

HDB3wHN 18mm Miniature Circuit breaker

Standard: IEC/EN60898-1



HDB3wHN Selection Guide

Product name	Breaking capacity	Number of poles	Trip type	Rated current
HDB3wHN	N	1	C	6
	N: 6kA	1: 1P 2: 2P 3: 3P 4: 4P	B: Type B C: Type C D: Type D	6: 6A 10: 10A 16: 16A 20: 20A 25: 25A 32: 32A 40: 40A

HDB3wHN Breaking capacity	Pole	Rated current	Trip type		
			B	C	D
 	1P	6	HDB3wHN1B6	HDB3wHN1C6	HDB3wHN1D6
		10	HDB3wHN1B10	HDB3wHN1C10	HDB3wHN1D10
		16	HDB3wHN1B16	HDB3wHN1C16	HDB3wHN1D16
		20	HDB3wHN1B20	HDB3wHN1C20	HDB3wHN1D20
		25	HDB3wHN1B25	HDB3wHN1C25	HDB3wHN1D25
		32	HDB3wHN1B32	HDB3wHN1C32	HDB3wHN1D32
		40	HDB3wHN1B40	HDB3wHN1C40	HDB3wHN1D40
		50	HDB3wHN1B50	HDB3wHN1C50	HDB3wHN1D50
		63	HDB3wHN1B63	HDB3wHN1C63	HDB3wHN1D63
		 	2P	6	HDB3wHN2B6
10	HDB3wHN2B10			HDB3wHN2C10	HDB3wHN2D10
16	HDB3wHN2B16			HDB3wHN2C16	HDB3wHN2D16
20	HDB3wHN2B20			HDB3wHN2C20	HDB3wHN2D20
25	HDB3wHN2B25			HDB3wHN2C25	HDB3wHN2D25
32	HDB3wHN2B32			HDB3wHN2C32	HDB3wHN2D32
40	HDB3wHN2B40			HDB3wHN2C40	HDB3wHN2D40
50	HDB3wHN2B50			HDB3wHN2C50	HDB3wHN2D50
63	HDB3wHN2B63			HDB3wHN2C63	HDB3wHN2D63
 	3P			6	HDB3wHN3B6
		10	HDB3wHN3B10	HDB3wHN3C10	HDB3wHN3D10
		16	HDB3wHN3B16	HDB3wHN3C16	HDB3wHN3D16
		20	HDB3wHN3B20	HDB3wHN3C20	HDB3wHN3D20
		25	HDB3wHN3B25	HDB3wHN3C25	HDB3wHN3D25
		32	HDB3wHN3B32	HDB3wHN3C32	HDB3wHN3D32
		40	HDB3wHN3B40	HDB3wHN3C40	HDB3wHN3D40
		50	HDB3wHN3B50	HDB3wHN3C50	HDB3wHN3D50
		63	HDB3wHN3B63	HDB3wHN3C63	HDB3wHN3D63
		 	4P	6	HDB3wHN4B6
10	HDB3wHN4B10			HDB3wHN4C10	HDB3wHN4D10
16	HDB3wHN4B16			HDB3wHN4C16	HDB3wHN4D16
20	HDB3wHN4B20			HDB3wHN4C20	HDB3wHN4D20
25	HDB3wHN4B25			HDB3wHN4C25	HDB3wHN4D25
32	HDB3wHN4B32			HDB3wHN4C32	HDB3wHN4D32
40	HDB3wHN4B40			HDB3wHN4C40	HDB3wHN4D40
50	HDB3wHN4B50			HDB3wHN4C50	HDB3wHN4D50
63	HDB3wHN4B63			HDB3wHN4C63	HDB3wHN4D63



