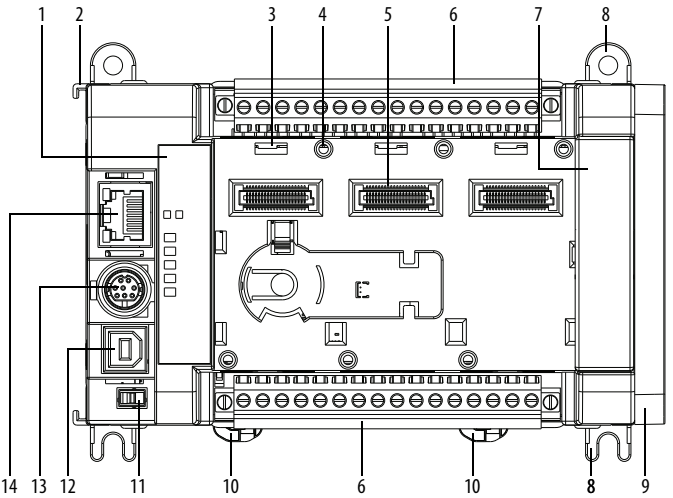
If you would like a manual, you can:

- download a free electronic version from the Internet: http://rockwellautomation.com/literature
- purchase a printed manual by contacting your local Allen-Bradley distributor or Rockwell Automation representative

Overview

The Micro870 24-point controller is an expandable brick style controller with embedded inputs and outputs. It can support up to three plug-in modules and up to eight Micro800 expansion I/O. It supports any 24V DC output power supply that meets the minimum specifications for the Micro870 controller. For systems with more than four Micro800 expansion I/O, an expansion power module 2085-EP24VDC is required.

Controller Overview

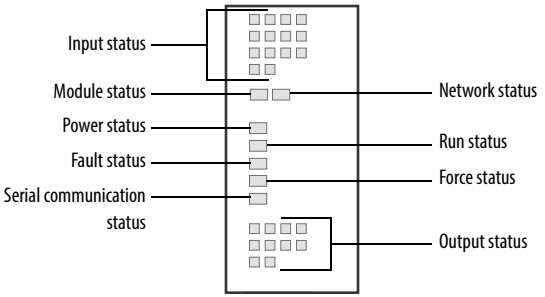


Controller Description

	Description		Description
1	Status indicator	8	Mounting screw hole / mounting foot
2	Optional power supply slot	9	Expansion I/O slot cover(1)
3	Plug-in latch	10	DIN rail mounting latch
4	Plug-in screw hole	11	Mode switch
5	40 pin high speed plug-in connector	12	Type B connector USB port
6	Removable I/O terminal block	13	RS232/RS485 non-isolated combo serial port
7	Right-side cover	14	RJ-45 Ethernet connector (with embedded green and yellow LED indicators)

(1) For use when the controller does not have an expansion I/O module attached to it.

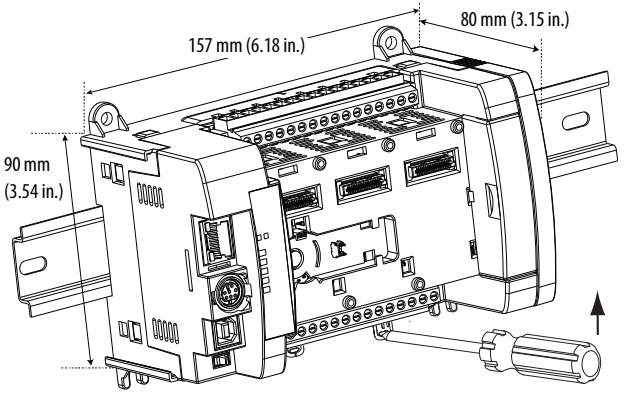
Status Indicators



Mount the Module

Most applications require installation in an industrial enclosure to reduce the effects of electrical interference and environmental exposure. Locate your controller as far as possible from power lines, load lines, and other sources of electrical noise such as hard-contact switches, relays, and AC motor drives. For more information on proper grounding guidelines, see the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Mounting Dimensions and DIN Rail Mounting



Module Spacing

Maintain spacing from objects such as enclosure walls, wireways, and adjacent equipment. Allow 50.8 mm (2.0 in.) of space on all sides for adequate ventilation. If optional accessories/modules are attached such as the power supply 2080-PS120-240VAC or expansion I/O modules, make sure that there is 50.8 mm (2 in.) of space on all sides after attaching the optional parts.

