

CERTIFICATE OF CONFORMITY

1. HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS

2. Certificate No: FM17US0075X

3. Equipment:
(Type Reference and Name) F304, F308, F312 and F316 Fieldbus Megablocks

4. Name of Listing Company: Relcom Inc

5. Address of Listing Company: 2221 Yew St, Forest Grove, Oregon 97116, United States of America

6. The examination and test results are recorded in confidential report number:

3041271 dated 15th September 2011

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM 3600:2022, FM 3611:2021, FM 3810:2021, ANSI/UL 60079-0:2020, ANSI/UL 60079-7:2021, ANSI/UL 60079-11:2018, ANSI/UL 61010-1:2012

8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

10. Equipment Ratings:

See Annex

11. The marking of the equipment shall include:

See Annex

12. Description of Equipment:

Megablock models F304, F308, F312, and F316 (the F3xx series products) are interconnection blocks for use in Fieldbus systems. They allow connection of up to sixteen (16) devices to a Fieldbus segment. Each product

Certificate issued by:



9 September 2024

J.E. Marquedant
VP, Manager - Electrical Systems

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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FM Approvals LLC. One Technology Way, Norwood, MA 02062 USA

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consists of one (1) 2-entry trunk port and up to sixteen (16) spur ports. Each spur port includes a current limiting "SpurGuard" circuit. The SpurGuards prevent a short on the spur cable or a short in the attached device from disabling the entire Fieldbus segment. Each F304, F308, F312 and F316 includes an F97 Fieldbus terminator to be installed if needed. F3xx Megablock versions with a -T suffix (i.e. F304-xx-T-xx) include a built-in terminator. Pluggable screw terminal connectors are standard on F3xx Megablocks. All pluggable screw terminal connectors are replaced by cage clamp style connectors by adding -PC to the part number (i.e. F304-xx-T-PC). All pluggable screw terminal connectors except the trunk connector are replaced by insulation displacement style connectors by adding -PD to the part number (i.e. F304-xx-T-PD). The F3xx Megablocks Terminator are intended for installation in an IP54 enclosure. On version without Nonincendive output connections the Overvoltage Protection Circuit is not populated indicated by -V2 (i.e. F304-V2-T-PD).

See Annex for additional descriptions.

13. Specific Conditions of Use:

1. The apparatus is to be installed within an enclosure with a minimum ingress protection level of IP54 in accordance with ANSI/UL 60079-0.
2. The apparatus shall be installed in an enclosure meeting the requirements of ANSI/UL 61010-1 (82.02.01).
3. The apparatus shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
15 September 2011	Original Issue.
2 March 2017	<u>Supplement 2:</u> Report Reference: – RR208629 dated 2 nd March 2017. Description of the Change: Change to model code structure to allow configuration without over-voltage protection circuitry.
2 October 2019	<u>Supplement 3:</u> Report Reference: - RR219909 dated 2 nd October 2019. Description of the Change: Addition of protection level "ec" and "[ic]",. Addition of standards to cover these new protection levels and update ANSI/ISA 60079-0 to 2019 Edition.

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Date	Description
10 March 2020	<u>Supplement 4:</u> Report Reference: - RR222479 dated 10 th March 2020. Description of the Change: Remove level of protection "[ic]" from drawing and label for Megablocks without over-voltage protection which as added in error under Supplement 3.
19 December 2022	<u>Supplement 5:</u> Report Reference: - RR235228 dated 19 th December 2022. Description of the Change: Update certificate to latest template, correct standards from ANSI/ISA to ANSI/UL, update Specific Condition of Use, update part of ANSI/UL 60079-7 assessment and update to drawings.
9 September 2024	<u>Supplement 6:</u> Report Reference: PR469774 dated 9 September 2024. Description of the Change(s): Change to intrinsically safe critical component, updates standards to latest editions, and update certificate to new template.

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ANNEX

F3a-b-c Megablox Series Fieldbus

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D; Temperature Class T4 Ta = -50°C to +70°C with Nonincendive Field Wiring in accordance with drawing 502-484; Nonincendive for use in Class I, Zone 2 IIC T4 Ta = -50°C to +70°C with Nonincendive Field Wiring in accordance with drawing 502-484, Zone 2 AEx ec [ic] IIC T4 Gc Ta = -50°C to +70°C in accordance with drawing 502-484 hazardous (classified) locations

Markings:

NI CL I DIV 2 GP ABCD T4
NI CL I ZN 2 GP IIC T4
Zone 2 AEx ec [ic] IIC T4 Gc
-50°C ≤ Tamb ≤ 70°C

Description of Equipment:

F3a-b-c. Megablock Series Fieldbus Connection Blocks with over-voltage protection.

a = Number of Spurs = 04, 08, 12 or 16.

b = Option for a built-in terminator = -T or blank.

c = Option for terminal connection: -PC, -PD or blank.

Nonincendive Field Wiring/Entity Parameters, Groups C and D (IIB, IIA) only:

$V_{max} = 32V$, $C_i = 0$, $L_i = 0$

$V_{oc} = 32V$, $I_{SC} = 56mA$, $P_o = 1.792W$, $C_a = 80nF$, $L_a = 0.26mH$

Nonincendive Field Wiring/Entity Parameters, Groups A and B (IIC):

$V_{max} = 24V$, $C_i = 0$, $L_i = 0$

$V_{oc} = 24V$, $I_{SC} = 56mA$, $P_o = 1.344W$, $C_a = 80nF$, $L_a = 0.15mH$

F3a-V2-b-c Megablox Series Fieldbus

Equipment Ratings:

Nonincendive for use in Class I, Division 2, Groups A, B, C and D; Temperature Class T4 Ta = -50°C to +70°C with Nonincendive Field Wiring in accordance with drawing 502-484; Nonincendive for use in Class I, Zone 2 IIC T4 Ta = -50°C to +70°C with Nonincendive Field Wiring in accordance with drawing 502-484, Zone 2 AEx ec IIC T4 Gc Ta = -50°C to +70°C hazardous (classified) locations

Markings:

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NI CL I DIV 2 GP ABCD T4

NI CL I ZN 2 IIC T4

Zone 2 AEx ec IIC T4 Gc

$-50^{\circ}\text{C} \leq T_{\text{amb}} \leq 70^{\circ}\text{C}$

Description of Equipment:

F3a-V2-b-c. Megablock Series Fieldbus Connection Blocks without overvoltage protection.

a = Number of Spurs = 04, 08, 12 or 16.

b = Option for a built-in terminator = -T or blank.

c = Option for terminal connection: -PC, -PD or blank.

Nonincendive Field Wiring Parameters, Groups C and D (IIB, IIA) only:

$V_{\text{max}} = 32\text{V}$, $C_i = 0$, $L_i = 0$

$V_{\text{oc}} = 32\text{V}$, $I_{\text{SC}} = 56\text{mA}$, $P_o = 1.792\text{W}$, $C_a = 80\text{nF}$, $L_a = 0.26\text{mH}$

Nonincendive Field Wiring Parameters, Groups A and B (IIC):

$V_{\text{max}} = 24\text{V}$, $C_i = 0$, $L_i = 0$

$V_{\text{oc}} = 24\text{V}$, $I_{\text{SC}} = 56\text{mA}$, $P_o = 1.344\text{W}$, $C_a = 80\text{nF}$, $L_a = 0.15\text{mH}$

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