

Operating Instructions

Earth Leakage Monitoring Relay

7UG0

IEC 60947-5-1



Please read and understand these instructions before installing, operating, or maintaining the equipment.



DANGER

Hazardous voltage can cause death or serious injury.
Disconnect power before working on equipment.



CAUTION

Reliable functioning of the equipment is only ensured with certified components.



Overvoltage category II
(Refer IEC 60947-1)

NOTICE

This product has been designed for environment A. Use of this product in environment B may cause unwanted electromagnetic disturbances in which case the user may require to take adequate mitigation measures.

Technical Data

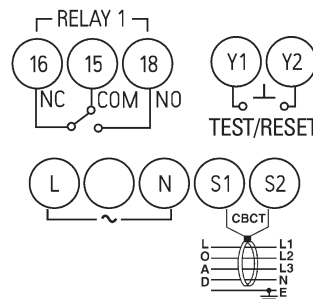
Designation	7UG0842-1AD21
Type	Earth Leakage relay
Control voltage	230V AC ($\pm 15\%$), 50/60Hz
AC Network	1 Φ - 2W, 3 Φ - 4W
Operating temperature	0 to 50°C
Humidity	upto 95%RH (Non-condensing)
Trip mode	Leakage current : 30mA - 30A
Trip Time delay	0 - 9 sec*
Rated current of relay output (@250VAC)	5A (AC12), 2A (AC15)
Rated Insulation voltage	Ui : 300V
Rated Impulse withstand voltage	Uimp : 2.5kV
Electrical life (AC15 @ 900 op/hr)	30,000 operations**
Pollution degree	For PCB : 2, For Product : 3
Response time maximum	< 50ms
Accuracy (Time)	$\pm 5\%$ of FS
Manual Reset / Recovery time	1sec
Accuracy (Current)	$\pm 5\%$ of set value
CBCT error detection	Short and Open condition
Power consumption	5VA
SCPD for relay output (For Short circuit current of 1kA as per IEC 60947-5-1)	4A, gL, HRC fuse




* Always Instantaneous trip, when leakage current is set at 30mA.

** Electrical life of 50,000 operations for NO contact and 30,000 operations for NC contact.

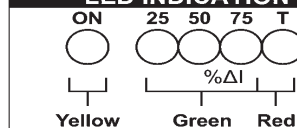
7UG0842...

Terminal connections



	7UG08... / 7UG09..
	0.5 Nm
 Solid	1 x (0.75 to 2.5) mm ² 2 x 0.5 to 2 x 1.5 mm ²
 Stranded with end sleeve	1 x (0.5 to 2.5) mm ² 2 x (0.5 to 1.5) mm ²

LED INDICATION

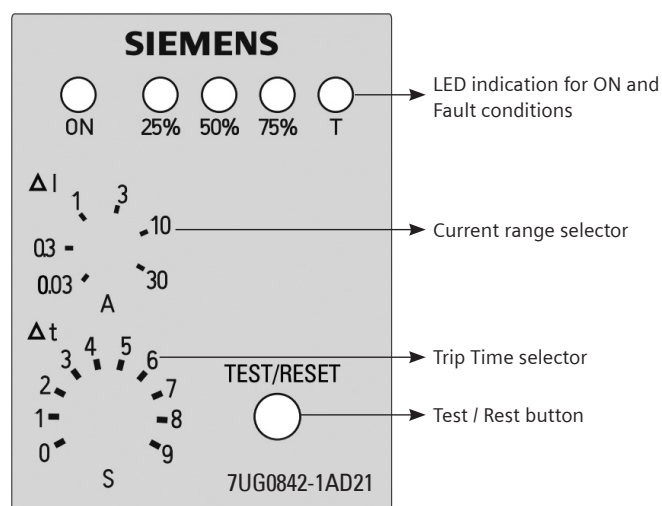


Yellow	Power ON Indication
Red	Trip Indication
Green LEDs blinking	CBCT error / CBCT absent / CBCT short
Green LEDs ON	Showing leakage current condition (25%, 50% & 75% of set current)

Reset enable level:

When leakage current increases above the set value of current, unit trips & all LED's glow indicating trip of the unit. At that time to reset the unit to previous condition (i.e. prior to trip condition), leakage current should be minimize to less than 85% of set value. This value is known as Reset enable value at which unit can reset.