DIN Rail Mounting

The module can be mounted using the following DIN rails: 35 x 7.5 mm x 1 mm (EN 50 022 - 35 x 7.5).

TIP For environments with greater vibration and shock concerns, use the panel mounting method, instead of DIN rail mounting.

Before mounting the module on a DIN rail, use a flat-blade screwdriver in the DIN rail latch and pry it downwards until it is in the unlatched position.

1. Hook the top of the DIN rail mounting area of the controller onto the DIN rail, and then press the bottom until the controller snaps onto the DIN rail.
2. Push the DIN rail latch back into the latched position.
   Use DIN rail end anchors (Allen-Bradley part number 1492-EA35 or 1492-EAHJ35) for vibration or shock environments.

To remove your controller from the DIN rail, pry the DIN rail latch downwards until it is in the unlatched position.

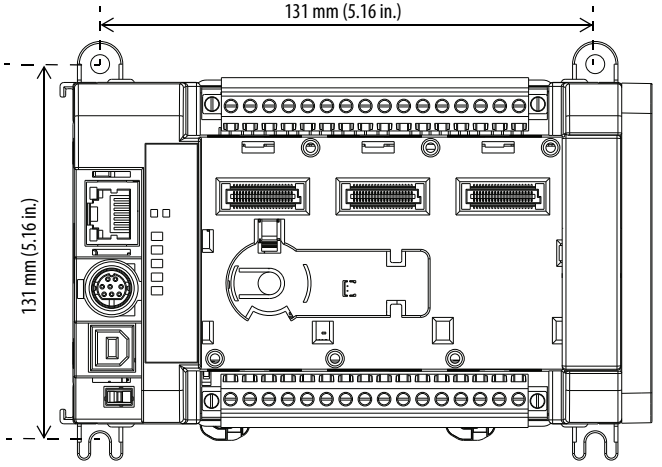
Panel Mounting

The preferred mounting method is to use four M4 (#8) screws per module. Hole spacing tolerance: ±0.4 mm (0.016 in.).

Follow these steps to install your controller using mounting screws.

1. Place the controller against the panel where you are mounting it. Make sure the controller is spaced properly.
2. Mark drilling holes through the mounting screw holes and mounting feet then remove the controller.
3. Drill the holes at the markings, then replace the controller and mount it. Leave the protective debris strip in place until you have finished wiring any other devices.

Panel Mounting Dimensions



Use Surge Suppressors

Because of the potentially high current surges that occur when switching inductive load devices, such as motor starters and solenoids, we recommend the use of some type of surge suppression to protect and extend the operating life of the controllers output contacts. Switching inductive loads without surge suppression can significantly reduce the life expectancy of relay contacts. By adding a suppression device directly across the coil of an inductive device, you prolong the life of the output or relay contacts. You also reduce the effects of voltage transients and electrical noise from radiating into adjacent systems.

Refer to the Micro830, Micro850, and Micro870 Programmable Controllers User Manual, publication 2080-UM002, for suitable surge suppression methods and recommended surge suppressors.

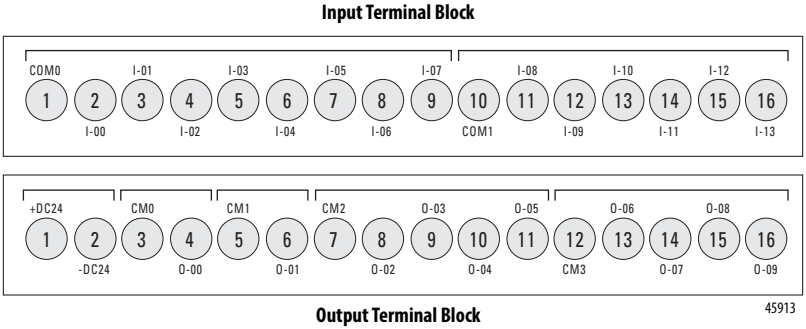
Expansion I/O, Expansion Power Supply, and Plug-in Module Installation

To attach expansion I/O, expansion power supply, and plug-in modules to your Micro870 controller, see the installation manual and/or wiring diagrams specific to your plug-ins, expansion I/O, and expansion power supply.

