

Jtec 10kA Miniature Circuit Breakers

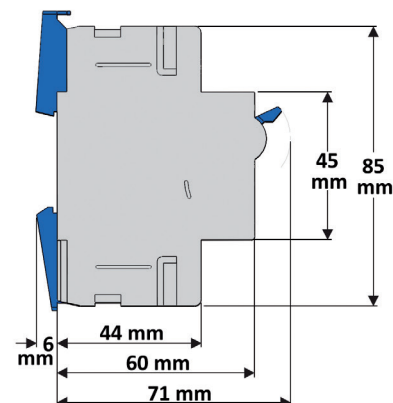
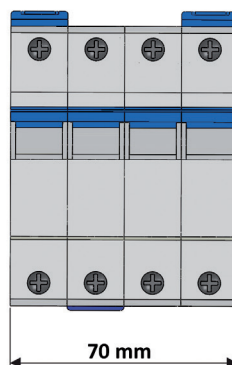
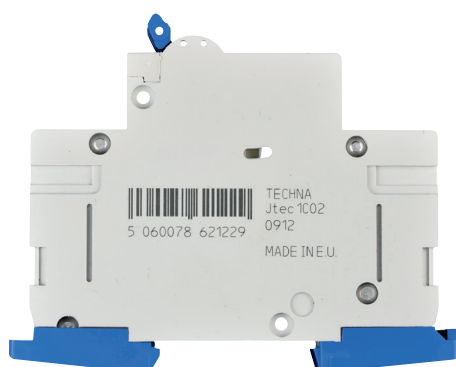


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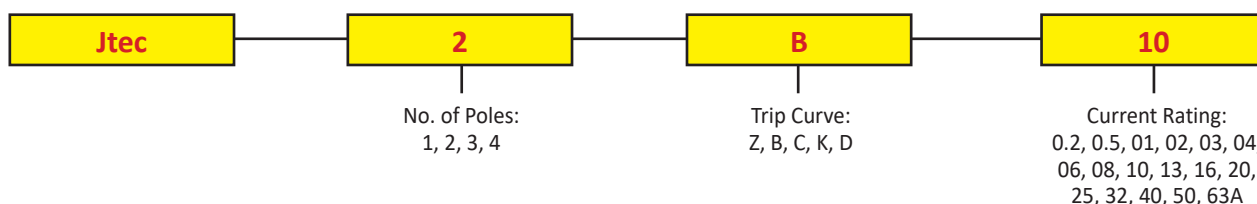


The Jtec range has been enthusiastically adopted by a diverse range of customers seeking a cost effective 10kA performance.

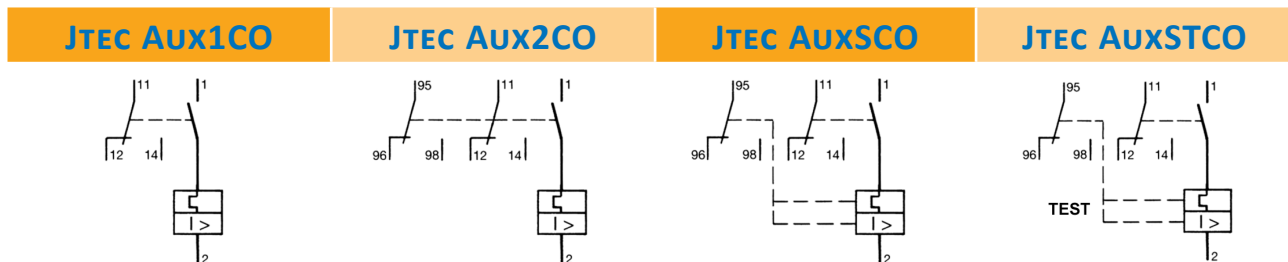
Jtec MCBs are available in a wide range of ratings and are available in trip curves B, C, D, Z and K from 0.2 - 63A.



