We touch your electricity everyday!

CSFPI

Earth Fault Passage Indicator

CSFPI
CSFPI
CSFPI

CSFPI
Series

Catalogue

C&S electric

PMD Division

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Introduction

CSFPI, Self Powered Fault Passage Indicator is designed to detect and indicate Earth fault on a cable system, in RMU networks with one input / open ring arrangement. The product is powered by the Internal Battery only. The unit will indicate a fault condition when current is detected above set trip current settings. Fault current is sensed by cable mounted sensor, which gives signal to indication unit. Sensor must be mounted on screened cable and can be retrofitted on the cable.

Features

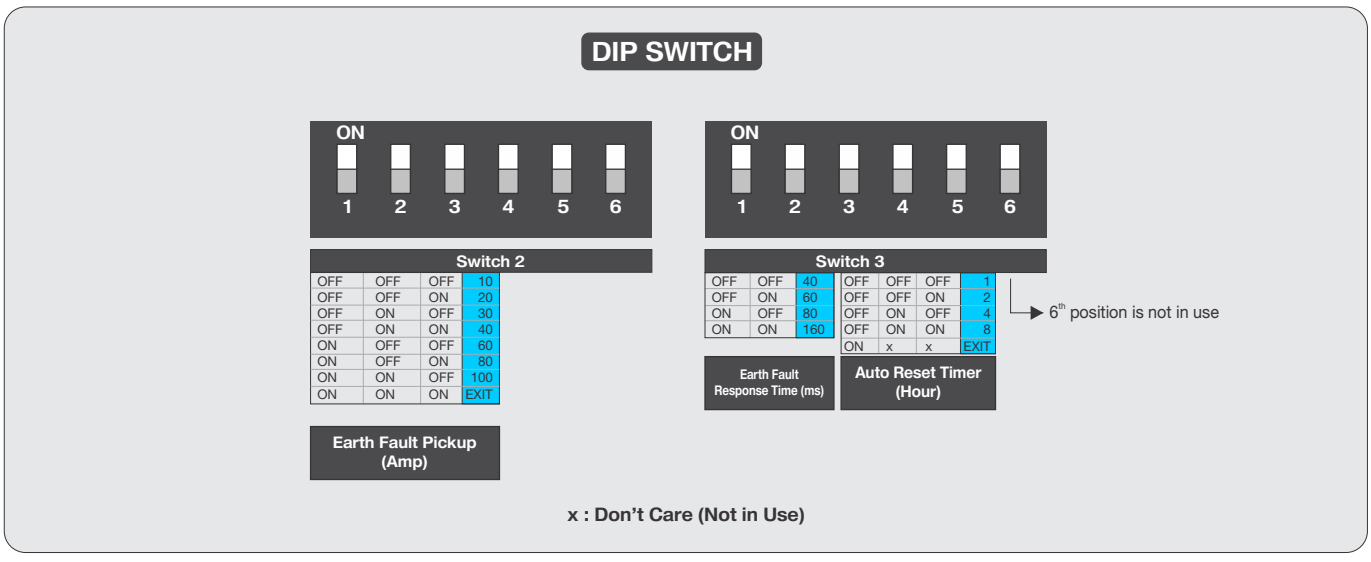
- Programmable Earth fault pickup level (wide range 10A to 100A)
- Indication of earth-fault by blinking of Earth-fault LED
- Programmable response delay for Earth-fault
- Up-to Two potential free contacts to indicate earth-fault. (remote indication for SCADA)
- Various Reset option for Fault Reset
- Self Reset in the event of momentary fault (By monitoring current after a fault)
- Reset through Potential free input & AC/DC voltage recovery
- Reset manually by push button
- Reset automatically by a field configurable timer (hour)

