



Earth-leakage circuit-breaker, 25A, 1A, type U

Part no. PFR2-1-U  
 Catalog No. 235870  
 Alternate Catalog No. PFR2-1-U

Similar to illustration

**Delivery program**

Basic function			Residual current relay
Rated short-circuit strength	$I_{cn}$	kA	5
Rated fault current	$I_{\Delta N}$	A	1
Type			Type U
Tripping		s...	40 ms delay - selective switch off
Product range			PFR2
Sensitivity			Pulse-current sensitive

**Technical data**

**Electrical**

Rated operational voltage	$U_e$	V	
	$U_e$	V AC	
Rated operating voltage	$U_e$	V AC	230/400
Rated frequency	f	Hz	50
Limit values of the operating voltage			
Test circuit		V AC	184 - 440
Sensitivity			Pulse-current sensitive
Rated impulse withstand voltage	$U_{imp}$	kV	4
Rated short-circuit strength	$I_{cn}$	kA	5
lifespan			
Electrical	Operations		≥ 4000
Mechanical	Operations		≥ 20000

**References**

Auxiliary switch for subsequent installation		Z-HK 248432
Tripping signal contact for subsequent installation		Z-NHK 248434
Compact enclosure		KLV-TC-4 276241
Sealing cover set		Z-RC/AK-4TE 101062

**Mechanical**

Standard front dimension		mm	45
Device height		mm	80
Built-in width		mm	70 (4TE)
Mounting			Quick attachment with 2 latch positions on top-hat rail IEC/EN 60715
Degree of Protection			IP40, IP54 (with moisture-proof enclosure)
Terminals top and bottom			Twin-purpose terminals
Terminal protection			finger and hand touch safe, DGUV VS3, EN 50274
Terminal cross-section			
Solid		mm <sup>2</sup>	1.5 - 35
Stranded		mm <sup>2</sup>	2 x 16
Thickness of busbar material		mm	0.8 - 2
Permissible storage and transport temperatures		°C	-35 - +60
Climatic proofing			25-55°C/90-95% relative humidity according to IEC 60068-2

**Design verification as per IEC/EN 61439**

Technical data for design verification		
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Rated operational current for specified heat dissipation	$I_n$	A	25
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	60
			Starting at 40 °C, the max. permissible continuous current decreases by 3% for every 1 °C
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			
			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			
			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			
			Meets the product standard's requirements.
10.2.5 Lifting			
			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			
			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			
			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			
			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			
			Meets the product standard's requirements.
10.5 Protection against electric shock			
			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			
			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			
			Is the panel builder's responsibility.
10.8 Connections for external conductors			
			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			
			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			
			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			
			Is the panel builder's responsibility.
10.10 Temperature rise			
			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			
			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			
			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			
			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Technical data ETIM 7.0

Circuit breakers and fuses (EG000020) / Residual current circuit breaker (RCCB) (EC000003)

Electric engineering, automation, process control engineering / Electrical installation, device / Residual current protection system / Residual current circuit breaker (RCCB) (ec1@ss10.0.1-27-14-22-01 [AAB906014])

Number of poles		0
Rated voltage	V	400
Rated current	A	25
Rated fault current	mA	1000
Rated insulation voltage $U_i$	V	440
Rated impulse withstand voltage $U_{imp}$	kV	4
Mounting method		DIN rail
Leakage current type		A
Selective protection		Yes
Short-time delayed tripping		No
Short-circuit breaking capacity ( $I_{cw}$ )	kA	10
Surge current capacity	kA	5
Frequency		50 Hz
Additional equipment possible		Yes
With interlocking device		No
Degree of protection (IP)		IP40
Width in number of modular spacings		4

Built-in depth	mm	69.5
Ambient temperature during operating	°C	-25 - 40
Pollution degree		2
Connectable conductor cross section multi-wired	mm <sup>2</sup>	1.5 - 16
Connectable conductor cross section solid-core	mm <sup>2</sup>	1.5 - 35