Jtec Ordering Scheme



Jtec Accessories

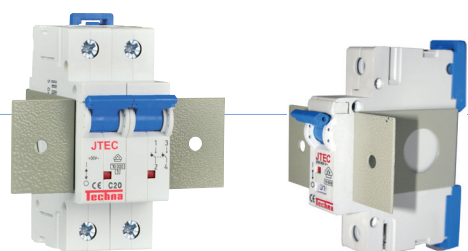


Accessories		Order Codes
Auxiliary and Signal Contacts	1 Changeover Contact	Jtec AUX 1CO
	2 Changeover Contact	Jtec AUX 2CO
	1 Changeover + 1 Signal Changeover	Jtec AUX SCO
	1 Changeover + 1 Signal + Test Button	Jtec AUX STCO
N-Pole	Add on Neutral Pole	Jtec N2

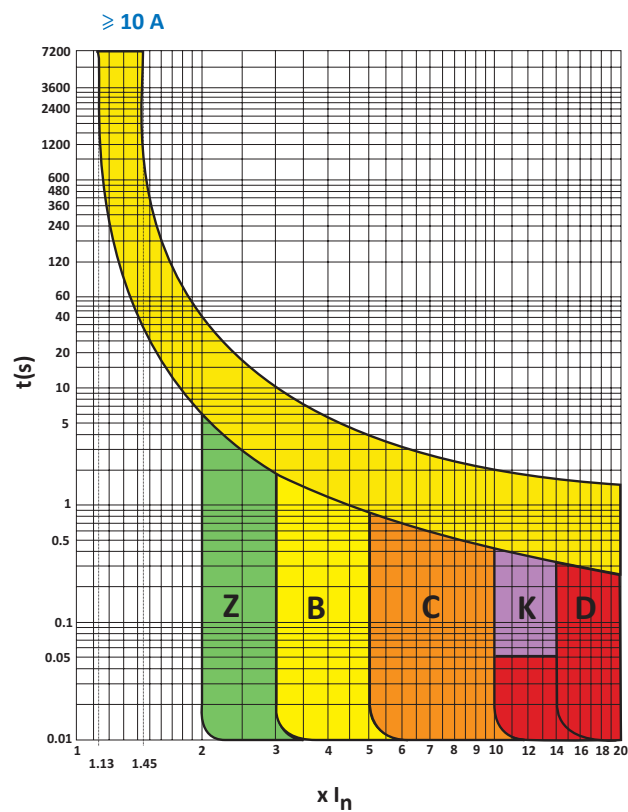
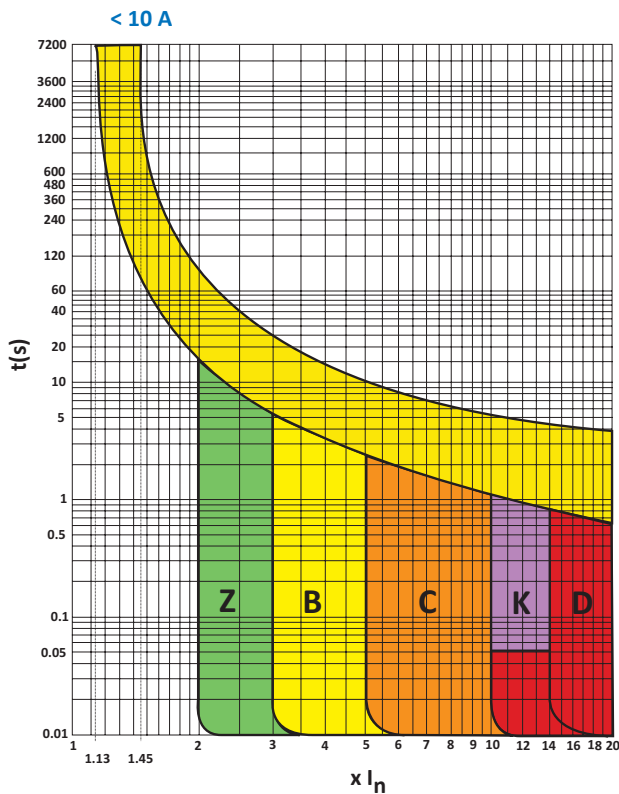
Accessories		Order Codes	
		Shunt Trips	Undervoltage Release
AC	12Vac	Jtec ST 12AC	Jtec UV12AC
	24Vac	Jtec ST 24AC	Jtec UV24AC
	48Vac	Jtec ST 48AC	Jtec UV48AC
	60Vac	Jtec ST 60AC	Jtec UV60AC
	110Vac	Jtec ST 110AC	Jtec UV110AC
	120Vac	Jtec ST 120AC	Jtec UV120AC
	230Vac	Jtec ST 230AC	Jtec UV230AC
	277Vac	Jtec ST 277AC	Jtec UV277AC
	400Vac	Jtec ST 400AC	Jtec UV400AC
DC	12Vdc	Jtec ST 12DC	Jtec UV12DC
	24Vdc	Jtec ST 24DC	Jtec UV24DC
	48Vdc	Jtec ST 48DC	Jtec UV48DC
	110Vdc	Jtec ST 110DC	Jtec UV110DC

