

# FI Earth Leakage Circuit Breakers

FI compact Earth Leakage Circuit Breakers detect and interrupt earth (ground) faults. They are VDE approved for the European system of protecting people, animals, equipment and property from dangerous line-to-ground and shock hazard currents.

US applications include ground-fault protection of equipment (GFPE) using the 10mA and 30mA fault current ratings, especially when high distributed capacitance or other leakages cause excessive nuisance trips at lower fault currents. Applications for the 300mA rating are equipment protection and fire prevention, limiting the energy of a fault to less than the minimum ignition energy for many materials.

### Type Designation

(a) (b) (c)

- (a) = 2-2 pole; 4-4 pole
- (b) = 1-16A; 2-25A; 3-40A; 4-63A
- (c) = 01 - 10mA  
= 03 - 30mA  
= 30 - 300mA



FI 2



FI 4<sup>a</sup>

Maximum Rated Line Current	Fault Trip Current	Type	Cat. No.	Fault Trip Current	Type	Cat. No.
16A	10mA	FI 21.01	15.921			
25A	30mA	FI 22.03	15.922	30mA	FI 42.03	15.926
25A	300mA	FI 22.30	15.924	300mA	FI 42.30	15.929
40A	30mA	FI 23.03	15.923	30mA	FI 43.03	15.927
40A	300mA	FI 23.30	15.925	300mA	FI 43.30	15.930
63A				30mA	FI 44.03	15.928
63A				300mA	FI 44.30	15.931

Earth Leakage Circuit Breaker with Auxiliary Contacts <sup>b</sup>				Earth Leakage Circuit Breaker with Auxiliary Contacts <sup>b</sup>			
25A	30mA	FI 22.03Y	15.932	30mA	FI 42.03Y	15.933	
40A	30mA	FI 23.03Y	15.934	30mA	FI 43.03Y	15.935	
63A				30mA	FI 44.03Y	15.936	

<b>Voltage Rating (maximum)</b>	240VAC, 50/60Hz (VDE: 125/220VAC, 50Hz)	415VAC, 50/60Hz (400Hz available on request) (VDE: 220/380VAC, 50Hz)
<b>Short Circuit Capacity</b>	Up to rated current (RC) 40A = 1.5kA, RC 63A = 2kA. 10kA in combination with series fuse of European Operation Class gL/gG: RC 16A = 63A fuse, RC 25/40A = 80A fuse, RC 63A = 100A fuse.	
<b>Fault Trip Current Calibration</b>	FI trips are calibrated at less than fault trip current for ensured safety (Typical trip range between 66.6-83.3% fault trip current, e.g., typical trip at 20-25mA for fault RC of 30mA)	
<b>Typical Life</b>	Fully functional after 4,000 operations to DIN/VDE 0664 (CEE27) and 16000 additional fault current trips.	
<b>Standard Pack and Weight</b>	1/290g (0.64 lb.); 1/390g (0.86 lb.) with auxiliary contact	1/450g (1.0 lb.) 1/550g (1.21 lb.) with auxiliary contact
<b>Terminal Size Acceptability</b>	16-6 AWG	14-3 AWG
<b>Equivalent Circuit</b>		

- <sup>a</sup> For 2-Phase applications, terminal 5 and 6 (next to Neutral terminals) must be connected to one phase for the test circuit to be operable.
- <sup>b</sup> Provided with mounted Auxiliary Switch, one N.O., one N.C. isolated feedthrough contact (Form X double make and Y double break), which adds 9mm (.35 in.) to the width dimension.
- <sup>c</sup> For voltage systems without a neutral conductor. Please use jumper from "1" or "3" to top "N" terminal. This will assure proper functioning of the "test" circuit.

*Note: If the power system has a marked conductor, it must connect through the FI and not be grounded at any point downstream.*



### HFI11 - Auxiliary Switch

Contact Rating	Wire Size	Type	Cat. No.
6A / 230V AC 1A / 220V DC or pulsed Std. Pk.: 1 Unit Weight: 45 grams (0.12 lb.) Width: 9mm (.354in.)	4mm <sup>2</sup> (12 AWG)	HFI11	15.991