

# Product Specification

FOUNDATION™ Fieldbus  
Profibus PA

## FCS-TI-xx

For new installations, please see our Megablock Connection Products.

The **Isolated Terminating Block, FCS-TI series**, is used as a terminator and wiring block at the far end of the segment, sometimes called the chicken foot. It interconnects up to four shielded wire pairs; for example, the home run cable and three devices. A high energy surge suppressor built into the isolated Terminator helps to protect the devices attached to the Fieldbus from near lightning strikes. A stainless steel ground stud is used for earthing the surge currents induced into the shields of the Fieldbus wiring. When not discharging surges, the ground stud is DC isolated from the cable shields. The FCS-TI series also contains a built-in differential surge suppressor that limits voltage spikes which may be present on the Fieldbus. This also helps to protect attached devices from damage. Only one isolated Terminating Block is used on each Fieldbus segment. The Terminator can be expanded with Relcom Fieldbus Expander blocks, FCS-E series, to provide four additional device connections. The Terminator has an LED that illuminates to indicate when segment power is present.

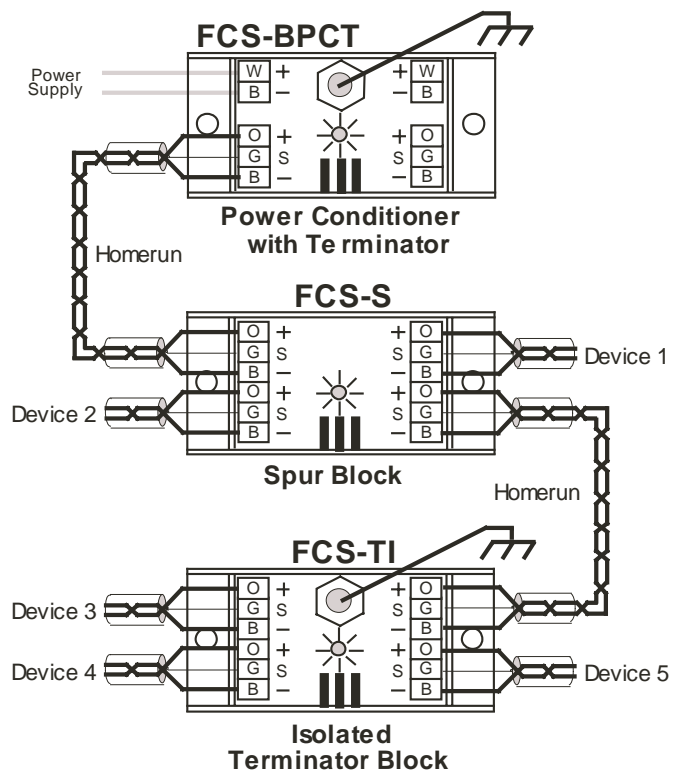
### Use

Fieldbus devices are connected to the Terminator with shielded twisted pair Fieldbus cable. Up to four connections may be made at the Terminator. The connections are typically one homerun cable and one, two, or three device cables. A controller or DCS is also considered to be a "device".

To prevent "ground loop currents" only one point on each segment should be grounded. Because the bolt on the Isolated Terminator is only connected to the shield during a surge event, it will not contribute to a ground loop. The bolt on the Isolated Terminator should ALWAYS be grounded to assist in shunting lightning induced surges to ground. The Terminator may be mounted on a flat surface with screws or on a 35mm DIN rail using the integrated sliding tab. See the package outline on the back page of this sheet for additional mounting and dimensional details.

### Sample Topology

This topology illustrates a typical Fieldbus segment where the power is supplied in the control room and the devices are connected to Relcom Fieldbus Connection Blocks in the field. If additional Fieldbus devices need to be added, Expansion Blocks (FCS-E) can be plugged into any of the FCS wiring blocks to increase the number of Fieldbus connection points by four (4) for each Expansion Block used. The shields of the segment wiring are grounded by attaching the bolt on the Power Conditioner to ground. Grounding the bolt on the Isolated Terminator Block provides protection from shield currents induced by near lightning strikes but does not provide a connection to ground under normal operating conditions.



Product specifications are subject to change without notice.



# Relcom Inc.

INDUSTRIAL LAN | WIRING COMPONENTS AND TESTERS

## Installation

FCS-TI series wiring blocks can be mounted vertically or horizontally within a suitable enclosure, such as a field junction box. They can be mounted directly or by using 35 mm DIN rail. They are secured to DIN rail by two extendable locking tabs. DIN rail end stops are recommended to prevent sliding in vertical installations.

## Specifications

Input Voltage:	9 — 32Vdc
Input Current:	1A max.
Terminator:	100 ohm 1%, 1 $\mu$ F 50 V
Operating Temperature:	-45 C to +70 C
LED Current:	3 mA maximum
(at 32 Volt segment power)	
Expansion connector:	One set female (gold plated)
Wire Capacity:	12-24 AWG
Case material:	Lexan Polycarbonate
Weight:	105 g
Surge Limit Start:	39 Volts (differential)
Surge Limit (Hard):	43 Volts (differential)
Surge Capacity:	10,000A (lightning)



CSA approved Intrinsically Safe and Non-Incendive Equipment for use in Hazardous Locations.

Class I, Division 1, Groups A, B, C, and D  
Class I, Zone 0, Group IIC, IIB and IIA

Class I, Division 2, Groups A, B, C, and D;  
Ex nA IIC T4  
AEx nA IIC T4

## Part Numbers

### FCS-S Series

Terminator Block with surge suppression and cage clamp connectors

### Part Number

FCS-TI-CC

Terminator Block with surge suppression and pluggable screw terminal connectors (SpurGuard™ compatible)

FCS-TI-PL

Terminator Block with surge suppression and screw terminal connectors

FCS-TI-ST

### Accessories

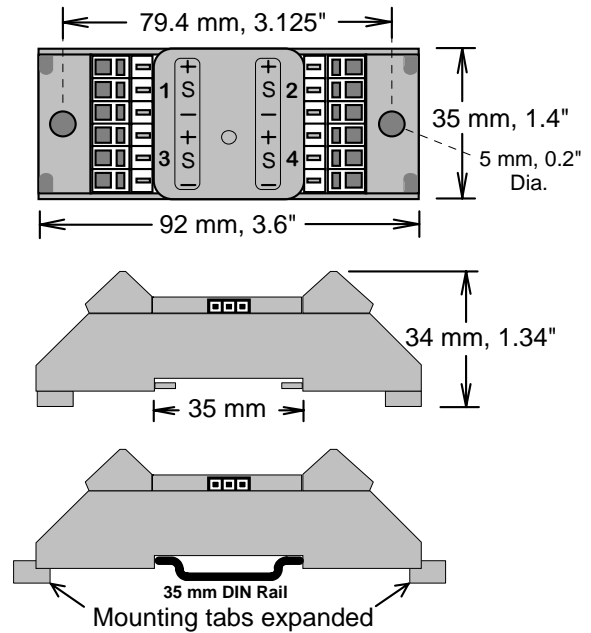
35 mm DIN Rail, 1 meter length  
DIN rail end stop

### Part Number

FCS-A01  
FCS-A02

## FCS Package Outline

(ground/surge connection bolt not shown)



Relcom Fieldbus Connection System (FCS) wiring blocks are protected by U.S. Patent 5,775,955

Relcom SpurGuard™ technology is protected by multiple U.S. Patents: 6,366,437 and 6,369,997 and 6,519,125