# Technology that Protects + Secures Life



# Residual Current Circuit Breaker

Model: FI7

Now in India, made in Europe



✓ 2 pole & 4 pole versions, Breaking capacity 10kA

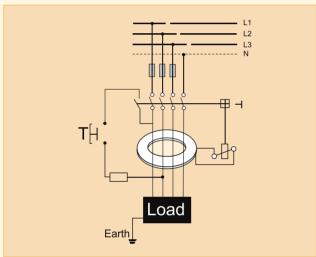
✓ Consistent performance, Compact & Space saving

✓ Protection against Electrocution, Short Circuit & Electrical fire

✓ Conforms to International IEC/EN: 61008, IS:12640, 240/415V, 50 Hz.







Wiring Scheme for RCCB

## Introduction

From large buildings to private homes, from industries to hospitals, electricity is essential. The extensive use of electricity in our daily life has become so common that we tend to forget that careless use of electricity can be hazardous. Every year, a large number of people are victims of accidents caused by negligent use of electricity, and a large number of industrial & domestic fires are attributed to "electrical faults".

HPL has introduced state-of-the-art HPL Techno RCCB model FI7 made in Europe, which is capable of detecting earth leakage current as soon as they appear and isolate the supply system.

# **Operational Principle**

HPL TECHNO RCCB is a current operated device and is independent of line voltage conditions. This means that they provide protection even when there is voltage dip or the neutral conductor is interrupted. In a healthy system the vector sum of all currents in phase and neutral is equal to zero. The device senses inbalance or residual currents in the system and disconnects supply system.

#### **Residual Current Circuit Breaker**

- Residual Current Circuit Breaker RCCB
- Shape compatible with and suitable for standard busbar connection to other devices
- Twin-purpose terminal (lift/open-mouthed) above and below
- Busbar positioning optionally line or load
- Free terminal space despite installed busbar
- Contact position indicator red green (FI7-4-pole)
- Suitable for being used with standard fluorescent tubes with or without electrical ballast (typically up to 20 units per phase conductor)
- The device functions irrespective of the position of installation
- Types with 80 A permissible short-circuit back-up fuse:
   Take into account overload protection

Tripping is line voltage-independent. Consequently, the RCCB is suitable for "fault current/residual current protection" and "additional protection" within the the meaning of the applicable installation rules

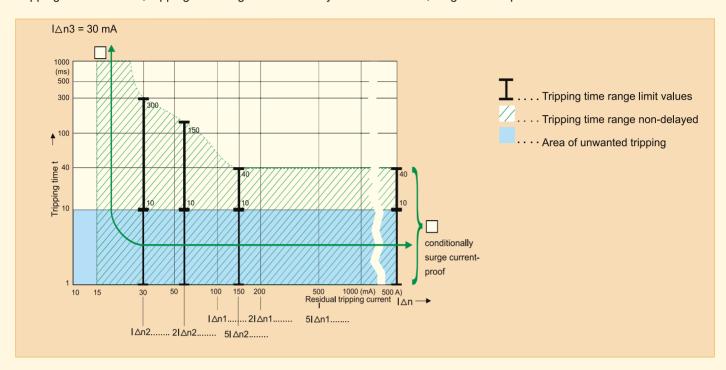
Mains connection at either side

- The 4-pole device can also be used for 3-pole connection. For this purpose use terminals 1-2, 3-4, and 5-6.
- The 4-pole device can also be used for 2-pole connection. For this purpose use terminals N-N and 5-6.
- Pressing the test key "T" serves the only purpose of function testing the residual current circuit breaker (RCCB). This test does not make earthing resistance measurement (R E), or proper checking of the earth conductor condition redundant, which must be performed separately.



# **Tripping Characteristics (IEC/EN 61008)**

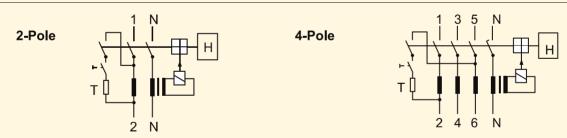
Tripping characteristics, tripping time range and selectivity of instantaneous, surge current-proof residual current circuit breaker.



Series connection of main RCCB and circuit RCCB's recommended by the installation rules set forth in ÖVE/ÖNORM E 8001-1, is compulsory for agricultural installations according to §56 of ÖVE-EN1, Part 4.

The device is ok if the result of measurement is within the time range specified by the manufacturer of the measuring instrument.

# **Connection Diagrams**



### **Residual Current Circuit Breaker - General Data**

Short description of the most important RCCB types:

There against an area most important (1005 types).					
Symbol	Description				
*-25 *-25	Standard. Suitable for outdoor installation (distribution boxes for outdoor installation and building sites) up to -25°C.				
	Conditionally surge-current proof (>250 A, 8/20 µs) for general application.				
SERVICE	Press service key when putting the device into operation, and subsequently approximately once per year. Pressing the key once per month is not required any more and can be				





Press service key when putting the device into operation, and subsequently approximately once per year. Pressing the key once per month is not required any more and can be omitted unless shorter testing intervals are required under any applicable regulations (e.g. on building sites).

For accessories please contact the nearest Sales Office



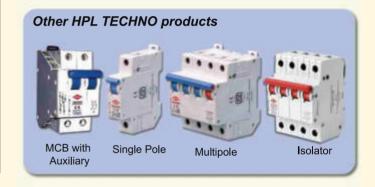
### **Technical Data**

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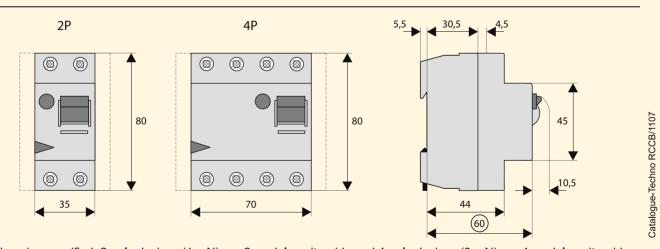
Tripping time	Undelayed	
Rated voltage	240 / 415 V; 50 Hz	
Rated tripping current	30, 100, 300 mA	
Sensitivity	AC 🖂	
Rated short circuit strength	10kA with 63 A gL back-up fuse 10kA with 80 A gL (FI7-80) 6 kA (Rated Current 63A) with 63A A gL	
Maximum back-up fuse for short circuit protection	_	
Maximum back-up fuse for overload protection	25 A gL (FI7-25 and - 40 A) 40 A gL (FI7-63 and - 63 A) 50 A gL (FI7-80 A)	
Resitance to climatic conditions	according to IEC/EN 61008	
Degree of protection	built-in switch IP40	
Endurance electrical mechanica	≥ 4,000 change overs l≥ 20,000 change overs	

#### **Mechanical**

Frame size	45 mm
Socket size	80 mm
Device size	35 mm (2mod.), 70 mm (4 mod.)
Mounting	Qucik fastening with 2 lock-in positions on DIN rail EN50022
Upper and lower terminals	Open mouthed / lift terminals
Terminal protection	Finger and hand touch safe, BGV A3, ÖVE-EN 6
Terminal capacity	1.5 mm <sup>2</sup> - 35 mm <sup>2</sup>
Busbar thickness	0.8 - 2 mm



### **Dimensions**



Unless otherwise specified, 2-pole devices (1p+N) are 2 module units wide and 4-pole devices (3p+N) are 4 module units wide.



ISO-9001:2000

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