**IMPORTANT PRODUCT INFORMATION**

GFK-2963D

Jan 2024

# PACSystems™ RSTi-EP

## POWER FEED MODULES (EP-7631 & EP-7641)
## POTENTIAL DISTRIBUTION MODULES
## (EP-700F, EP-710F, EP-711F, EP-751F & EP-750F)

EMERSON

# Warnings and Caution Notes as Used in this Publication

## ⚠ WARNING

Warning notices are used in this publication to emphasize that hazardous voltages, currents, temperatures, or other conditions that could cause personal injury exist in this equipment or may be associated with its use.

In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.

## ⚠ CAUTION

Caution notices are used where equipment might be damaged if care is not taken.

**Note:** Notes merely call attention to information that is especially significant to understanding and operating the equipment.

These instructions do not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met during installation, operation, and maintenance. The information is supplied for informational purposes only, and Emerson makes no warranty as to the accuracy of the information included herein. Changes, modifications, and/or improvements to equipment and specifications are made periodically and these changes may or may not be reflected herein. It is understood that Emerson may make changes, modifications, or improvements to the equipment referenced herein or to the document itself at any time. This document is intended for trained personnel familiar with the Emerson products referenced herein.

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# Introduction

Emerson  provides RSTi-EP power-feed modules (EP-7631 and EP-7641), which are used to refresh the current paths and isolate the power supply. The RSTi-EP station‘s main power supply is always fed in through the network adapter. Each module has a Module Status LED and connector block LEDs for inspection.

The power-feed module EP7631 must be connected if the current demand of the series of input modules is too large. The power-feed module EP-7641 must be connected if the current demand of the series of output modules is too large.

The potential distribution module EP-700F provides 16 connections for the functional earth.

The potential distribution module EP-711F provides 16 connections for +24 V from the input current path.

The potential distribution module EP-751F provides 16 connections for +24 V from the output current path.

The potential distribution module EP-710F provides 16 connections for ground from the input current path.

The potential distribution module EP-750F provides 16 connections for ground from the output current path.

Power-feed and potential distribution modules are passive modules without fieldbus communication, therefore they are not considered during configuration. A maximum of three passive modules (power-feed module, potential distribution module, empty slot module) may be installed in succession, however the next module to be installed must be an active module.

The RSTi-EP station is usually installed on a horizontally positioned DIN rail. Installation on vertically positioned DIN rails is also possible.

Modules should to be allowed to de-energize for a minimum 10 seconds after power down, prior to starting any maintenance activity.

In the case of a maximum power supply of >8 A and a maximum temperature of > +55 °C, all four contacts must be connected with 1.5 mm² wiring.

Refer to the RSTi-EP Slice I/O User Manual (GFK-2958) for additional information.

Refer to the RSTi-EP Power Supply Reference Guide, a software utility available on PME V9.00, for detailed power-feed requirements.

# Module Features

Spring style technology for ease of wiring

- DIN rail mounted
- Double-click installation for positive indication of correct installation

# Ordering Information

| Module | Description |
|---|---|
| EP-7631 | Power Module, 1 Channel 24VDC Input Flow 10A |
| EP-7641 | Power Module, 1 Channel 24VDC Output Flow 10A |
| EP-711F | Power Module, 16 Channels 24VDC Potential Distribution +24 VDC from Input Current Path |
| EP-751F | Power Module, 16 Channels 24VDC Potential Distribution +24 VDC from Output Current Path |
| EP-700F | Power Module, 16 Channels 24VDC Potential Distribution Functional Earth |
| EP-710F | Power Module, 16 Channels 24VDC Potential Distribution +0VDC from Input Current Path |
| EP-750F | Power Module, 16 Channels 24VDC Potential Distribution +0VDC from Output Current Path |