HDB3wHN 18mm Miniature Circuit Breaker

Standard: IEC/EN60898-1



Final Distribution



Functions and Features

Electrical Characteristics

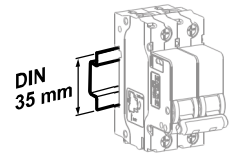
Rated insulation voltage U_i	(V)	250 (phase-to-ground) 500 (phase-to-phase)
Maximum working voltage U_{Bmax}	(V)	240/415 AC
Rated short-circuit capacity I_{cn} (IEC/EN60898)	(kA)	6
Rated impulse withstand voltage U_{imp} (1.2/50)	(kA)	4
Dielectric test voltage		2kV (50/60HZ, 1min)
Over-voltage category		II
Isolating function		Available
Pollution class		2
Electric shock protection grade		II
Trip type:		Thermal magnetic trip
Thermal magnetic trip characteristics:	Type B curve (3I _n ~5I _n)	■
	Type C curve (5I _n ~10I _n)	■
	Type D curve (10I _n ~14I _n)	■
Electrical and mechanical accessories		■

Mechanical Characteristics

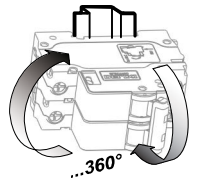
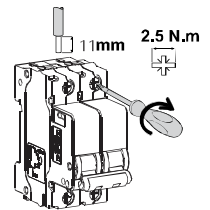
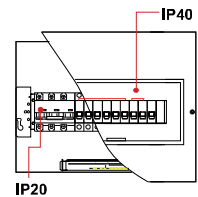
Handle	Red, pad printing indicating ON-OFF position
Mechanical endurance	Times 20,000
Electrical endurance	Times 7,000
Protection grade	Installed in distribution box IP40 Installed directly IP20
Mechanical shock resistance	30g, 3 shocks, lasting 11ms (No significant vibration or shock)
Anti-vibration (IEC/EN 60947-2)	No significant vibration or shock
Rated ambient temperature	30°C
Operating ambient temperature (daily mean temperature)	-20° C~+60°C
Storage temperature	-40° C~+70°C

Installation Features

Terminal form	Tunnel terminal
Maximum wiring capacity	Current ratings 1-63 25mm ²
Maximum ultimate torque	Current ratings 1-63:2.5 N.m
Tool:	Crosshead screwdriver or flathead screwdriver
Installation	Installed on standard DIN guide rail (35mm)
Wiring Type	Top or bottom



Installed on 35mm standard guide rail



Flexible installation direction

HDB3wHN 18mm Miniature Circuit breaker

Standard: IEC/EN60898-1



Trip Characteristic

B features

The miniature circuit breaker with B tripping features meets IEC 60898 standard and applies to providing protection for the resistive load or the load without impulse current.

C features

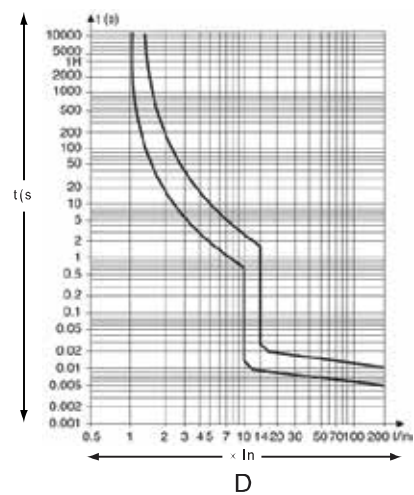
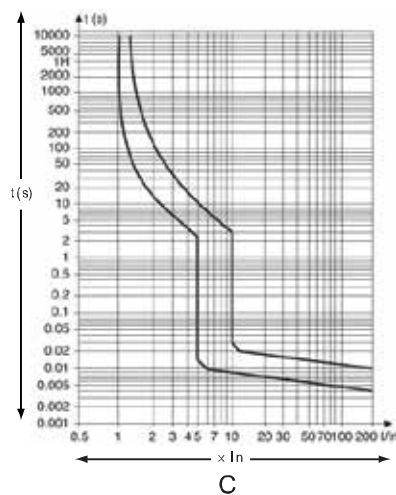
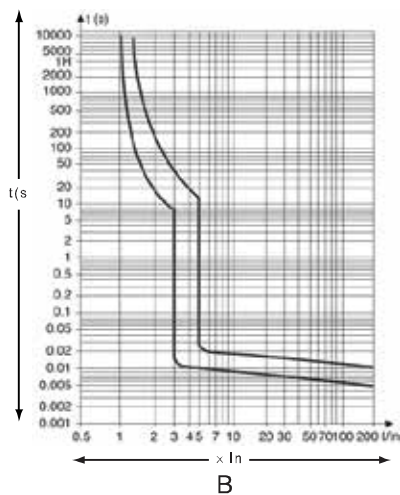
The miniature circuit breaker with C trip features meets IEC60898 standard and applies to providing protection for the resistive load and the inductive load with lower impulse current