Jtec Front Mount Adaptors

Jtec Front Mount Adaptors allow the easy front attachment of any of our Jtec/JtecUL/Jtec489 range of MCBs. Available in either 1, 2 and 3 pole. For more information please see page 25.



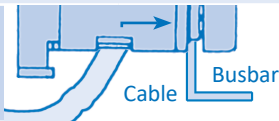
Jtec Trip Curves



Magnetic Tripping Characteristics (50/60Hz)

Type	I_n min.	I_n max.	Typical Applications
Z	2	3	Semiconductor Protection
B	3	5	Commercial and Lighting
C	5	10	Medium Industrial
K	10	14	To replace existing K curves
D	10	20	Heavy Industrial, eg. Transformers and Large Motors

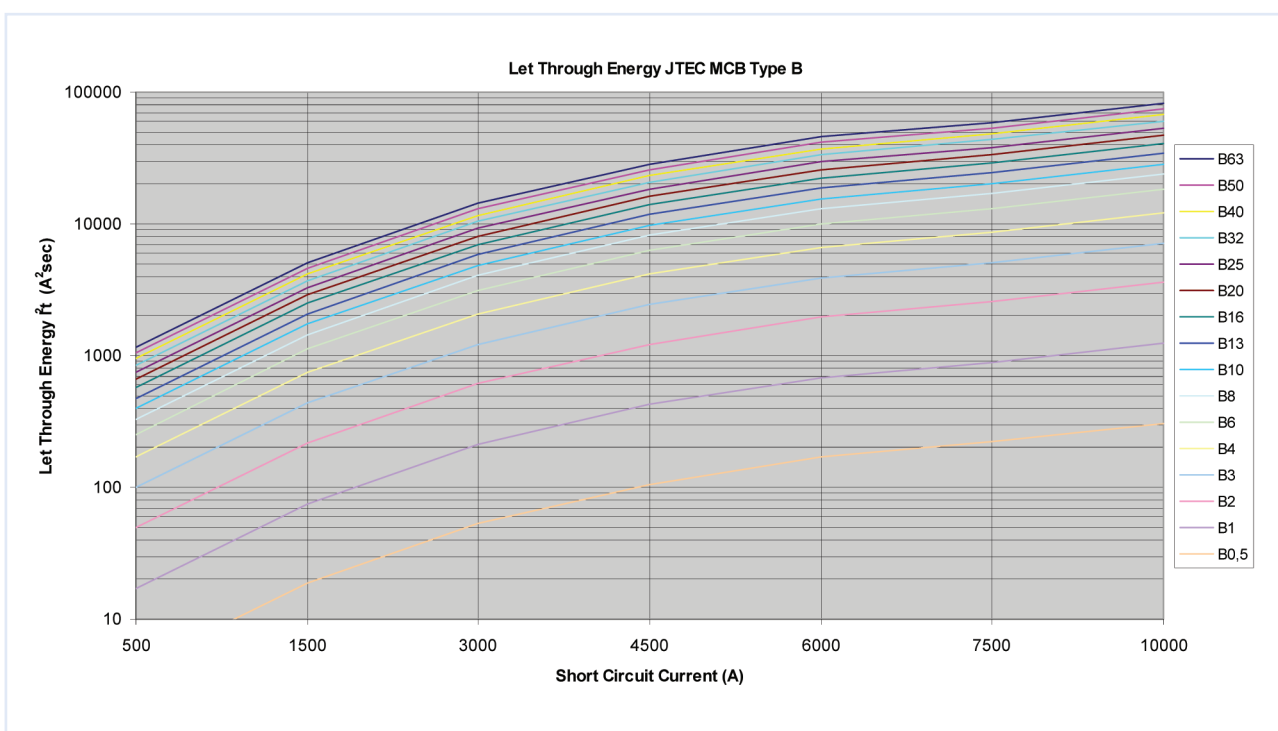
Jtec Technical Specification

Tripping Characteristic	Z	B	C	K	D
Application	Semi Conductor Protection	Wiring Protection	Wiring Protection, Device Protection	Special Motor Protection	Wiring Protection, Power Circuit, Transformers, Motors
Number of Poles 10kA	1 - 4; 1+N; 3+N				
Breaking Capacity	10kA				
Current Limiting Class	3 (≤40A)			n/a	
Max. Fuse for 10kA	Fuse according to DIN VDE 0636 125A				
Rated Voltage AC	230 / 400 Vac				
Frequency Range	50 - 60 Hz				
Rated Voltage DC	60 Vdc (for higher DC voltages see JtecDC breakers)				
Rated Current Range	0.5 - 63A				
