FEEO

FPV-63

Solar DC Mini Circuit Breaker (DC MCB)

FPV-63 DC MCB supplementary protectors are designed to provide overcurrent protection within appliances or electrical equipment, where a branch circuit protection is already provided or not required. Devices are designed for direct current (DC) control circuit applications.



Specifications

FPV-63 Series Circuit Breaker		FPV-63			
Frame Degree Rated Current (A)		63			
Pole		1P	2P	3P	4P
Rated Operating Voltage (V DC)		250	550/800	750	1000/1200/1500
Rated Insulation Voltage Ui (V DC)		1200V			
Rated Current In (A)		3, 6, 10, 16, 20, 25, 32, 40, 50, 63A			
Rated Impact Voltage Uimp (kV)		4			
Ultimate Breaking Capacity Icu (kA)		6			
Run Breaking Capacity Ics (%Icu)		100%			
Curve Type		C			
Trip Type		Thermal-magnetic			
Mechanical	Actual average value	7800			
	Standard value	7800			
Electric	Actual average value	200			
	Standard value	300 (accord to TUV standard)			

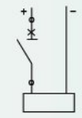
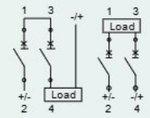
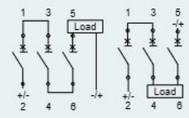
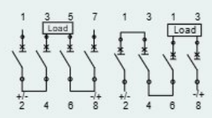
Control and Indication

Shunt release (SHT)	Option
Undervoltage release (UNT)	
Auxiliary contact (AX)	
Alarm contact (AL)	

Condition and Installation

Wiring capacity (mm²)		In ≤ 32A, 1-6, I ≥ 40A, 10~16			
Ambient temperature ( )		40			
Altitude		≤ 2000			
Relative humidity		≤ 95%			
Pollution Level		3			
Installation Environment		No obvious shock and vibration			
Installation category		Class III			
Installation		DIN Standard rail			
Dimensions (W)x(H)x(Deep)	W	18	36	54	72
	H	80	80	80	80
	Deep	71	71	71	71
Weight (kg)		0.12	0.24	0.36	0.48

Connection

Wiring capacity (mm2)	1P	2P	3P	4P
Connection				

Over current tripping characteristic

Test	Test Current	Initial State	Limited Time	Expected Result	Remarks
a	1.05In	Cold state	t 1h	Non-tripping	
b	1.3In	Right after test number a	t < 1h	Tripping	The current is rising within 5s
c	7In	Cold state	t ≤ s	Non-tripping	
d	10In	Cold state	t < 0.1s	Tripping	

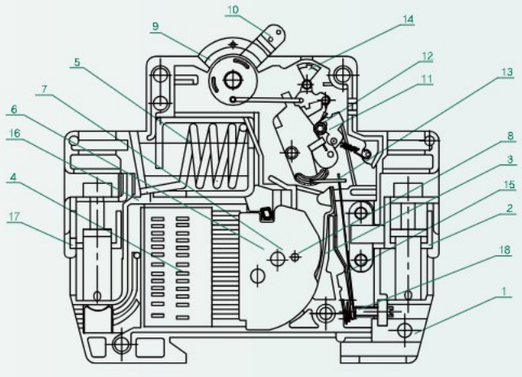
Current correction values used at different ambient temperatures

Temperature / Fixed current (A) / Rated Current (A)	-35	-30	-20	-10	0	10	20	30	40	50	60	70
3A	3.9	3.78	3.69	3.57	3.42	3.3	3.12	3	2.88	2.79	2.64	2.49
6A	7.8	7.56	7.38	7.14	6.84	6.6	6.24	6	5.76	5.64	5.28	4.98
10A	13.2	12.7	12.5	12	11.5	11.1	10.6	10	9.6	9.3	8.9	8.4
16A	21.12	20.48	20	19.2	18.4	17.76	16.96	16	15.36	14.88	14.24	13.44
20A	26.4	26.4	25	24	23	22.2	21.2	20	19.2	18.6	17.8	16.8
25A	33	32	31.25	30	28.75	27.75	26.5	25	24	23.25	22.25	21
32A	42.56	41.28	40	38.72	37.12	35.52	33.93	32	30.72	29.76	28.16	26.88
40A	53.2	51.2	50	48	46.4	44.8	42.4	40	38.4	37.2	35.56	33.6
50A	67	65.5	63	60.5	58	56	53	50	48	46.5	44	41.5
63A	83.79	81.9	80.01	76.86	73.71	70.56	66.78	63	60.48	58.9	55.44	52.29

Current correction factor used at different altitudes

Rated Current (A)	Different altitude correction factors		
	≤ 2000m	2000~3000m	≥ 3000m
3,6,10,16,20,25,32,40,50,63A	1.0	0.9	0.8

Current correction factor used at different altitudes

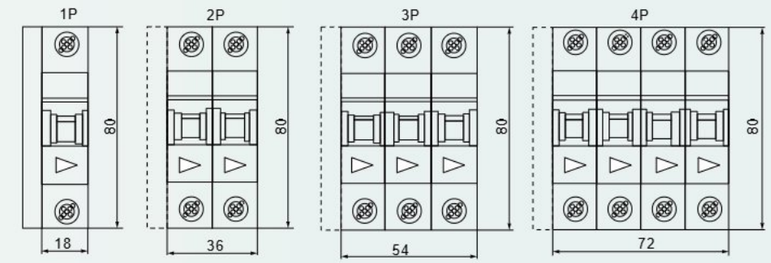


1. Shell
2. Wiring board
3. Static contact
4. Arc chamber
5. Copper coil
6. Insulation plate
7. Moving contact
8. Fixed contact
9. Spring
10. Handle
11. Lock catch knuckle
12. Tripping chain
13. Jump pin
14. Indicator
15. Bimetal
16. Soft linking
17. Wiring board
18. Adjusting screw

Wire connection terminals

Rated current In (A)	Copper wire nominal cross sectional area (mm²)
3,6	1
10	1.5
16,20	2.5
25	4
32	6
40,50	10
63	16

Current correction factor used at different altitudes



Characteristic Curve