D features

The miniature circuit breaker with D trip features meets IEC60898 standard and applies to providing protection for the load with higher impulse current at circuit connection.

Tripping type	Compliance standard	Thermal trip characteristics				Electro-magnetic trip characteristics			
		Test current	Test time	Initial state	Expected result	AC test current	Test time	Initial state	Expected result
B	IEC60898	1.13I _n	≥1h	Cold state	Non tripping	3I _n	≥0.1s	Cold state	Non-tripping
		1.45I _n	<1h	Heated state	Tripping	5I _n	<0.1s		Tripping
C	IEC60898	1.13I _n	≥1h (≤ 63A) ≥ 2h (>63A)	Cold state	Non tripping	5I _n	≥0.1s	Cold state	Non-tripping
		1.45I _n	<1h (≤ 63A) <2h (>63A)	Heated state	Tripping	10I _n	<0.1s		Tripping
D	IEC60898	1.13I _n	≥1h	Cold state	Non tripping	10I _n	≥0.1s	Cold state	Non-tripping
		1.45I _n	<1h	Heated state	Tripping	14I _n	<0.1s		Tripping

Tripping Curve



HDB3wHN 18mm Miniature Circuit Breaker

Standard: IEC/EN60898-1



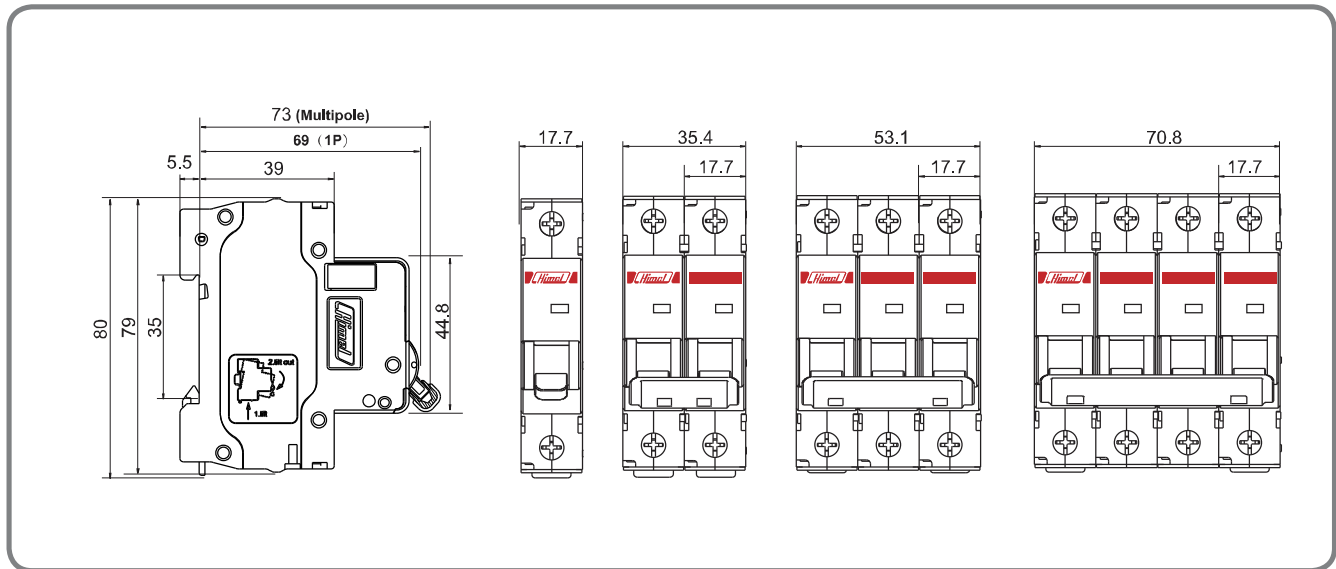
Final Distribution



Temperature Correction Coefficient Table

Rated current A	Rated current correction value A								
	-20	-10	0	10	20	30	40	50	60
6	7.33	7.05	6.84	6.62	6.3	6	5.64	5.42	5.06
10	12.25	11.87	11.64	11.15	10.62	10	9.3	8.96	8.48
16	19.49	18.72	18.06	17.98	16.96	16	15.04	14.42	13.47
20	24.35	23.68	22.82	22.47	21.2	20	18.8	17.85	16.78
25	30.52	29.61	28.78	28.09	26.5	25	23.25	22.52	21.02
32	38.96	37.68	36.62	35.96	33.92	32	30.08	28.81	26.84
40	48.85	47.13	46.32	45.8	42.8	40	36.8	36.21	33.5
50	61.58	59.52	57.35	55.04	52.59	50	46	44.25	42.36
63	76.86	74.25	71.18	69.13	67.41	63	58.59	56.83	52.93

HDB3wHN Installation Dimension



Accessories

HDB3wHN

Standard:OF/SD: IEC/EN60947-5-1, MN/MV/MVMN: IEC/EN 60947-2; MO: IEC/EN 60947-1(MX);IEC/EN60947-5-1(OF)

Accessories

Remote indication accessories

- **OF Auxiliary contact**
 - External circuit, indicating the close and open status of the circuit breaker
 - Basic form of auxiliary contacts; one normally open and one normally closed
 - Wiring capacity: 1-2.5mm² wire
