HAZARDOUS (CLASSIFIED) LOCATION

NI Class I Div 2 ABCD T4
NI Class I Zone 2 IIC T4 (US only)
Class I, Zone 2 AEx ec IIC T4 Gc
Ex nA [nL] IIC T4 Gc (Canada only)
Ex ec IIC T4 Gc (Canada only)

$-50°C \le T_{amb} \le 70°C$
Field wiring shall be rated for 70C

Gray Spur (Fieldbus Device) Connections

- S + - S + - S + - S +

F3xx Megablock™
Fieldbus Connection Block
(F308, 8-spur series shown)

Gray spur connections are
Current limited to 53.5mA (nominal)
V_{max}= 24V Gas Groups A, B (IIC)
V_{max}= 32V Gas Groups C, D (IIB, IIA)
I_{max} = 2A
$V_{oc} = V_{max\ power\ supply}$
I_{sc} = 56mA
$C_i = L_i = 0$,
P_o = 1.344W Gas Groups A, B (IIC)
P_o = 1.792W Gas Groups C, D (IIB, IIA)

Gas Groups	A, B (IIC)	C (IIB)	D (IIA)
Ca	80nF	80nF	80nF
La	0.15mH	0.26mH	0.26mH

- S + - S + - S + - S +

Gray Spur (Fieldbus Device) Connections

Gray Spur Outputs are energy limited (Non-incendive Field Wiring) and may be live worked without gas clearance where allowed by local code.

To support live working of the devices connected to the gray spurs, the following criteria must be met:

- Device must have entity parameters with a maximum input voltage greater than or equal to V_{oc} of the Megablock.
- $C_a \le C_i + C_{cable}$
- $L_a \le L_i + L_{cable}$

Installation must be in accordance with the National Electrical Code (NFPA 70, Article 504), ANSI/ISA-RP12.6, and CEC Part 1, or any other applicable local electrical requirements.

The plastic parts can store static charge. Clean only with a damp cloth to prevent static buildup.

+ S -
+ S -

Black Trunk Connections

+ S -

F97

V_{max}=32V
I_{max} = 2A

F3xx Megablock Terminator

NON-HAZARDOUS LOCATION

Host Connection (typical)

+ S -

FIELDBUS POWER SUPPLY

$V_{out\ (max)} \le 24V$ Gas Groups A, B (IIC)
$V_{out\ (max)} \le 32V$ Gas Groups C,D (IIB, IIA)
$I_{out\ (max)} \le 2A$
Must meet Ex n requirements for
Ex nA [nL] installations.
Must Meet Ex e requirements for
Ex ec installations.

+ S -

+
-

24VDC Power Source (typical)

Fusing of the power source is recommended

Shield is grounded for reasons other than Electrical Safety

Galvanic isolation in accordance with IEC61010 provided by Power Source or Power Supply.

If the Fieldbus Power Supply is suitably rated, it may be installed in the Hazardous Area.

WARNING – EXPLOSION HAZARD. DO NOT DISCONNECT EQUIPMENT WHEN A FLAMMABLE OR COMBUSTIBLE ATMOSPHERE IS PRESENT (except gray spurs)

Megablock™ Part Numbers:

F3xx[-V2][-T][-PC][-PD]

xx – indicates the number of spurs (04, 08, 12, or 16)
-V2 – option for no over-voltage protection
-T – option for a built-in terminator
-PC – option for pluggable spring clamp connectors
-PD – option for pluggable insulation displacement connectors

Standard connectors are Pluggable Screw Terminal type.

The F97 is not used if the F3xx contains an internal Terminator (-T part number suffix).

Wire Requirements:

Connector Type	AWG	Torque
Screw Terminal	22-14	0.5-0.6Nm
Spring Clamp	24-12	NA
Insulation Displacement	20-18	NA

FM APPROVED

Relcom Inc.
INDUSTRIAL LAN | WIRING COMPONENTS AND TESTERS
2221 Yew Street, Forest Grove, Oregon 97116 USA

FM CONTROL DRAWING FOR F3XX MEGABLOCK™ SERIES FIELDBUS CONNECTION BLOCKS CID2, Zone 2, nA [nL], AND ec, INSTALLATIONS

Approved by: Cyrus Kelly	Date: 01 DEC 2022
Doc. No. 502-484	Rev. F.0
	Sheet 1 of 3

HAZARDOUS (CLASSIFIED) LOCATION

Class I, Zone 2 AEx ec [ic] IIC T4 Gc
Ex ec [ic] IIC T4 Gc (Canada only)

