

Earth Fault Monitoring Relays

CE 7UG0
IEC 60947-5-1
IEC 60947-4-1



7UG0861-1BU20

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



DAANGER

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	7UG0861-1BU20
Type	Earth Fault relay
Control voltage	85 - 270V AC/DC
Operating temperature	0 to 50°C
Trip modes	Fault current: 10%-80% of rated current CBCT current ranges: - 160A - 250A - 630A
Trip Time delay	0 - 99.9 sec
Power consumption	4VA

LED Indication Chart

Various condition	'R1' LED	'R2' LED
No Fault	OFF	OFF
Pre-Alarm	OFF	ON
Fault / Trip	ON	ON

Note:

7UG0991.CBCT (Core Balanced Current Transformer) is an accessory to be used with 7UG0861... (Earth Fault relay)

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

For 3 Phase 3 wire system, pass L1, L2, L3 through CBCT.

For 3 Phase 4 wire system pass L1, L2, L3 and N through CBCT.

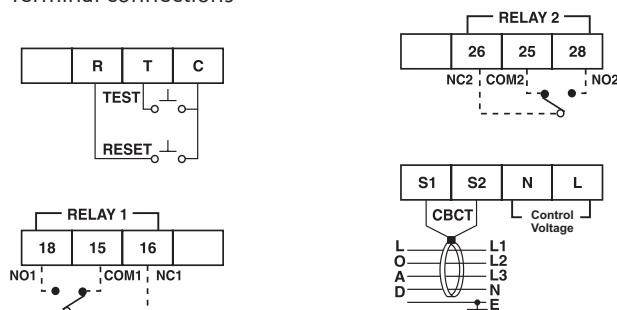
The Earth **MUST NOT** pass through the CBCT.

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).

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Terminal connections



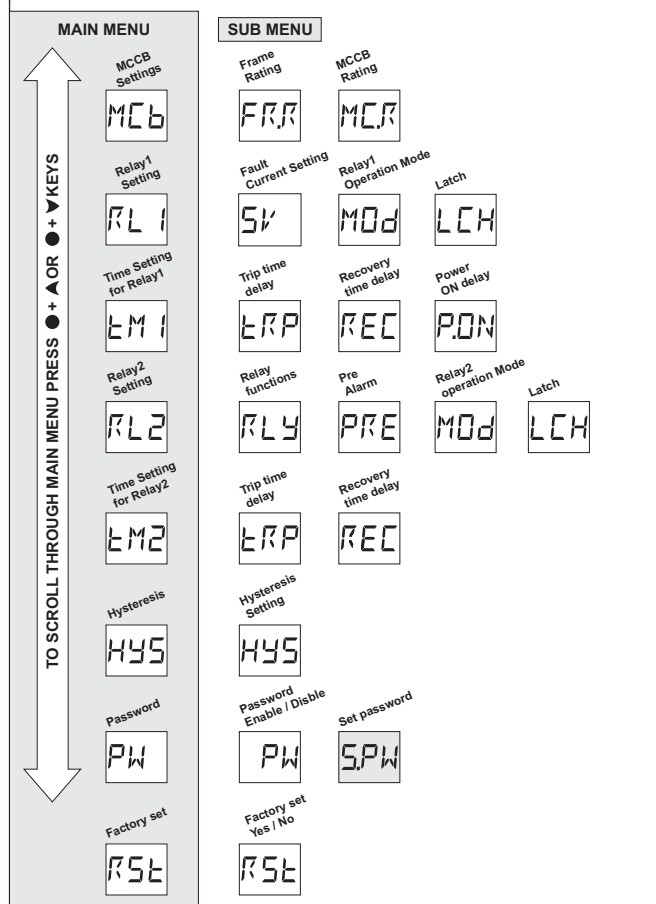
MLFB	Type
7UG09910	Core Balance CT 160 A, 3P
7UG09911	Core Balance CT 160 A, 4P
7UG09912	Core Balance CT 250 A, 3P
7UG09913	Core Balance CT 250 A, 4P
7UG09914	Core Balance CT 630 A, 3P
7UG09915	Core Balance CT 630 A, 4P

	7UG08... / 7UG09..
	0.5 Nm / 0.4 Nm
	1 x (0.75 to 2.5) mm ² 2 x 0.5 to 2 x 1.5 mm ²
	1 x (0.5 to 2.5) mm ² 2 x (0.5 to 1.5) mm ²

Menu Guide 7UG0861..

CONFIGURATION MENU

Press ▲ + ▼ for 3sec. to enter or exit configuration menu.



Note: Appearance of shaded menus dependant on selection of other parameters

SUB MENU

MCCB Settings (MCb)		Press ▲ to enter sub menu from main menu		
Press ▲ to ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
FRR	Frame Rating	160 ^A	160, 250, 630	
MCR	MCCB Rating	16 ^A	For different Frame rating the MCCB ratings are 160: 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160 250: 40, 50, 63, 80, 100, 125, 160, 200, 250 630: 250, 315, 400, 500, 630	For selected frame rating, the default value will be minimum MCCB rating of that particular frame.