# Specifications

## Power-feed Modules

| Module Specification | EP-7631 | EP-7641 |
|---|---|---|
| **Supply Data** | | |
| Supply voltage | 20.4V – 28.8V | |
| Maximum feed current for input modules | 10 A | -- |
| Current consumption from output input path $I_{IN}$ | 10 mA | -- |
| Maximum feed current for output modules | -- | 10 A |
| Current consumption from output input path $I_{OUT}$ | -- | 10 mA |
| Operating temperature | -20°C to +60°C (-4 °F to +140 °F) | |
| Storage temperature | -40°C to +85°C (-40 °F to +185 °F) | |
| Air humidity (operation/transport) | 5% to 95%, noncondensing as per IEC 61131-2 | |
| **General Data** | | |
| Width | 11.5 mm (0.45 in) | |
| Depth | 76 mm (2.99 in) | |
| Height | 120 mm (4.72 in) | |
| Weight | 76 g (6.21 oz) | 76 g (6.21 oz) |

## Power Distribution Modules

| Specification | EP-700F | EP-711F | EP-751F | EP-710F | EP-750F |
|---|---|---|---|---|---|
| **Supply Data** | | | | | |
| Supply voltage | None | 20.4V – 28.8V | 20.4V – 28.8V | 0 V (from input current path) | 0 V (from input current path) |
| **General Data** | | | | | |
| Weight | 84 g (2.96 oz) | 84 g (2.96 oz) | 84 g (2.96 oz) | 84 g (2.96 oz) | 84 g (2.96 oz) |

# LED’s

Potential distribution modules have only a Module Status LED.

### Power-feed Modules

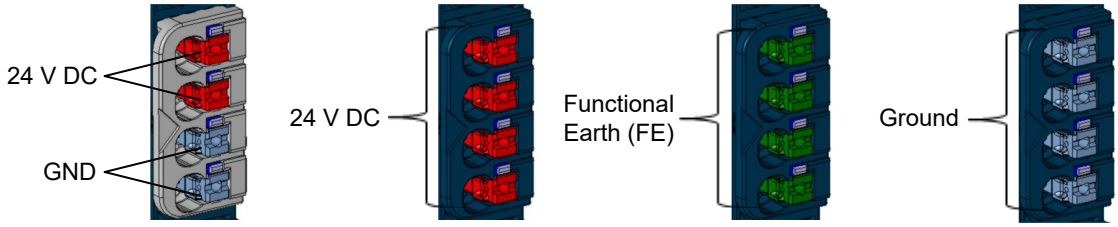
| LED | EP-7631 |
|---|---|
| **Module Status** | **Green:** Voltage applied and is > 18 V DC |
| | |
| 1.1 | |
| 1.2 | |
| 1.3 | |
| 1.4 | |
| 2.1 | |
| 2.2 | |
| 2.3 | |
| 2.4 | |
| 3.1 | **Green:** Supply voltage for input current path > 18 V DC |
| 3.2 | **Red:** Supply voltage for input current path < 18 V DC |
| 3.3 | |
| 3.4 | **Red:** Internal fuse defective, replace module |
| 4.1 | |
| 4.2 | |
| 4.3 | |
| 4.4 | |

| LED | EP-7641 |
|---|---|
| **Module Status** | **Green:** Voltage applied and is > 18 V DC |
| 1.1 | |
| 1.2 | |
| 1.3 | |
| 1.4 | |
| 2.1 | |
| 2.2 | |
| 2.3 | |
| 2.4 | |
| 3.1 | |

| | | |
|---|---|---|
|  | 3.2 | |
| | 3.3 | |
| | 3.4 | |
| | 4.1 | **Green:** Supply voltage for output circuit > 18 V DC |
| | 4.2 | **Red:** Supply voltage for output circuit < 18 V DC |
| | 4.3 | |
| | 4.4 | **Red:** Internal fuse defective, replace module |

# Field Wiring

The connection frame has one connector block, and two 24 V DC wires can be connected to each connector, along with two ground connections. Those four connectors are used as shown in the following figure. The Spring style technology allows either finely stranded or solid wire with crimped wire-end ferrules or ultrasonically welded wires, each with a maximum cross-section of 1.5 mm² (16 guage), to be inserted easily through the opening in the clamping terminal without having to use tools. To insert fine stranded wires without wire-end ferrules, the pusher must be pressed in with a screwdriver and released to latch the wire.




