

# Installation Instructions

FCS-TI-yy  
FCS-S-yy  
FCS-E-yy

# FCS-TI, S, E Series

## 1010.1 Equipment Information

Equipment Class III, Pollution Degree 1, Installation Category I

Maximum Altitude: 2000m

Humidity: 0 to 90% (non-condensing)

Operating Temperature: -40°C to 70°C

For Indoor Use Only (IP 54 minimum enclosure)

**Electrical Ratings** (see Drawing for connection information and certified devices)

Area Classification	Ratings	Drawing	Agency
Class I, Div 2 ABCD T4 Class I, Zone 2 IIC T4 Ex nA IIC T4 AEx nA IIC T4	32VDC, 1A	502-125	CSA
Class I, Div 1 ABCD Ex ia IIC	See Drawing	FCS-M1-9801	CSA

**Drawing FCS-M1-9801 is a separate document – see document number 500-274.**

## Installation

Refer to the drawing that is appropriate for the area in which the FCS series device will be installed. These drawings represent typical installations and are intended to address the safety aspects of the area for which they are drawn. Actual segment connections may vary depending on factors such as the required number of Fieldbus devices to be connected to the segment (determines the specific models and quantities of components used).

**IMPORTANT: For SpurGuards to work properly, the Fieldbus Segment MUST be isolated from ground.**

## Mounting

The FCS connection blocks are designed to be mounted on 35 mm DIN rail using the integrated clip mechanisms at the bottom of each unit. Mounting can be vertical or horizontal. Use of DIN rail end stops is highly recommended. The FCS connection blocks must be installed inside of an enclosure with a minimum rating of IP 54.

## Wiring connections

There are three different terminals available on these connection blocks. This is indicated by the last two characters of the part number – generically indicated by “yy” above. CC is Cage Clamp style connectors which are spring loaded. We supply 3 levers with each block to use to open the connector. Push on the lever to open the connector then slide the wire in the connector opening. Release the lever to cause the connector to grip the wire. ST is the Screw Terminal style. Use a screwdriver to open the connector, insert the wire, then tighten to grip the wire. PL is for the Pluggable Screw Terminal connectors. Use the same procedure as with the ST connectors. The PL version allows you to remove a 3 wire connection to the block without using a tool. They are also the only connector style which supports the discrete SpurGuards™ (FCS-SG-xx).

## Testing/Troubleshooting

Once DC power has been connected to the Fieldbus segment, the green power LEDs on the connection blocks should be lit, indicating that DC power is present on the segment trunk. **If the green LED is not lit**, verify the integrity and polarity of the trunk cable connections to the FCS blocks, that the voltage measured at the trunk connection to the block is high enough, that there are no shorts in the trunk cable, and that the power supply is operating properly.

## Operation

During normal operation, the green power LED should be lit. If the green LED is not lit, follow the instructions in the testing/troubleshooting section above.

## Maintenance Requirements

These FCS blocks contain no user serviceable parts. Non-functioning units should be returned to the manufacturer for replacement or repair. No regular cleaning is required. Visible dirt may be removed with a damp cloth.

## For Further Information

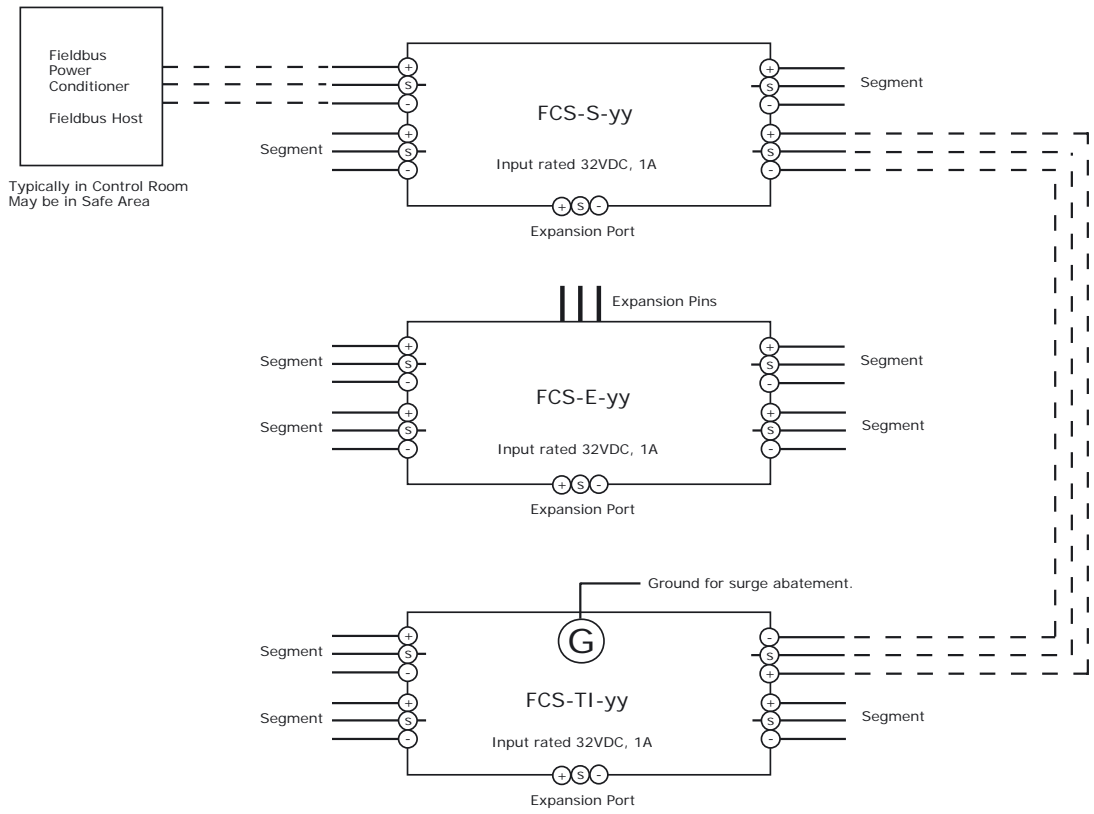
Contact your local MTL representative or Relcom Inc. as listed at the bottom of this page.