Thermal Must Hold 1 (A) > 1h	1.13xI _n				
Thermal Must Trip 2 (A) < 1h	1.45xI _n				
Electromagnetic Must Hold (A) > 0.1s	2 x I _n	3 x I _n	5 x I _n	10 x I _n	10 x I _n
Electromagnetic Must Trip (A) < 0.1s	3 x I _n	5 x I _n	10 x I _n	14 x I _n	20 x I _n
Reference Calibration Temp.	30°C ^{+5°C}				
Ambient Operating Range Temp.	-25 to 60°C				
Electrical Life	6000 Operations				
Mechanical Life	100,000 Operations				
Touch Protection	Safe for fingers and back of hand according to DIN VDE 0106 T 100, BGV A2 (VBG4)				
Protection Type EN 60529/IEC 60529	IP 20				
Installation Position	Any				
Mounting	DIN-Rail according to DIN EN 60715 35mm				
Maximum Feed Current Through Jtec MCB to Busbar	126A				
Vibration Resistance	3g (8-50Hz)				
Resistance to Thermal Shocks	140°C				
	Connectable Conductor Cross Sections				
	Bottom Cable Clamp		Top Cable Clamp		
	Minimum	Maximum	Minimum	Maximum	
Cable Size	2.5mm ²	25mm ²	2.5mm ²	25mm ²	
Bus Bar Comb Connection	Techna BBtec Comb 16/20				
Combined, Connector and Busbar	Maximum Terminal Feed Current 126A when used with suitable outgoing Busbar				
Terminal Tightening Torque	1.5 Nm	2 Nm	1.5 Nm	2 Nm	