**Connector Blocks**

## Connector Specifications:

- Conductor cross-section 0.14 to 1.5 mm² (26 – 16 guage)
- Maximum ampacity: 10 A
- 4-pole

**⚠ CAUTION**

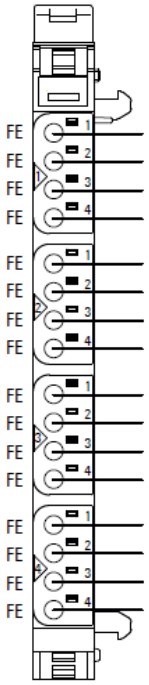
In case of a maximum power supply of >8 A and a maximum temperature of > +55 °C, all four contacts must be connected with 1.5 mm² wiring.

The modules do not have a fused sensor/activator power supply. All cables to the connected sensors/actuators must be fused corresponding to their conductor cross-sections (as per Standard DIN EN 60204-1, section 12).

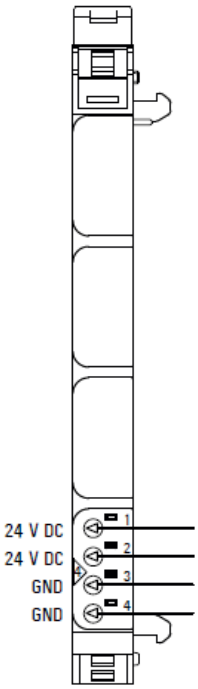
Refer to the RSTi-EP Slice I/O User Manual (GFK-2958) for additional information.

For technical assistance, go to https://www.emerson.com/Industrial-Automation-Controls/support.