$-50°C \le T_{amb} \le 70°C$
Field wiring shall be rated for 70C

NON-HAZARDOUS LOCATION

Gray Spur (Fieldbus Device) Connections

F3xx Megablock™
Fieldbus Connection Block
(F308, 8-spur series shown)

Gray spur connections are
Current limited to 53.5mA (nominal)
V_{max}= 24V Gas Groups A, B (IIC)
V_{max}= 32V Gas Groups C, D (IIB, IIA)
I_{max} = 2A
$V_{oc} = V_{max\ power\ supply}$
I_{sc} = 56mA
$C_i = L_i = 0$,
P_o = 1.344W Gas Groups A, B (IIC)
P_o = 1.792W Gas Groups C, D (IIB, IIA)

Gas Groups	A, B (IIC)	C (IIB)	D (IIA)
Ca	80nF	80nF	80nF
La	0.15mH	0.26mH	0.26mH

Gray Spur (Fieldbus Device) Connections

Gray Spur Outputs are energy limited (Non-incendive Field Wiring) and may be live worked without gas clearance where allowed by local code.

To support live working of the devices connected to the gray spurs, the following criteria must be met:

- Device must have entity parameters with a maximum input voltage greater than or equal to V_{oc} of the Megablock.
- $C_a \le C_i + C_{cable}$
- $L_a \le L_i + L_{cable}$

Black Trunk Connections

F97

V_{max}=32V
I_{max} = 2A

F3xx Megablock Terminator

Host Connection (typical)

FIELDBUS POWER SUPPLY

$V_{out\ (max)} \le 24V$ Gas Groups A, B (IIC)
$V_{out\ (max)} \le 32V$ Gas Groups C,D (IIB, IIA)
$I_{out\ (max)} \le 2A$
Must Meet Ex e requirements for
Ex ec [ic] installations.

24VDC Power Source (typical)

Fusing of the power source is recommended

Shield is grounded for reasons other than Electrical Safety

Galvanic isolation in accordance with IEC61010 provided by Power Source or Power Supply.

If the Fieldbus Power Supply is suitably rated, it may be installed in the Hazardous Area.

WARNING – EXPLOSION HAZARD. DO NOT DISCONNECT EQUIPMENT WHEN A FLAMMABLE OR COMBUSTIBLE ATMOSPHERE IS PRESENT (except gray spurs)

Megablock™ Part Numbers:

F3xx[-T][-PC][-PD]

xx – indicates the number of spurs (04, 08, 12, or 16)
-T – option for a built-in terminator
-PC – option for pluggable spring clamp connectors
-PD – option for pluggable insulation displacement connectors

Standard connectors are Pluggable Screw Terminal type.

The F97 is not used if the F3xx contains an internal Terminator (-T part number suffix).

Wire Requirements:

Connector Type	AWG	Torque
Screw Terminal	22-14	0.5-0.6Nm
Spring Clamp	24-12	NA
Insulation Displacement	20-18	NA

Installation must be in accordance with the National Electrical Code (NFPA 70, Article 504), ANSI/ISA-RP12.6, and CEC Part 1, or any other applicable local electrical requirements.

The plastic parts can store static charge. Clean only with a damp cloth to prevent static buildup.

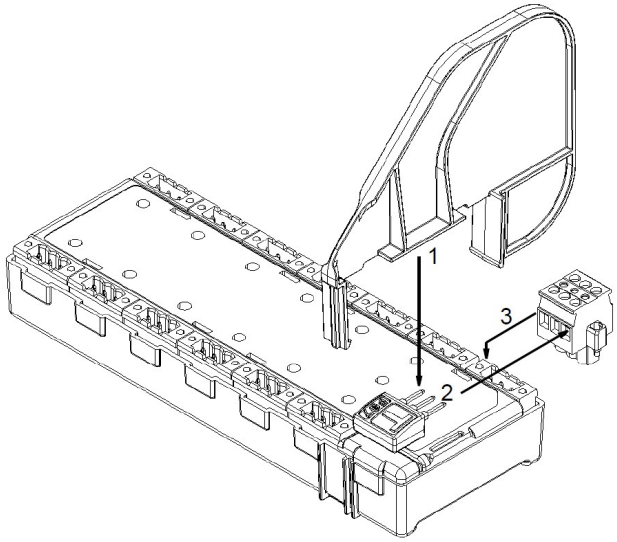
FM APPROVED

Relcom Inc.
INDUSTRIAL LAN | WIRING COMPONENTS AND TESTERS
2221 Yew Street, Forest Grove, Oregon 97116 USA