- **SD Alarm contact**
 - Issue a signal in case of circuit breaker fault trip
 - Mechanical indication on the front panel can indicate the fault trip
 - Basic form of auxiliary contacts; one normally open and one normally closed
 - Wiring capacity: 1-2.5mm² wire

Trip accessories

- **MX+OF Shunt release**
 - External circuit, indicating the close and open status of the circuit breaker
 - Trigger the circuit breaker assembled with it to trip after obtaining the signal
 - Basic form of auxiliary contacts; one normally open and one normally closed
 - Wiring capacity: 1-2.5mm² wire
- **MV Over-voltage release**
 - Protect the line over-voltage fault
 - Trigger the circuit breaker assembled with it to trip after the voltage at both ends of the release rises to the rated range
 - The fault trip indication is provided on the front panel and the upspring of the indicating part indicates the over-voltage trip
 - Rated work trip over-voltage: 280 (1±5%) V AC
 - Wiring capacity: 1-2.5mm²
- **MN Under-voltage release**
 - Protect the line under-voltage fault
 - Trigger the circuit breaker assembled with it to trip after the voltage at both ends of the release rises to the rated range
 - The fault trip indication is provided on the front panel and the upspring of the indicating part indicates the under-voltage trip
 - Rated work trip under-voltage: 161 (1±5%) V AC, under-voltage protection range (35% 70%) U_e
 - Wiring capacity: 1-2.5mm²
- **MV+MN Over-voltage and under-voltage release**
 - Protect the line over-voltage, under-voltage and other faults
 - Trigger the circuit breaker assembled with it to trip after the voltage at both ends of the release rises to the rated range
 - The fault trip indication is provided on the front panel and the upspring of the indicating part indicates the over-voltage or under-voltage trip
 - Rated work trip over-voltage: 280 (1±5%) V AC, rated work trip under-voltage: 161(1±5%) V AC, under-voltage protection range (35% 70%) U_e
 - Wiring capacity: 1-2.5mm²