Functional Description

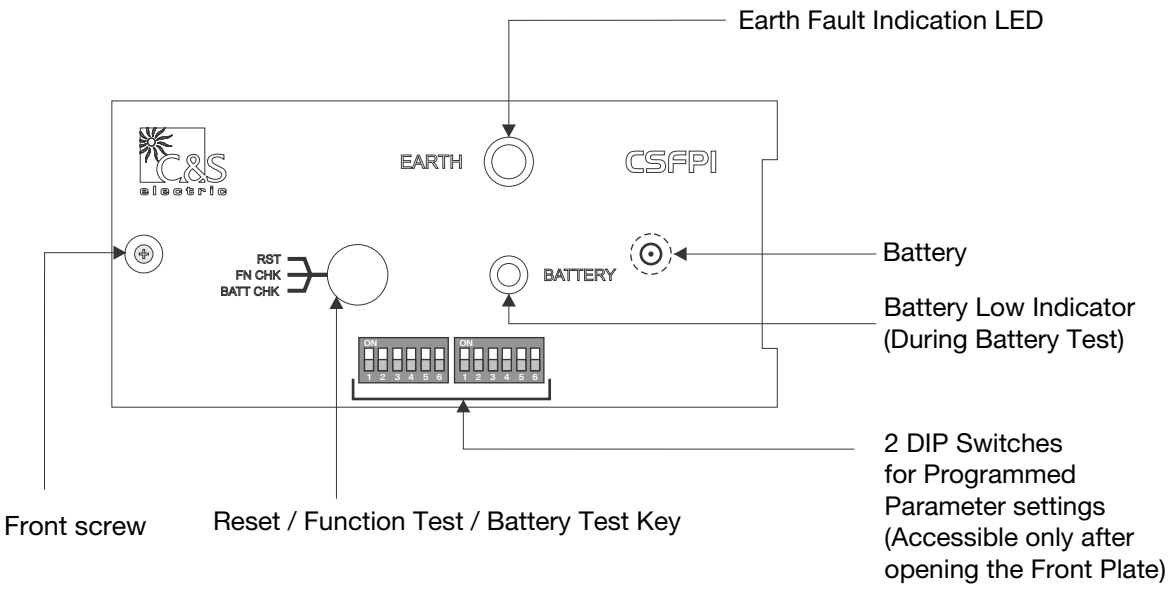
If the Earth current exceeds programmed set current for programmed response time the fault will be indicated by red flashing LED and relay contact will be activated. Reset occurs automatically by preset time passage or by a external potential free input or by recovering of 230V AC (Not a Aux. Supply) Voltage or by manually via push button. A 'Functional Test' can also be carried out on field by pressing for more than 3 Sec and 'Battery Test' by pressing the Push button for more than 6 Sec.

The sensor for earth fault detection is a summation type current sensor and it is dimensioned in such a way that if can be mounted around all three phases of the network.

Programmable parameters can be set through DIP switches which are accessible by opening the Front Cover of the CSFPI indication unit. Exit (Disable) option is available for fault detection.

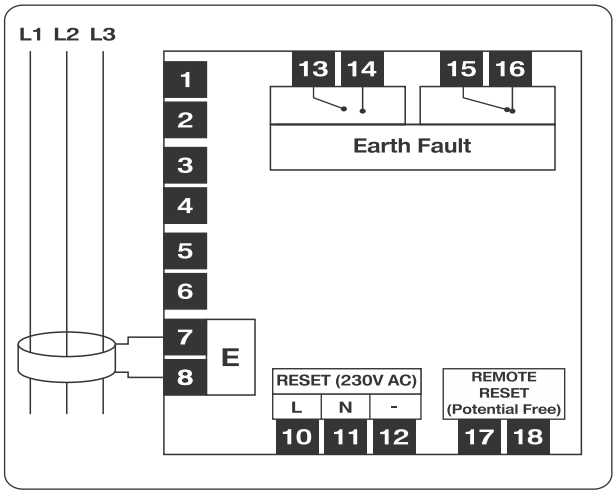


Front Interface

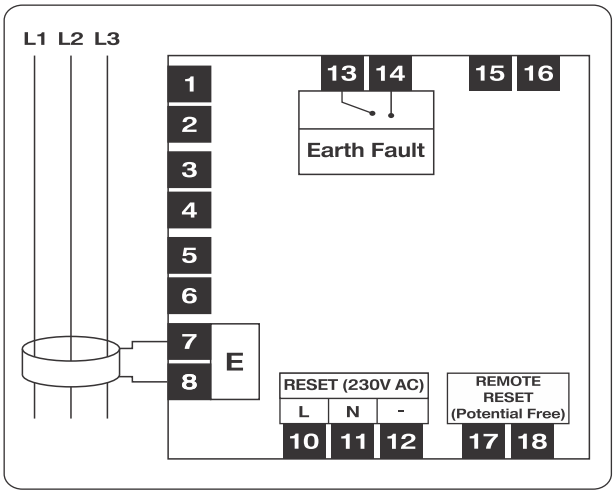


Note: open the Front plate by removing the front screw to access the DIP switch setting.

