

## FPV-63

### Solar DC Mini Circuit Breaker (DC MCB)



#### Application

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)		250VDC	550VDC	750VDC	1000VDC
Rated Current In (A)		3,6,10,16,20,25,32,40,50,63A			
Rated Insulation Voltage Ui (V DC)		1200VDC			
Rated Impact Voltage Uimp (kV)		4			
Ultimate Breaking Capacity Icu (kA)		10			
Run Breaking Capacity Ics (75% Icu)		7.5			
Curve Type		C			
Trip Type		Thermal-magnetic			
Mechanical	Actual average value	20000			
	Standard value	8500			
Electric	Actual average value	2500			
	Standard value	1500			

#### Control and Indication

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

#### Condition and Installation

Wiring capacity (mm <sup>2</sup> )	In ≤ 32A, 1~25 mm <sup>2</sup> , I ≥ 40A, 10~35mm <sup>2</sup>				
Ambient temperature (°C)	-20~+70				
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

Pole	1P	2P	3P	4P
Connection				

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### Over current tripping characteristic

Item	Test Current	Initial State	Limited Time	Prospective Result	Starting State
a	1.05I <sub>n</sub>	Cold state a	t≤1h	Non-tripping	The current rise steadily to a fixed value within 5s
b	1.3I <sub>n</sub>	Followed by test a	t<1h	Tripping	
c	7I <sub>n</sub>	Cold state a	t≤0.2s	Non-tripping	
d	10I <sub>n</sub>	Cold state a	t<0.2s	Tripping	

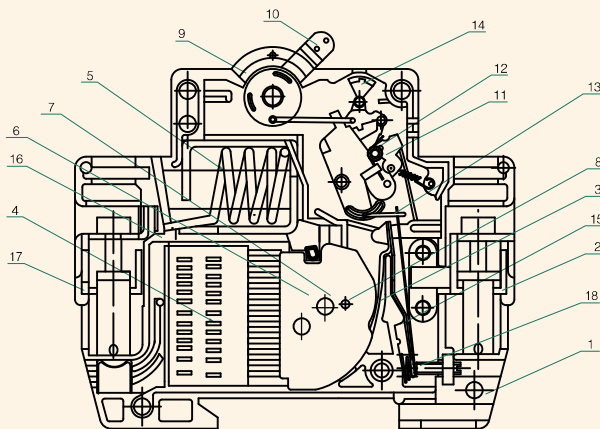
### Current correction values used at different ambient temperatures

Fixed current(A) Rated Current(A)	Temperature											
	-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	25.6	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	35.6	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

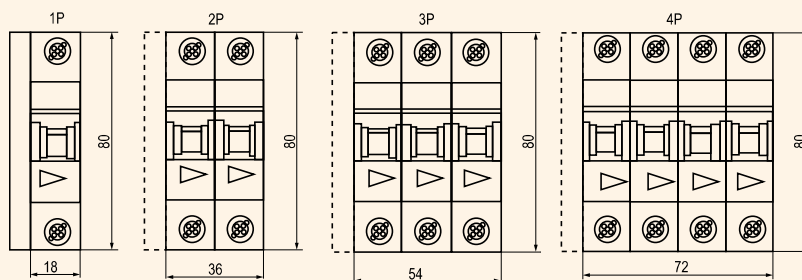
### Details



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

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## Dimension



## Characteristic Curve

FPV-63 Characteristic curve