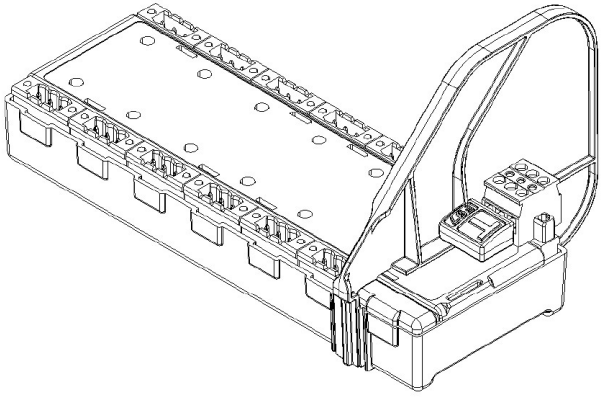
FM CONTROL DRAWING FOR F3XX MEGABLOCK™ SERIES FIELDBUS CONNECTION BLOCKS ec [ic] INSTALLATIONS

Approved by: Cyrus Kelly	Date: 01 DEC 2022
Doc. No. 502-484	Rev. F.0
	Sheet 2 of 3

Installing the Partition, Terminator, and Connector



Partition, Terminator, and Connector Installed



Partition Installation

The Partition must be installed for Ex nA [ic] applications. Orient the partition as shown above and press down as indicated by the arrow. The 'fingers' will slide in the two channels on each side of the F3xx until they latch in place at the bottom of the case. The channels are sized differently so the Partition cannot be installed backwards.

Terminator Installation

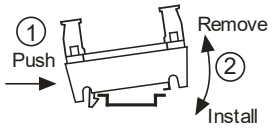
If needed the F97 Terminator is installed in the Black Dual Pluggable connector as shown above. Insert it into the connector and tighten the screws.

Connector Installation

The connectors are installed as shown in the diagram above. Fully insert them into the mating connector on the F3xx. Secure the two retaining screws to prevent the connector from unexpectedly dislodging.

DIN Rail Mounting

F3xx Megablocks are designed to be mounted on 35 mm DIN rail using the clip mechanism on the back of each unit. Mounting can be vertical or horizontal. Use of DIN rail end stops is recommended.



Repair and Maintenance

No regular maintenance is required for these products. There are also no user serviceable parts in this product. Contact the distributor or factory for any product issues.

Specific Conditions of Use

- The apparatus is to be installed within an enclosure which meets a minimum ingress protection level of IP54 in accordance with ANSI/ISA/CSA C22.2 No. 60079-0 and CSA C22.2 No. 60079-15 as applicable.
- The apparatus shall be installed in an enclosure meeting the requirements of ANSI/ISA 61010-1 (82.02.01) and CSA Standard C22.2 No 61010-1.
- The apparatus shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.
- For Level of Protection 'nA' provisions shall be made externally to the F304, F308, F312 and F316 Megablocks to prevent the rated input from exceeding by transient disturbances of more than 140% of the rated voltage.
- For Level of Protection 'nA' the apparatus shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.

Certification Markings F3xx

FM APPROVED
FM17CA0041X
FM17US0075X

NI Class I Div 2 ABCD T4
NI Class I Zone 2 IIC T4 (US only)
Class I, Zone 2 AEx ec [ic] IIC T4 Gc
Ex nA [nL] IIC T4 Gc (Canada only)
Ex ec [ic] IIC T4 Gc (Canada only)
Install per document 502-484
Relcom Inc. Forest Grove, OR USA

Certification Markings – F3xx–V2

FM APPROVED
FM17CA0041X
FM17US0075X

NI Class I Div 2 ABCD T4
NI Class I Zone 2 IIC T4 (US only)
Class I, Zone 2 AEx ec IIC T4 Gc
Ex nA [nL] IIC T4 Gc (Canada only)
Ex ec IIC T4 Gc (Canada only)
Install per document 502-484
Relcom Inc. Forest Grove, OR USA

Relcom Inc.
INDUSTRIAL LAN | WIRING COMPONENTS AND TESTERS
2221 Yew Street, Forest Grove, Oregon 97116 USA

F3XX MEGABLOCK™ SERIES

INSTALLATION INSTRUCTIONS

Approved by: Cyrus Kelly	Date: 01 DEC 2022
Doc. No. 502-484	Rev. F.0
	Sheet 3 of 3