Installation Instructions

Original Instructions

Allen-Bradley
by ROCKWELL AUTOMATION

ControlLogix Redundancy Modules

Catalog Numbers 1756-RM2, 1756-RM2K, 1756-RM2XT

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A redundant system is composed of two ControlLogix® redundancy modules working together that supervise the operating states and state transitions that establish the basic framework for redundancy operations. The redundant pairs provide a bridge between chassis pairs that let other modules exchange control data and synchronize their operations.

Summary of Changes

This manual contains new and updated information as indicated in the following table.

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Rockwell Automation

Connect the Redundancy Modules via a Fiber-optic Cable

IMPORTANT Do not connect the primary redundancy module to the secondary redundancy module until all other components that are used in the redundant chassis pair are installed, updated to the correct firmware revision, and configured.

Once the **first and second chassis and their components are installed**, you connect the redundancy modules via the 1756-RMC*x* fiber-optic communication cable. The cable is not included with the redundancy module. Before installation, order this fiber-optic communication cable separately.

The following redundancy cables are available from Rockwell Automation:

Fiber Cable Cat. No.	Length
1756-RMC1	1 m (3.28 ft)
1756-RMC3	3 m (9.84 ft)
1756-RMC10	10 m (32.81 ft)

The cable connection is made at the bottom of the module in a downward orientation. There is enough space between the transmit and receive connectors so you can use the LC connector coupler. The use of this coupler keeps the fiber-optic cable from bending so you can connect and disconnect the cable without removing the module from the chassis.

ATTENTION: Consider these points when connecting the fiber-optic cable:

- The redundancy module communication cable contains optical fibers. Avoid making sharp bends in the cable. Install the cable in a location where it will not be cut, run over, abraded, or otherwise damaged.
- The redundancy module contains a single-mode transmitter. If you connect this module to a multimode port, it can damage multimode devices.
- Under certain conditions, viewing the optical port can expose the eye to hazard. When viewed under some conditions, the optical port can expose the eye beyond the maximum permissible-exposure recommendations.
- Media redundancy is achieved by installing modules with redundant ports and installing a redundant fiber cable system. If a cable failure occurs, or a cable is degraded, the system uses the redundant network.
- When using a redundant system, route the two trunk cables (A and B) so that damage to one cable will not damage the other cable. This reduces the risk of both cables being damaged simultaneously.
- Redundant cabling can tolerate one or more faults on a single channel. If a fault occurs on both channels, the network operation is unpredictable.

Connect the Fiber-optic Communication Cable to the Redundancy Modules

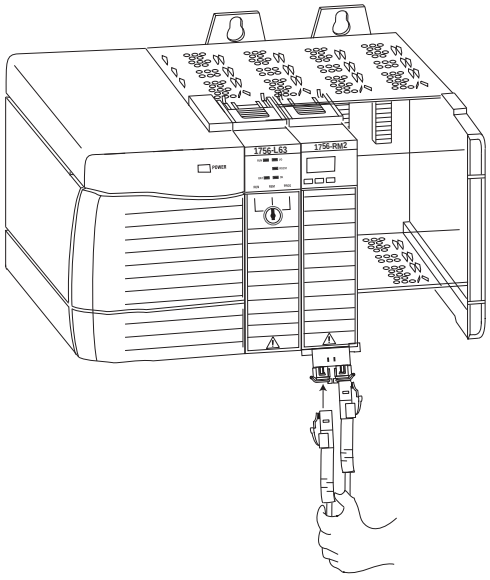
Follow this procedure to install the fiber-optic communication cable to the channels of the redundancy module.

IMPORTANT The redundancy module communication cable contains optical fibers. Avoid making sharp bends in the cable. Install the cable in a location where it cannot be cut, run over, abraded, or otherwise damaged.

If redundant channels between the redundancy modules are required, repeat the installation process for the unused port (CH1 or CH2) with a different fiber cable.

1. Remove the black protective channel cover on the first redundancy module in the redundant chassis pair.
2. Remove the protective caps from the cable ends.
3. Plug the cable connector into the CH1 or CH2 port on the first redundancy module.
4. Plug the other end of the cable into a channel on the secondary module.

We recommend that you match channel to channel, CH1 to CH1 and CH2 to CH2, for troubleshooting simplicity, but this match is not required.



IMPORTANT The redundancy module communication cable contains optical fibers. Avoid making sharp bends in the cable. Install the cable in a location where it cannot be cut, run over, abraded, or otherwise damaged.

Specifications

Attribute	1756-RM2, 1756-RM2K	1756-RM2XT
Connector type	LC-type (fiber-optic)	
Cable type	8.5/125 μm single-mode fiber-optic cable	
Channels	1 (transmit and receive fiber)	
Length, max	10 km (10,000 m, 10,936.13 yd)	
Transmission	1000 Mbps	
Wavelength	1310 nm	
SFP transceiver	Transceiver Rockwell Automation PN-91972 Connector/cable: LC duplex connector, 1000BASE-LX-compliant	
Temperature, operating	0…60 °C (32…140 °F)	-25…+70 °C (-13…+158 °F)
Corrosive Atmosphere(1) • ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3(2) per ANSI/ISA 71.04–2013, Airborne Contaminants—Gases Severity Level CX(2)(3) per IEC 60721-3-3:2019, Chemically Active Substances	
Temperature code	T4	
Power from system backplane	1.16 A at 5.1V DC 3.4 mA at 24V DC	1.16 A at 5.1V DC 3.4 mA at 24V DC

(1) Only applicable to modules that end with a 'K and 'XT'.
(2) Port Plugs must remain installed in unused ports at all times during storage and operation for the product to meet its corrosive atmosphere rating.
(3) Up to 9.6 microns per year, corrosion rate of copper.