# 502-125: Div2/Zone2 Installation – (CSA and US)

## HAZARDOUS (CLASSIFIED) LOCATION


Class I, Division 2, Groups A, B, C, D, T4  
 Class I, Zone 2 IIC  
 Ex nA IIC T4      AEx nA IIC T4  
 -40 C ≤ Tamb ≤ 70 C  
 TO BE INSTALLED IN AN IP 54 OR BETTER ENCLOSURE

**WARNING:**  
 EXPLOSION HAZARD - DO NOT DISCONNECT  
 EQUIPMENT UNLESS POWER HAS BEEN SWITCHED  
 OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.



Dotted lines indicate a typical connection scheme. Actual implementations will vary. Any number of listed part numbers may be connected together.

"Segment" connections may be left unconnected, or may connect to a Fieldbus Device.

 The Expansion Port allows an FCS-E-yy to add 4 more Segment connections to the Fieldbus Segment. When using an FCS-E-yy with a FCS-x-yy, make sure to use DIN Rail End Stops to prevent port disengagement.

The Segment connections may connect to a Fieldbus Host, Fieldbus Device, or a connection block that feeds other Fieldbus Devices.

Part Numbers:

FCS-TI-CC	FCS-S-CC	FCS-E-CC
FCS-TI-ST	FCS-S-ST	FCS-E-ST
FCS-TI-PL	FCS-S-PL	FCS-E-PL

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



 INDUSTRIAL LAN   WIRING COMPONENTS AND TESTERS 2221 Yew Street, Forest Grove, Oregon 97116 USA	
Title: <b>CONTROL DRAWING FOR FCS-TI, S, E                  CLASS I, DIV 2 (ZONE 2)                  HAZARDOUS LOCATIONS</b>	
Approved By: <b>Mike Strauser</b>	Date: <b>1/16/06</b>
<b>Drawing Number: 502-125</b>	<b>Rev.: A</b>

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# EMC Summary

FCS-TI-yy  
FCS-S-yy  
FCS-E-yy

# FCS-TI, S, E Series

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## FCS Series EMC Summary

European Union EMC Tests in accordance with EN61326 EMC Product Family Standard for measurement, control and laboratory equipment.

Test Items: **FCS-PH, FCS-PCT, FBR-1, FCS-S, FCS-E, FCS-TI, FCS-TG, FCS-PM, FCS-SG, FBT-3, FBT-4**

Other products conforming based on these test results include:

**FCS-TI-yy, FCS-S-yy, FCS-E-yy**

## European Union Electromagnetic Compatibility (EMC) Tests in accordance with EC Council Directive 89/336/EEC

### Emissions Tests per EN61326

Result	Standard	Description	Port	Criteria
Pass	EN61326	Radiated Emissions	Enclosure	A
N/A	EN61326	Conducted Emissions	AC Mains	

### Immunity Tests per EN61326 Annex A

Result	Standard	Description	Port	Criteria
Pass	EN61000-4-2	Electrostatic Discharge Immunity	Enclosure	B
Pass	EN61000-4-3	RF Electromagnetic Field Immunity	Enclosure	A
Pass	EN61000-4-4	Electrical Fast Transient/Burst Immunity	DC / IO Port	B
N/A	EN61000-4-5	Electrical Slow Transient Immunity	N/A	N/A
Pass	EN61000-4-6	RF Conducted Immunity	DC / IO Port	A
N/A	EN61000-4-8	Magnetic Field Immunity	N/A	N/A
N/A	EN61000-4-11	Voltage Dips/Short Interruptions Imm.	N/A	N/A

I, Mike Strauser, representative for Relcom Inc., verify that the product tested is representative of production products to be sold.