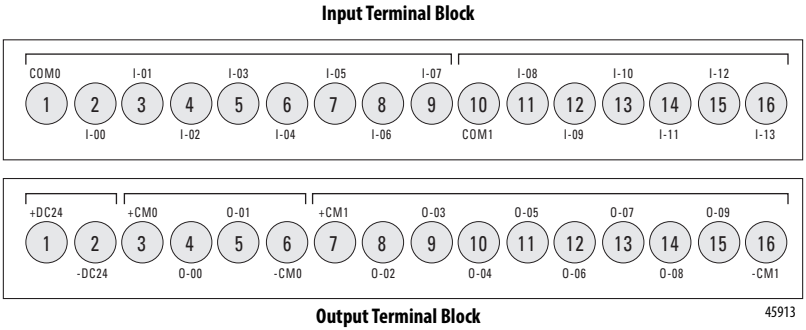
Installation Instructions are available in the Literature Library, http://rockwellautomation.com/literature.

Wire the Controller

2080-LC70-24QWB, 2080-LC70-24QWBK, 2080-LC70-24AWB

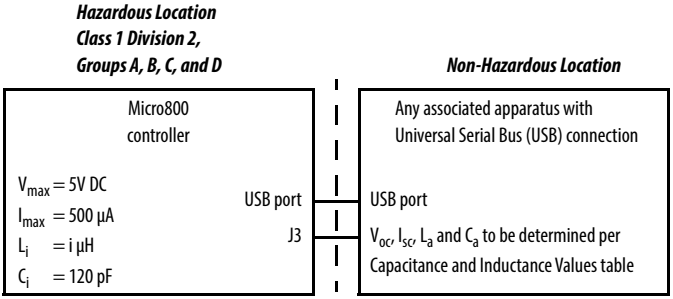


2080-LC70-24QBB, 2080-LC70-24QBBK



ATTENTION: Do not ground the -DC24 terminal of the Micro870 controller. The Micro870 system is grounded either through the DIN Rail or the top right panel mounting screw hole.

Control Drawing for Class 1 Division 2 Applications



Capacitance and Inductance Values

Nonincendive Equipment		Associated Apparatus
V_{max} (or U_i)	≥	V_{oc} or V_t (or U_o)
I_{max} (or L_i)	≥	I_{sc} or I_t (or I_o)
$C_i + C_{cable}$	≤	C_a (or C_o)
$L_i + L_{cable}$	≤	L_a (or L_o)

Capacitance and Inductance of the field wiring from the nonincendive equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in the table above.

Where the cable capacitance and inductance per foot are not known, the following values shall be used: C_{cable} = 60 pF/ft, L_{cable} = 0.2 µH/ft.

Wiring method must be in accordance with ANSI/NFPA70.