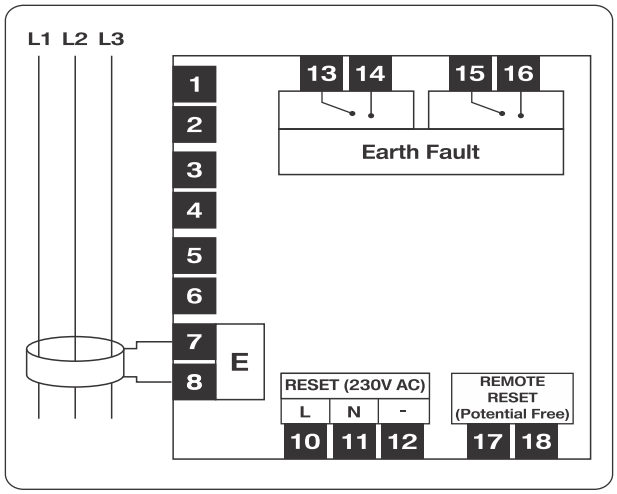
Connection Diagram



CSFPI-E-A-x



CSFPI-E-E-x



CSFPI-E-F-x

General Data

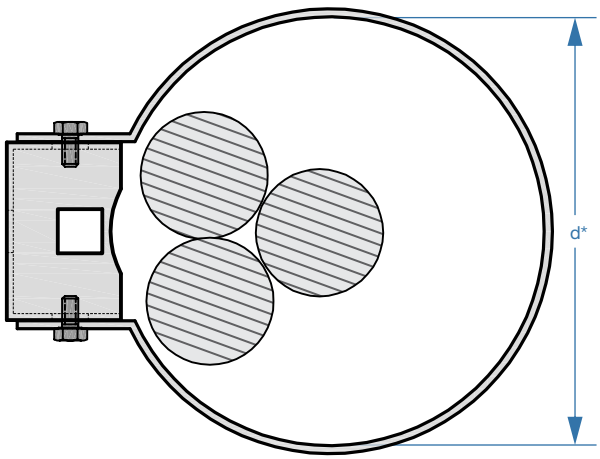
Subject		Value
Earth-Fault Trip Current (Phase to Ground)	: :	Adjustable: 10/ 20/ 30/ 40/ 60/ 80/ 100 A (±10%) **
Earth Fault Response Time	: :	Adjustable 40 / 60 / 80 / 160 ms (±100mSec)
Indication Unit	:	Suitable for panel installation
Indication of a) Earth-Fault b) Battery	 : :	 a) One Red LED for Earth-Fault b) One Yellow LED for Battery Low
Reset of the Indicator	: : : :	a) Manual by push-button b) Remote Reset (Potential Free Input) c) Automatic Reset by Time : 1 / 2 / 4 / 8 (±5%) hours after fault d) Self-acting after recovering of 230V AC/DC (Range: 22V - 260V AC/DC)
On Site Function Test	:	By Push-Button
Dimensions	:	Indication Unit : 97.75 mm x 51.75 mm x 92.0 mm (WxHxD)
Protection Class	:	Indication Unit - IP50, Sensors - IP67
Type Test	:	According to IEEE 495-2007
Operation Temperature Range	:	-25°C to +70°C
Power Supply	:	Lithium Battery 3.6V / 2.7 Ah **(Mandatory)**
SCADA Contact *	: : : :	Max. 2 Latch Contacts Nominal Switching Capacity:2A 30V DC, 0.5A 125V AC (Resistive Load) Max. Switching Power:60W, 60VA (Resistive Load) Max. Switching Voltage:220V DC, 250V AC
Earth-Fault Sensor (CT)	: :	One Earth-Fault Sensor Type CS-x-ES-x-x for a Three-Core Cable Diameter & Length: various option available (Based on ordering information)
Connection & Mounting	:	Screwed Terminal Connector at the rear side of the unit for connection. The unit is Panel mount.

** **Accuracy claimed at 50Hz**

* **Model Dependent**

Earth Fault Sensor Type (CS-x-ES-x-x)

Sensor dia (d)	Cable Dia
D1	80-100 mm (Round)
D2	100-120 mm (Round)
D3	120-140 mm (Round)

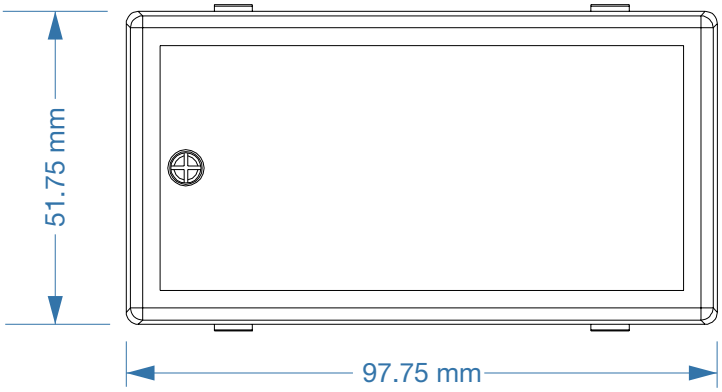


Sensor Diameter (d *) & Sensor Cable (2 Wire, 6mm dia, FR Grade type) Length : based on sensor ordering information

