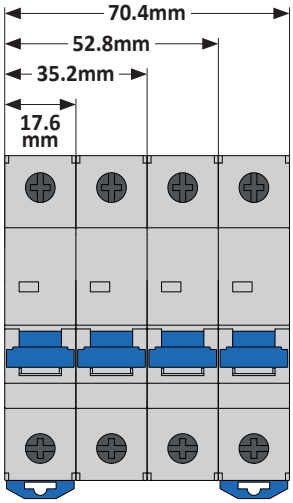
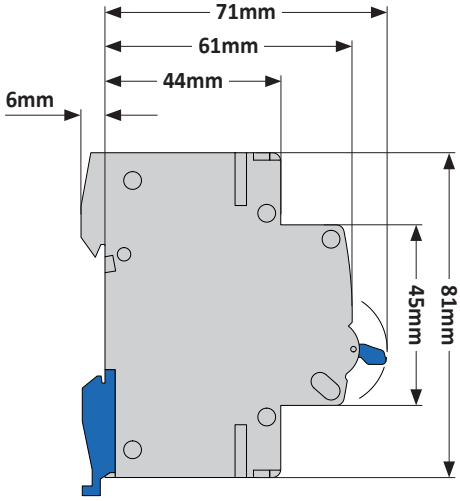
Htec 10kA Miniature Circuit Breakers

EN 60898

The Htec range of MCBs has been enthusiastically adopted by a diverse range of customers seeking a cost effective 10kA performance.

Htec MCBs are available in 1 to 4 pole, in trip curves B, C, D and in current ratings from 0.5A to 63A.