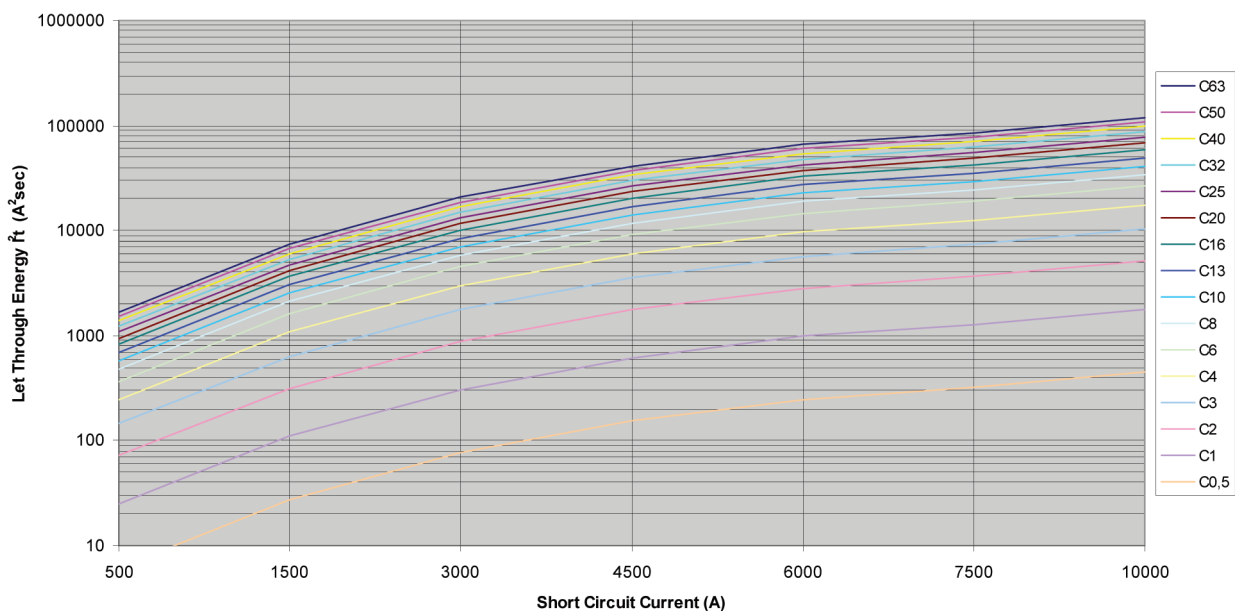
Jtec Technical Specification

Rated Current of MCB	Internal Impedances & Power Loss					MCB Temperature Compensation									
	Internal Impedance	Power Loss on CB	Maximum Allowable Impedance of Breakdown Loop (0.2/0.4s)			Effective Rated Current allowing for Ambient Temperature.									
I _n (A)	Z (mΩ)	P (W)	Z _s (Ω)			I _{cor} (A)									
	Char. B,C,D	Char. B,C,D	Char.B	Char.C	Char.D	Ambient Temperature									
						-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	
0.50	6600	1.7	n/a	n/a	n/a	0.61	0.59	0.57	0.55	0.53	0.50	0.47	0.44	0.42	
1.00	1650	1.7	n/a	n/a	n/a	1.21	1.18	1.14	1.10	1.05	1.00	0.93	0.88	0.83	
2.00	370	1.5	n/a	n/a	n/a	2.42	2.36	2.28	2.20	2.10	2.00	1.86	1.76	1.67	
3.00	210	1.9	15.33	n/a	n/a	3.63	3.54	3.42	3.30	3.15	3.00	2.79	2.64	2.50	
4.00	126	2.0	n/a	n/a	n/a	4.84	4.72	4.56	4.40	4.20	4.00	3.72	3.52	3.33	
6.00	51	1.8	7.67	3.83	1.92	7.30	7.10	6.80	6.60	6.30	6.00	5.60	5.30	5.00	
8.00	21	1.3	n/a	n/a	n/a	9.70	9.40	9.10	8.80	8.40	8.00	7.40	7.00	6.70	
10.0	14.8	1.5	4.60	2.30	1.15	12.1	11.8	11.40	11.00	10.50	10.00	9.30	8.80	8.30	
13.0	11.3	1.9	n/a	n/a	n/a	15.7	15.3	14.80	14.30	13.70	13.00	12.10	11.50	10.80	
16.0	7.5	1.9	2.87	1.44	0.72	19.4	18.9	18.20	17.60	16.80	16.00	14.90	14.10	13.30	
20.0	6.3	2.5	2.30	1.15	0.57	24.2	23.60	22.80	22.00	21.00	20.00	18.60	17.60	16.70	
25.0	4.4	2.8	1.84	0.92	0.46	30.3	29.50	28.50	27.50	26.30	25.00	23.30	22.00	20.80	
32.0	3.1	3.2	1.44	0.72	0.36	38.7	37.80	36.50	35.20	33.60	32.00	29.80	28.20	26.70	
40.0	2.5	4.0	1.15	0.57	0.29	48.4	47.20	45.60	44.00	42.00	40.00	37.20	35.20	33.30	
50.0	2.2	5.5	0.92	0.46	0.23	60.5	59.0	57.00	55.00	52.50	50.00	46.50	44.10	41.70	
63.0	1.6	6.4	0.73	0.36	0.18	76.2	74.30	71.80	69.30	66.20	63.00	58.60	55.50	52.50	