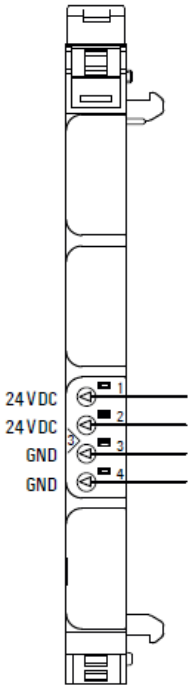
# Connection Diagrams



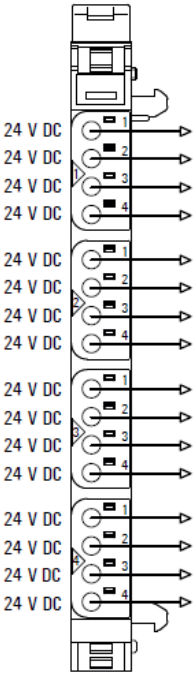

**EP-700F**



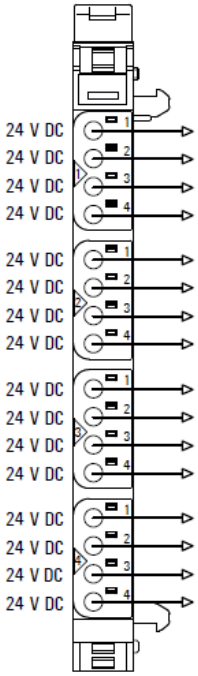

**EP-7641**



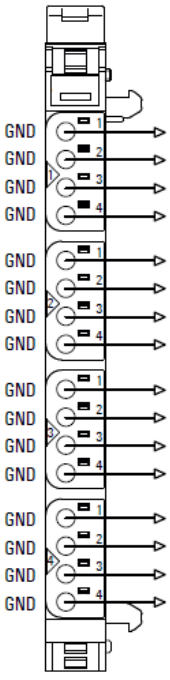

**EP-7631**




**EP-711F**




**EP-751F**

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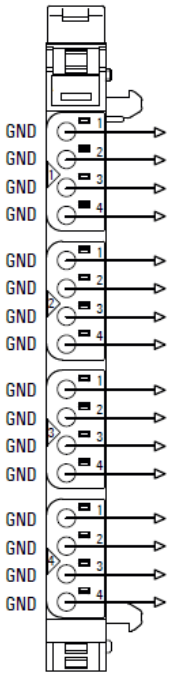
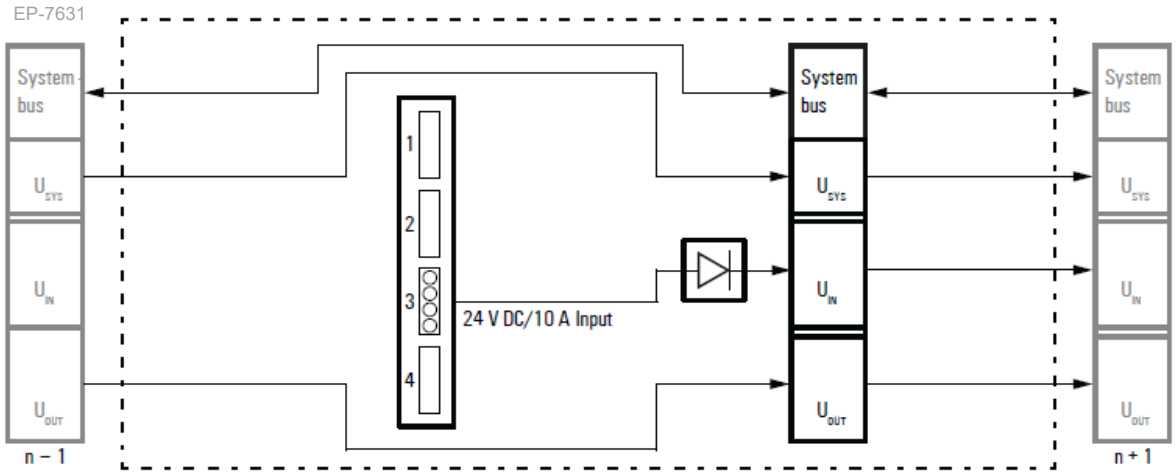
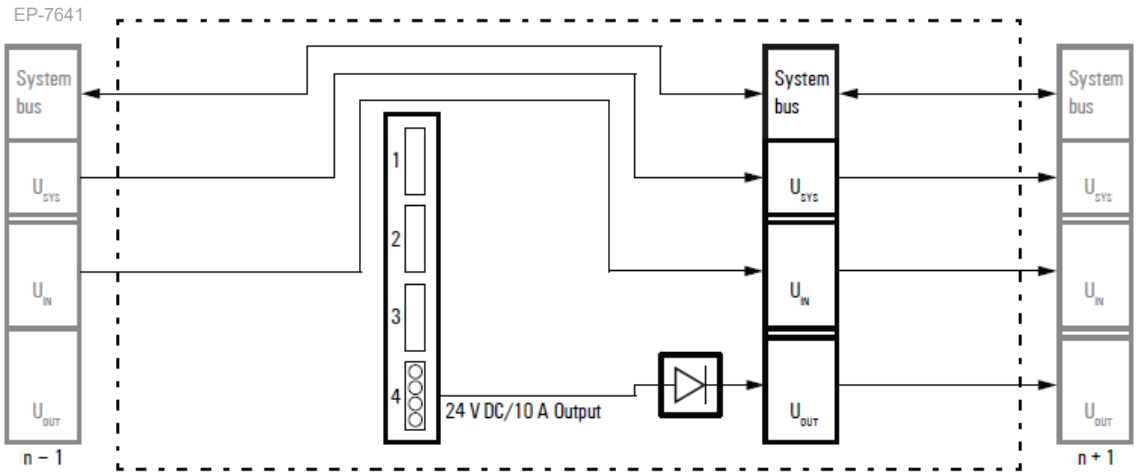