Relay 1 Settings (RL1)		Press ▲ to enter sub menu from main menu		
Press ▲ to ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
SV	Set trip value for fault current	16 ^A	10% to 80% of selected MCCB rating Steps of 0.1A from 0 to 99.9A and Steps of 1A beyond 100A	Eg. For MCCB rating of 160A Set value will be from 16.0A to 128A
MOD	Relay operation mode	ON ^{RI}	ON/OFF	ON : NC (During Trip) OFF : NO (During Trip)
LCH	Latch	OFF ^{RI}	ON/OFF	If latch is ON, user has to reset the unit manually when the fault is removed

Time Setting for Relay 1 (TM1)		Press ▲ to enter sub menu from main menu		
Press ▲ to ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
TRP	Trip time delay	0.0 ^{RI}	0.0 – 99.9 sec	
REC	Recovery time delay	0.5 ^{RI}	0.0 – 99.9 sec	
PON	Power ON delay	5.0 ^{RI}	0.5 – 99.9 sec	Applicable for Relay1 and Relay2

Relay 2 Settings (RL2) Press ▲ to enter sub menu from main menu				
Press ▲ to ▼ to scroll through sub menu		Press ●+▲ or ●+▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
	Relay 2 Functions		RL1 / PRE	If RL1 is selected, all the settings done for RL1 & TM1 will be automatically set for RL2 and no other parameter of RL2 & TM2 will be prompted.
	Pre Alarm		50% – 100%	Will prompt only if PRE is selected for Relay 2
	Relay operation mode		ON / OFF	ON : NC (During Trip) OFF : NO (During Trip)
	Latch		ON / OFF	If Latch is ON, user has to reset the unit manually when fault is removed

Time Setting for Relay 2 (TM2) Press ▲ to enter sub menu from main menu				
Press ▲ to ▼ to scroll through sub menu		Press ●+▲ or ●+▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
	Trip time delay		0.0 – 99.9 sec.	
	Recovery time delay		0.0 – 99.9 sec.	

Hysteresis (HYS) Press ▲ to enter sub menu from main menu				
Press ▲ to ▼ to scroll through sub menu		Press ●+▲ or ●+▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
	Hysteresis		1% to 10% of Trip current setting (SV)	Fault condition is removed when fault is H% less than the Set Value

Password (PW) Press ▲ to enter sub menu from main menu				
Press ▲ to ▼ to scroll through sub menu		Press ●+▲ or ●+▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
	Password		ENB / DIS	Enable / Disable password protection option
	Set password		0-999	Will be prompted only when Password option is enabled
	Main Menu Password		NOTE: PW option will be asked when the user enter the config. menu if PW option is enabled in the config menu and the user has to enter the password which he has set in the S.PW (set password) option.	

Factory set (RST) Press ▲ to enter sub menu from main menu				
Press ▲ to ▼ to scroll through sub menu		Press ●+▲ or ●+▼ to change parameter value		
DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
	Reset (Factory set)		YES / NO	

TEST & RESET FUNCTION

● LED ON ○ LED OFF

KEY	DESCRIPTION	DISPLAY (For 1sec)	LED's	CONDITION
For TEST	Press TST key for > 2 sec.		○ ○ R1 R2	Test is in Process.
Test passed			● ● R1 R2	If test key is passed, OK will be displayed till reset button is pressed.
Test Failed			○ ○ R1 R2	–
RST	Press RST key for > 2 sec.	Actual Value	○ ○ R1 R2	–

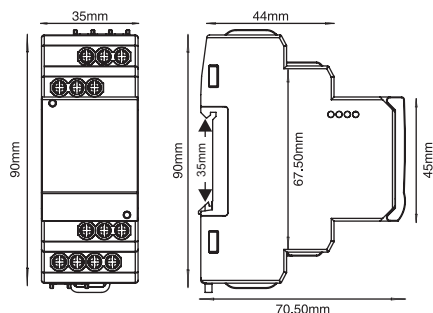
TRIP INDICATION	Trip Indication on press of ▲ key: Trip value will be displayed till the key is pressed.
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RESET	Press ● key for 3sec. to reset manually
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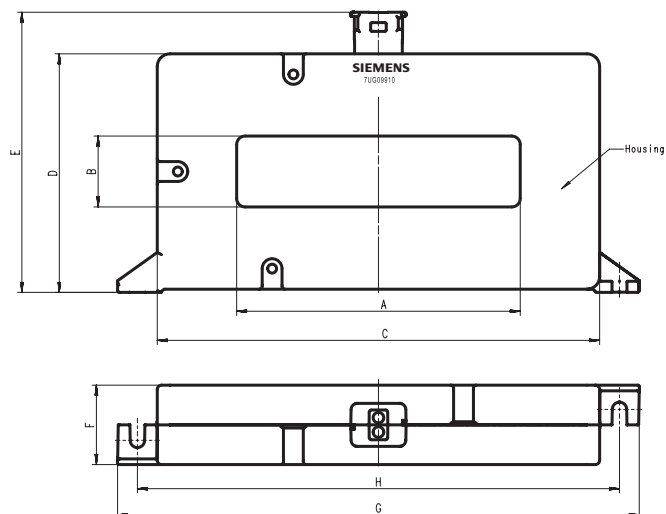
Master Password: 753

Dimensional drawings

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7UG0991..



Sr. No.	MLFB	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
1	7UG09910	100	25	156	84	100	28	184	170
2	7UG09911	140	35	201	98	114	28	230	215
3	7UG09912								
4	7UG09913	180	35	236	93	109	28	264	250
5	7UG09914								
6	7UG09915	220	50	276	112	128	28	305	290

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