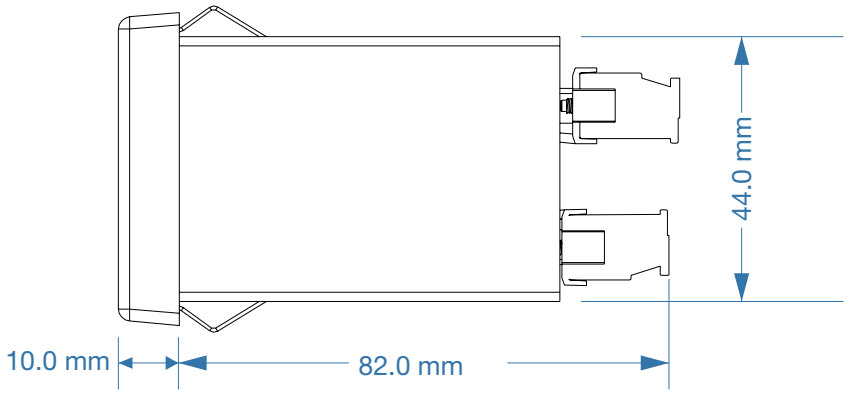
Dimension Details

Panel cut out Dimension		
Width	:	91.0 mm
Height	:	46.0 mm
Installation Depth	:	84.0 mm

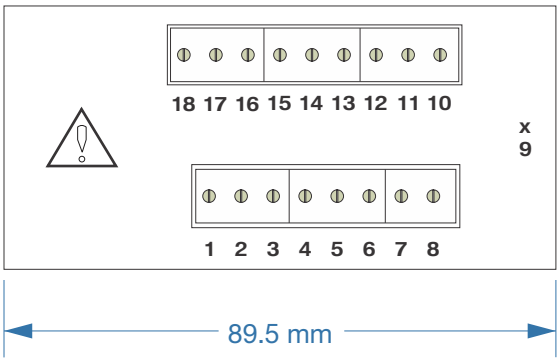
FRONT VIEW OF PHASE & EARTH FAULT INDICATOR



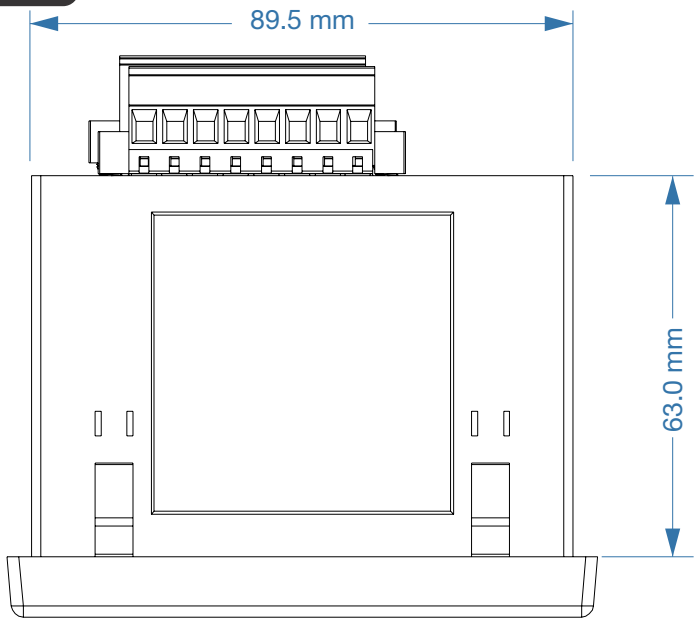
SIDE VIEW



BACK VIEW



TOP VIEW



Ordering Information (Indication Unit)

CSFPI - E - X - H - X

A : Earth Fault Indicator with 1 NO & 1 NC Digital Output
E : Earth Fault Indicator with 1 N/O Digital Output (Earth Fault)
F : Earth Fault Indicator with 2 N/O Digital Output (Earth Fault)

Cx : Customized model
- : Standard Model

All the models have internally Battery for Power.

Ordering Information (Sensor Unit)

CS - E - ES - X - X

Dx : Sensor Diameter (Refer Sensor Details)

1: Wire Length from Sensor to Indicator 1.5 Meter
3: Wire Length from Sensor to Indicator 3.0 Meter

Revision History

S.No.	Rev.No.	Details	Date
01	01	In Dimension Details: Depth of the Relay is changed from 75 mm to 84 mm.	27.04.15
02	02	In Functional Description on Page 3 Dip switch details : 6th position of switch 3 included.	28.07.15
03	03	On Page 5 in General Data ±15% changed to ±10%	04.08.15
04	04	Change in all Connection diagram and Back Terminal in dimension details	24.08.15
05	05	Inclusion of Text “Self Powered Fault Passage Indicator is designed...	16.05.16
05	05	and the internal battery power supply” in introduction	16.05.16

For further information, please contact:

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REVISE OR ELSE

Issue Date: 20.04.15

Rev. No: 05

Rev. Date: 16.05.16

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