Specifications

General Specifications

Attribute	2080-LC70-24AWB	2080-LC70-24QWB, 2080-LC70-24QWBK	2080-LC70-24QBB, 2080-LC70-24QBBK
Number of I/O	24 (14 inputs, 10 output)		
Dimensions (HxWxD)	90 x 157 x 80 mm (3.54 x 6.18 x 3.15 in.)		
Shipping weight, approx.	0.47 kg (1.04 lb)		
Wire size	<table><tr><th></th><th>Min</th><th>Max</th><th></th></tr><tr><td>Solid and Stranded</td><td>0.2 mm^2 (24 AWG)</td><td>2.5 mm^2 (14 AWG)</td><td>Rated @ 90 °C (194 °F) insulation max</td></tr></table>		
Wiring category[1][2]	2 – on signal ports 2 – on power ports 2 – on communication ports		
Wire type	Use copper conductors only		
Terminal screw torque	0.4…0.5 Nm (3.5…4.4 lb-in.) using a 0.6 x 3.5 mm flat-blade screwdriver. Note: Use a handheld screwdriver to hold down the screws at the side.		
Input circuit type	12/24V sink/source (standard) 24V sink/source (high-speed)		
Output circuit type	Relay		24V DC source (standard and high-speed)
Power consumption	28 W		
Power supply voltage range	21.4…26.4V DC Class 2, or Limited Voltage Limited Current Source (LVLC)		
I/O rating	Input 120V AC, 16 mA Output 2 A, 240V AC 2 A, 24V DC	Input 24V, 8.8 mA Output 2 A, 240V AC 2 A, 24V DC	Input 24V, 8.8 mA Output 24V DC, Class 2, 1 A per point (Surrounding air temperature 30 °C) 24V DC, Class 2, 0.3 A per point (Surrounding air temperature 65 °C)
Isolation voltage	250V (continuous), Reinforced Insulation Type, Output to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 3250V DC Output to Aux and Network, Inputs to Outputs. 150V (continuous), Reinforced Insulation Type, Input to Aux and Network Type tested for 60 s @ 1950V DC, Inputs to Aux and Network	250V (continuous), Reinforced Insulation Type, Output to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 3250V DC Output to Aux and Network, Inputs to Outputs. 50V (continuous), Reinforced Insulation Type, Input to Aux and Network Type tested for 60 s @ 720V DC, Inputs to Aux and Network	50V (continuous), Reinforced Insulation Type, I/O to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 720 V DC, I/O to Aux and Network, Inputs to Outputs.
Pilot duty rating	C300, R150		–
Insulation stripping length	7 mm (0.28 in.)		
Enclosure type rating	Meets IP20		
North American temp code	T4		

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

(2) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual.

At the end of its life, this equipment should be collected separately from any unsorted municipal waste.

DC Input Specifications

Attribute	2080-LC70-24QWB, 2080-LC70-24QWBK, 2080-LC70-24QBB, 2080-LC70-24QBBK	
	High-Speed DC Input (Inputs 0…7)	**Standard DC Input (Inputs 8 and higher)**
Number of inputs	8	6
Voltage category	24V sink/source 24V AC, 50/60 Hz	
Input group to backplane isolation	Verified by one of the following dielectric tests: 720V DC for 2 s 50V DC working voltage (IEC Class 2 reinforced insulation)	
On-state voltage range	16.8…26.4V DC @ 65°C (149°F) 16.8…30.0V DC @ 30°C (86°F)	10…26.4V DC @ 65°C (149°F) 10…30.0V DC @ 30°C (86°F)
Off-state voltage, max	5V DC	
On-state current, min	5.0 mA @ 16.8V DC	1.8 mA @ 10V DC
On-state current, nom	7.6 mA @ 24V DC	6.15 mA @ 24V DC
On-state current, max	12.0 mA @ 30V DC	12.0 mA @ 30V DC
Off-state current, max	1.5 mA	
Nominal impedance	3 kΩ	3.74 kΩ
IEC input compatibility	Type 3	

IMPORTANT For 24V AC specifications, refer to the Micro830, Micro850, and Micro870 User Manual, publication 2080-UM002.

AC Input Specifications

Attribute	2080-LC70-24AWB
Number of inputs	14
On-state voltage, min	79V AC
On-state voltage, max	132V AC
Off-state voltage, max	20V @ 120V AC
On-state current, min	5 mA
On-state current, max	16 mA
Off-state current, max	2.5 mA @ 120V AC

AC Input Specifications

Attribute	2080-LC70-24AWB
Input frequency, min	47 Hz
Input frequency, nom	50/60 Hz
Input frequency, max	63 Hz
Inrush current, max	250 mA @ 120V AC
Inrush delay time constant, max	22 ms
IEC input compatibility	Type 3