**EP-750F**

# Connection Block Diagrams




**EP-7631**

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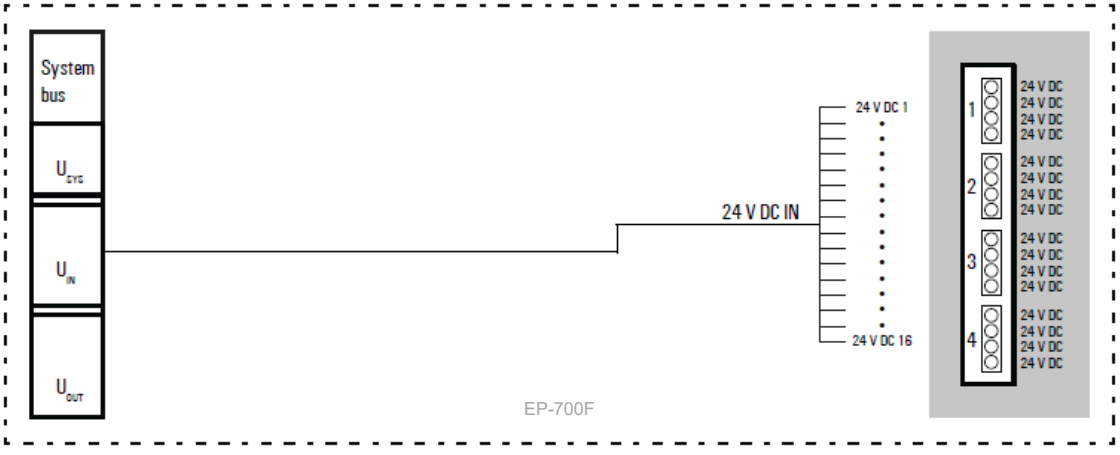
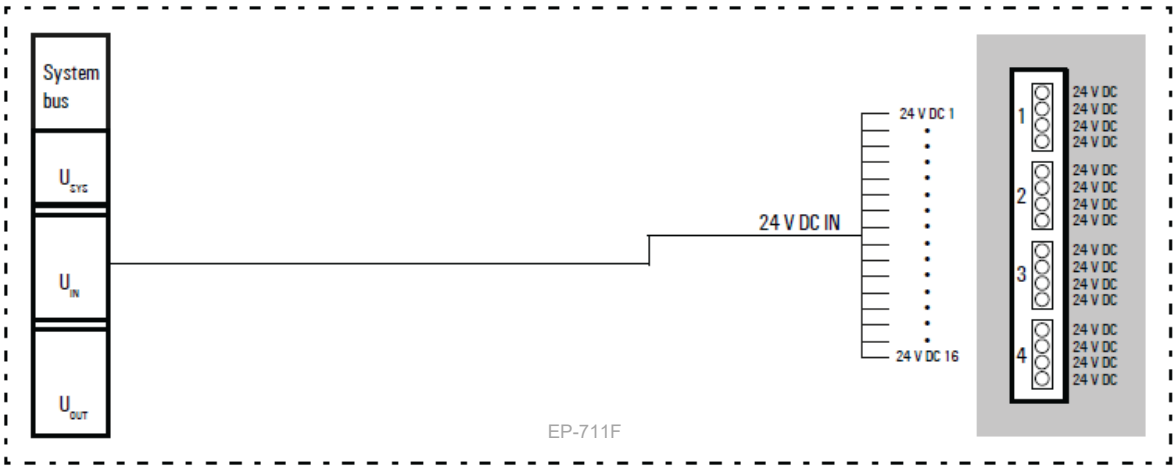
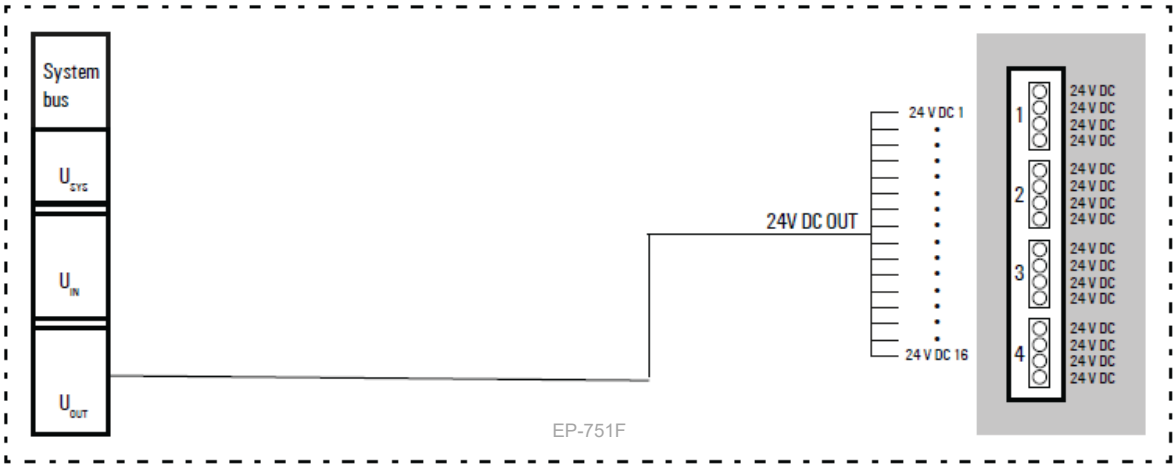