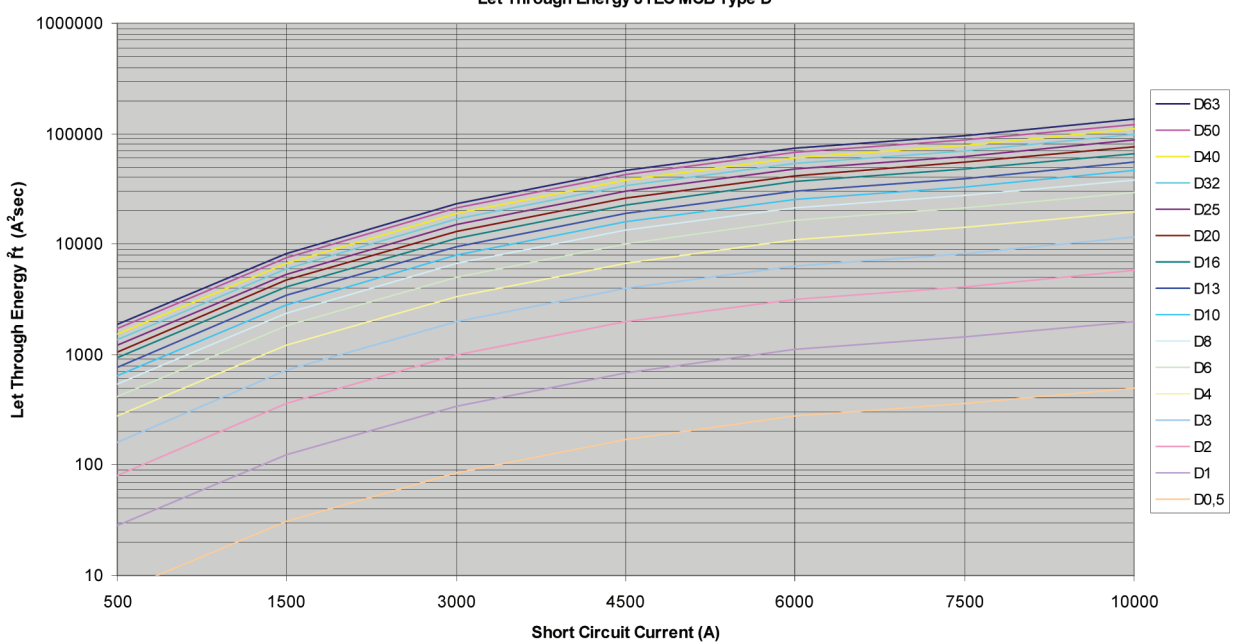
Let Through Energy Characteristics



Let Through Energy JTEC MCB Type C



Let Through Energy JTEC MCB Type D

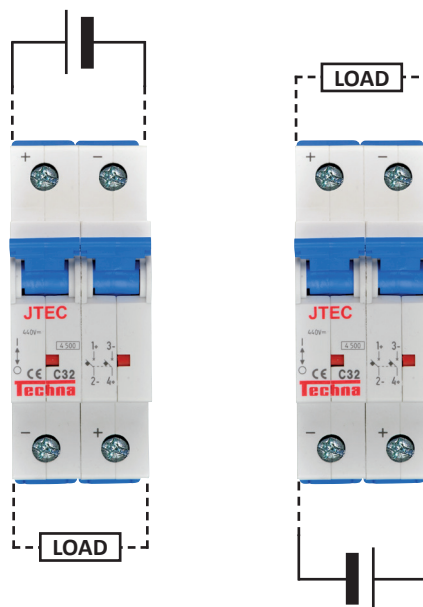


JtecDC Miniature Circuit Breakers



The JtecDC Circuit Breaker allows usage on DC circuits up to 220Vdc in a single pole and 440Vdc with two poles in series configuration.

The JtecDC device is polarity sensitive and must be wired correctly as per the examples to the right.



JtecDC Technical Specification

Poles	Voltage	Breaking Capacity
Single Pole	220 Vdc	4.5kA
Double Pole in Series	440 Vdc	4.5kA

NOTE: for other details please refer to standard Jtec on page 10.

JtecDC Ordering Scheme