Output Specifications

Attribute	2080-LC70-24QWB, 2080-LC70-24QWBK, 2080-LC70-24AWB	2080-LC70-24QBB, 2080-LC70-24QBBK	
	Relay Output	High Speed Output (Outputs 0...1)	Standard Output (Outputs 2 and higher)
Number of outputs	10	2	8
Output voltage, min	5V DC, 5V AC	10.8V DC	10V DC
Output voltage, max	125V DC, 265V AC	26.4V DC	26.4V DC
Load current, min	10 mA		
Load current, continuous, max	2.0 A	100 mA (high-speed operation) 1.0 A @ 30 °C 0.3 A @ 65 °C (standard operation)	1.0 A @ 30 °C 0.3 A @ 65 °C (standard operation)
Surge current, per point	See Relay Contacts Ratings on page 13	4.0 A for 10 ms every 1 s @ 30 °C; every 2 s @ 65 °C(1)	
Current, per common, max	5 A	–	–
Turn on time, max/ Turn off time, max	10 ms	2.5 µs	0.1 ms 1 ms

(1) Applies for general purpose operation only; does not apply for high-speed operation.

Relay Contacts Ratings

Maximum Volts	Amperes		Amperes Continuous	Volt-Amperes	
	Make	Break		Make	Break
120V AC	15 A	1.5 A	2.0 A	1800V A	180V A
240V AC	7.5 A	0.75 A			
24V DC	1.0 A		1.0 A	28V A	
125V DC	0.22 A		0.22 A		

Environmental Specifications

Attribute	Value
Temperature, operating	IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock): -20…65 °C (-4…149 °F)
Temperature, surrounding air, max	65 °C (149 °F)
Temperature, nonoperating	IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock): -40…85 °C (-40…185 °F)
Relative humidity	IEC 60068-2-30 (Test Db, Unpackaged Damp Heat): 5…95% non-condensing
Vibration	IEC 60068-2-6 (Test Fc, Operating): 2 g @ 10…500 Hz
Shock, operating	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 25 g
Shock, nonoperating	IEC 60068-2-27 (Test Ea, Unpackaged Shock): DIN mount: 25 g PANEL mount: 35 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…2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz
EFT/B immunity	IEC 61000-4-4: ±2 kV @ 5 kHz on power ports ±2 kV @ 5 kHz on signal ports ±1 kV @ 5 kHz on communication ports
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line(DM) and ±2 kV line-earth(CM) on signal ports ±1 kV line-earth(CM) on communication ports
Conducted RF immunity	IEC 61000-4-6: 10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz

Certifications

Certification (when product is marked)(1)	Value
c-UL-us	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E322657. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E334470.
CE	European Union 2014/30/EU EMC Directive, compliant with: EN 61326-1; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) European Union 2014/35/EU LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11) European Union 2011/65/EU RoHS, compliant with: EN 50581; Technical Documentation
RCM	Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation Russian Customs Union TR CU 004/2011 LV Technical Regulation
EtherNet/IP	ODVA conformance tested to EtherNet/IP™ specifications

(1) See the Product Certification link at http://www.rockwellautomation.com/global/certification/overview.page for Declaration of Conformity, Certificates, and other certification details.

Rockwell Automation Support

Use the following resources to access support information.

Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	https://rockwellautomation.custhelp.com/
Local Technical Support Phone Numbers	Locate the phone number for your country.	http://www.rockwellautomation.com/global/support/get-support-now.page
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	http://www.rockwellautomation.com/global/support/direct-dial.page
Literature Library	Installation Instructions, Manuals, Brochures, and Technical Data.	http://www.rockwellautomation.com/global/literature-library/overview.page
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	http://www.rockwellautomation.com/global/support/pcdc.page

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf.

Rockwell Otomasyon Ticaret A.Ş., Kar Plaza İş Merkezi E Blok Kat:6 34752 İçerenköy, İstanbul, Tel: +90 (216) 5698400

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 2080-IN012B-EN-P - March 2019 PN-513538

Supersedes Publication 2080-IN012A-EN-P - March 2018