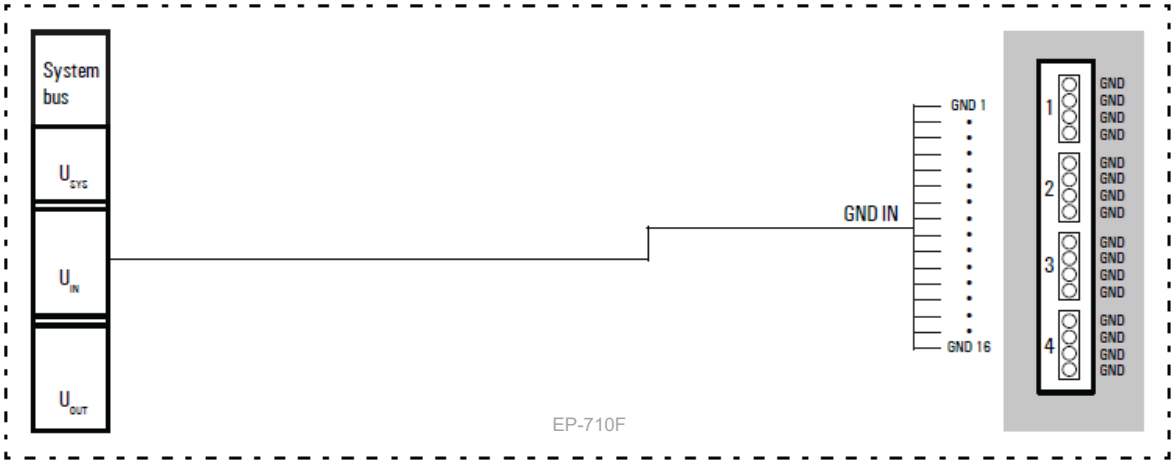
**EP-700F**



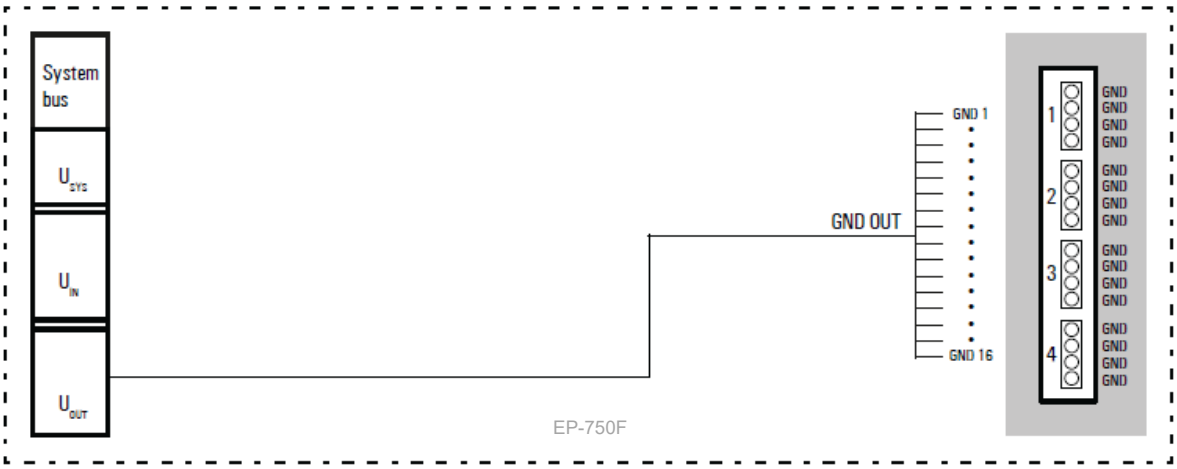

**EP-711F**




**EP-751F**



**EP-710F**




**EP-750F**

# Installation in Hazardous Areas

**⚠ WARNING**

- EQUIPMENT LABELED WITH REFERENCE TO CLASS I, GROUPS A, B, C & D, DIV. 2 HAZARDOUS AREAS IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C, D OR NON-HAZARDOUS AREAS ONLY
- EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2;
- EXPLOSION HAZARD - WHEN IN HAZARDOUS AREAS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES; AND
- EXPLOSION HAZARD - DO NOT CONNECT OR DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

## ATEX Marking

Ⓔx II 3 G Ex nA IIC T4 Gc

Ta: -20°C to +60°C (-4° F to +140 °F)

# Release History

| Catalog Number | Firmware Version | Date | Comments |
|---|---|---|---|
| EP-7631-D,<br>EP-7641-D<br>EP-700F-D<br>EP-710F-D<br>EP-711F-D,<br>EP-751F-D,<br>EP-750F-D. | N/A | Jan 2024 | Updated product markings to include UKCA, CCC & Morocco. |

| Catalog Number | Firmware Version | Date | Comments |
|---|---|---|---|
| EP-700F-C,<br>EP-710F-C<br>EP-711F-C<br>EP-750F-C<br>EP-751F-C<br>EP-7631-C<br>EP-7641-C | N/A | Sep-2019 | Following Emerson's acquisition of this product, changes have been made to apply appropriate branding and registration of the product with required certification agencies. No changes to material, process, form, fit or functionality. |
| EP-700F-B<br>EP-710F-B<br>EP-711F-B<br>EP-750F-B<br>EP-751F-B<br>EP-7631-B<br>EP-7641-B | N/A | Mar-2018 | These product revisions are updated to be usable in marine / shipbuilding application and pass marine certification tests. [DNV-GL & Lloyd's Register] |
| EP-7631<br>EP-7641<br>EP-700F<br>EP-711F<br>EP-751F<br>EP-710F<br>EP-750F | N/A | Dec-2015 | Documentation update only |