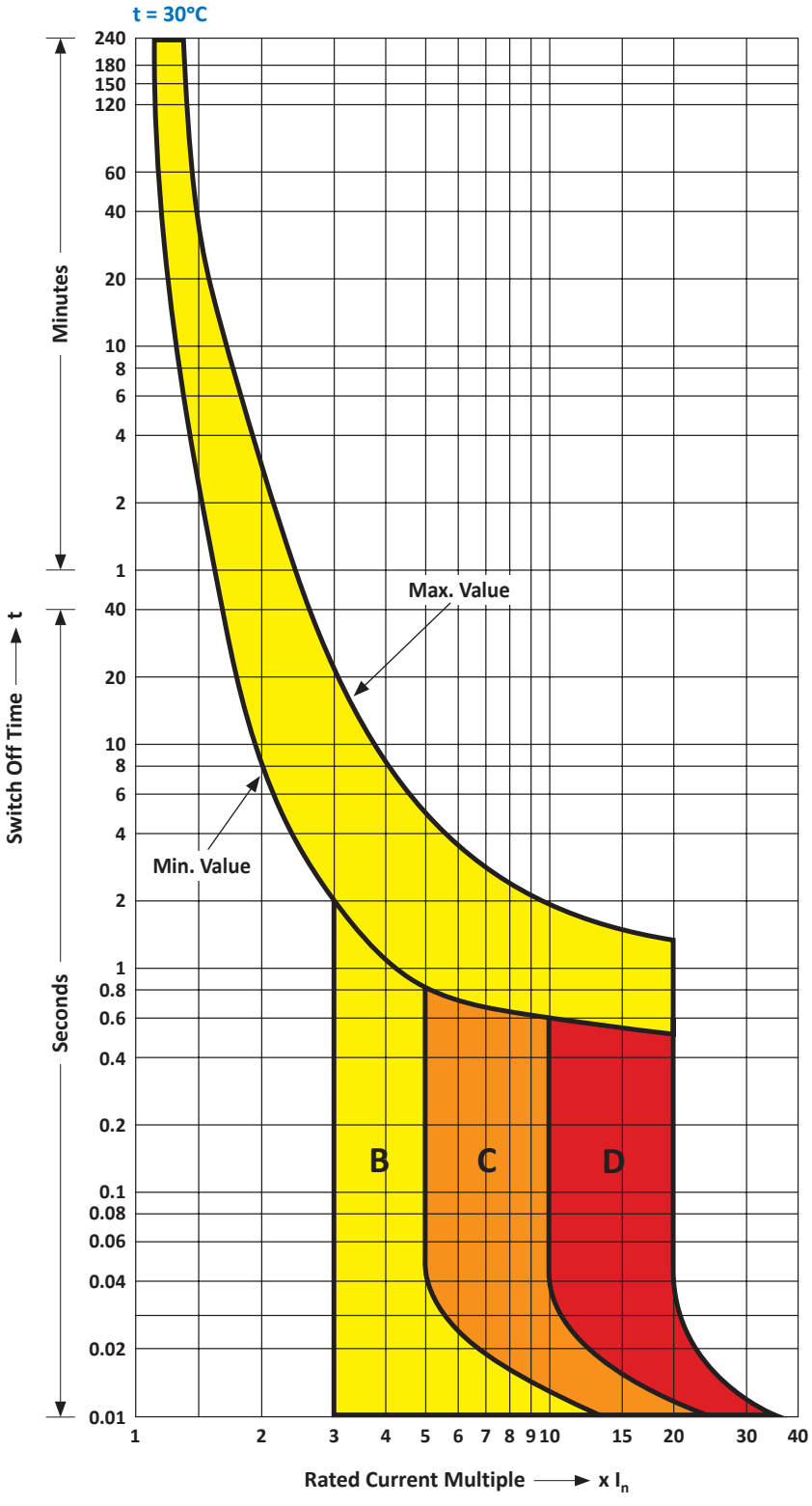




Htec Ordering Scheme

Htec	2	B	10
	No. of Poles: 1, 2, 3, 4	**Trip Curve:** B, C, D	**Current Rating:** 0.5, 01, 02, 03, 04, 06 08, 10, 13, 16, 20, 25 32, 40, 50, 63A

Htec Trip Curve



Magnetic Tripping Characteristics (50/60Hz)			
Type	I_n Min.	I_n Max.	Typical Applications
B	3	5	Commercial and Lighting
C	5	10	Medium Industrial
D	10	20	Heavy Industrial, eg. Transformers and Large Motors

Htec Technical Specification

Tripping Characteristic	B	C	D
Application	Wiring Protection	Wiring Protection, Device Protection	Wiring Protection, Power Circuit, Transformers, Motors
Number of Poles	1 - 4		
Breaking Capacity	10kA		
Current Limiting Class	3 (≤ 40A)		n/a
Rated Voltage AC	230 / 400 Vac		
Frequency Range	50 - 60Hz		
Rated Current Range	0.5 - 63A		
Impulse Withstand Voltage	6kV		
Thermal Must Hold 1 (A) > 1h	$1.13xI_n$		
Thermal Must Trip 2 (A) < 1h	$1.45xI_n$		
Electromagnetic Must Hold (A) > 0.1s	$3 \times I_n$	$5 \times I_n$	$10 \times I_n$
Electromagnetic Must Trip (A) < 0.1s	$5 \times I_n$	$10 \times I_n$	$20 \times I_n$
Reference Calibration Temp.	$30°C^{+5°C}$		
Ambient Operating Range Temp.	-25 to 60°C		
Maximum Relative Humidity	90% @ -25°C 50% @ 60°C		
Electrical Life	4000 Operations		
Mechanical Life	20,000 Operations		
Touch Protection	Finger Protected Connection Terminals		
Protection Type EN 60529/IEC 60529	IP20		
Installation Position	Any		
Mounting	DIN-Rail according to DIN EN 60715 (35mm)		
Cable Size	$2.5 - 25mm^2$		
Busbar Comb Connection	Techna BBtec Comb and Pin 16/20		
Terminal Tightening Torque	2 Nm		

Htec Technical Specification

Rated Current of MCB	Internal Impedances & Power Loss		MCB Temperature Compensation								
	Internal Impedance	Power Loss on CB	Effective Rated Current allowing for Ambient Temperature.								
In (A)	Z (mΩ)	P (W)	I cor (A)								
	Characteristic B, C & D	Characteristic B, C & D	Ambient Temperature								
			-25°C	-15°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
0.5	7150	1.79	0.64	0.61	0.58	0.55	0.52	0.5	0.47	0.45	0.4
1.0	1300	1.3	1.27	1.22	1.15	1.1	1.05	1	0.95	0.9	0.8
2.0	430	1.72	2.44	2.36	2.24	2.16	2.08	2	1.92	1.84	1.6
3.0	150	1.35	3.99	3.81	3.54	3.36	3.18	3	2.82	2.61	2.41
4.0	100	1.6	5.32	5.08	4.72	4.48	4.24	4	3.76	3.52	3.21
6.0	45	1.62	7.32	7.08	6.72	6.48	6.24	6	5.76	5.52	5.3
8.0	45.3	2.9	9.76	9.44	8.96	8.64	8.32	8	7.68	7.36	7.07
10.0	13.2	1.32	13.3	12.7	11.8	11.2	10.6	10	9.3	8.6	7.8
13.0	12.85	2.17	17.3	16.5	15.3	14.6	13.8	13	12.1	11.2	10.1
16.0	7.3	1.87	20.2	19.7	18.4	17.6	16.8	16	15.2	14.2	13.3
20.0	4.6	1.84	25.2	24.6	23	22	21	20	19	17.8	16.8
25.0	3.6	2.25	31.5	30.8	28.8	27.5	26.2	25	23.7	22.2	20.7
32.0	2.9	2.97	40.3	39.4	36.8	35.2	33.5	32	30.4	28.4	27.5
40.0	1.9	3.04	50.4	49.2	46	44	42	40	38	35.6	33.2
50.0	1.3	3.25	63	61.5	57.5	55	52.5	50	47.4	44	40.5
63.0	0.9	3.57	80.6	77.5	72.5	69.3	66.2	63	58	54.2	49.2