Front Panel Description:



Test / Reset Functionality:

1. Front Panel button:
 - Test button is used to check the functionality of the unit even in the absence of leakage current and CBCT connected to unit. On pressing TEST/RESET button, all LEDs glow and trip relay energises instantly indicating proper functionality of unit
 - In case of fault, Reset Button is used to reset the unit to prior to the fault condition.

2. Terminal Y1 and Y2

- Short terminals Y1 and Y2 to reset the unit

Note:

7UG099.CBCT (Core Balanced Current Transformer) is an accessory to be used with 7UG0842-1AD21 (Earth Leakage relay).

For single phase applications, only the live and neutral needs to be passed through the CBCT.

For 3P4W system pass L1, L2, L3 and N through CBCT.

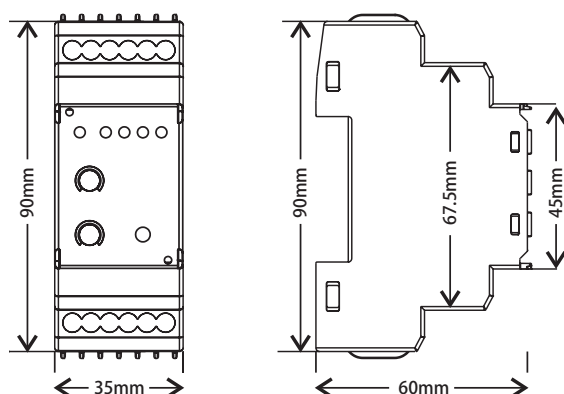
The Earth MUST NOT pass through the CBCT.

The distance between relay and CBCT should be kept as short as possible. Use Screen, shielded cable or twisted pair cable between the unit and CBCT for long distance (Greater than 1m).

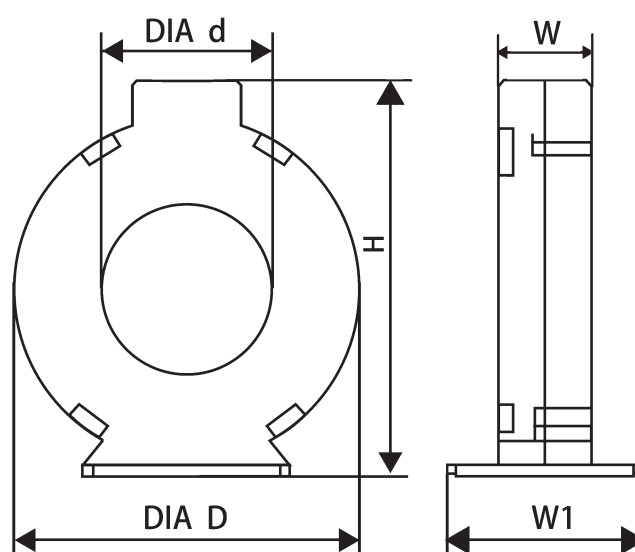
MLFB	Type
7UG0994	Core Balance CT 210mm
7UG0995	Core Balance CT 310mm

Dimensional drawings

7UG0842-1AD21



7UG099..



MLFB	D (mm)	d (mm)	H (mm)	W (mm)	W1 (mm)
7UG0995	268	210	270	25	55
7UG0996	377	310	379	25	65

Disposal

Siemens product are environment friendly, which predominantly consist of recyclable materials.

For disposals we recommend disassembling and separation into following materials:

METALS: Segregate into Ferrous & Non Ferrous types for recycling through authorised dealer.

PLASTICS: Segregate as per material type for recycling through authorised dealer. Because of the long lifetime of Siemens products the disposal guidelines may be replaced by other national regulations when taking the product out of service.

The local customer care service is available at any time to answer disposal-related questions