| EP-7631<br>EP-7641<br>EP-700F<br>EP-711F<br>EP-751F<br>EP-710F<br>EP-750F | N/A | Oct-2015 | Initial Release |

# Important Product Information for this Release

## Updates

None

## Functional Compatibility

Not Applicable

## Problems Resolved by this Release

None - Documentation update only

## New Features and Enhancements

None - Documentation update only

## Known Restrictions and Open Issues

None

# Operational Notes

None

# Product Documentation

RSTi-EP Slice I/O Module User Manual (GFK-2958)

RSTi-EP Slice I/O Functional Safety Module User Manual (GFK-2956)

# General Contact Information

Home link: http://www.emerson.com/industrial-automation-controls

Knowledge Base: https://www.emerson.com/iac-support

# Technical Support

**Americas**

Phone: 1-888-565-4155
1-434-214-8532 (If toll free option is unavailable)

Customer Care (Quotes/Orders/Returns): customercare.mas@emerson.com
Technical Support: support.mas@emerson.com

**Europe**

Phone: +800-4444-8001
+420-225-379-328 (If toll free option is unavailable)

+39-0362-228-5555 (from Italy - if toll-free 800 option is unavailable or dialing from a mobile telephone)

Customer Care (Quotes/Orders/Returns): customercare.emea.mas@emerson.com
Technical Support: support.mas.emea@emerson.com

**Asia**

Phone: +86-400-842-8599
+65-3157-9591 (All other Countries)

Customer Care (Quotes/Orders/Returns): customercare.cn.mas@emerson.com
Technical Support: support.mas.apac@emerson.com

Any escalation request should be sent to mas.sfdcescalation@emerson.com

**Note:** If the product is purchased through an Authorized Channel Partner, please contact the seller directly for any support.

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