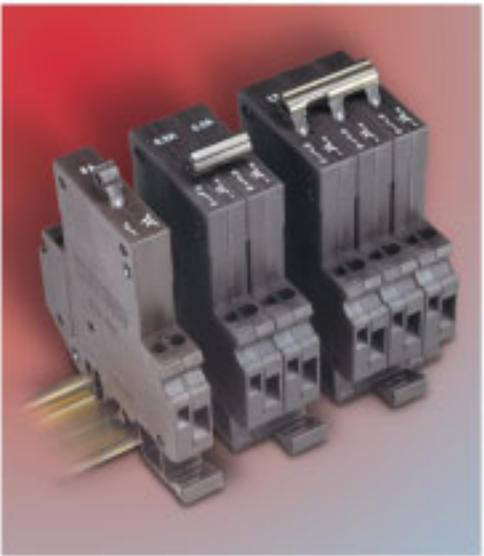


Thermal-Magnetic Circuit Breaker | TMC 1

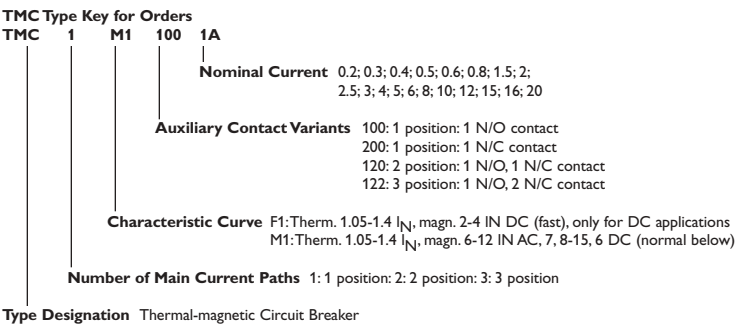
One, two and three pole thermal-magnetic circuit breakers with tease-free, trip-free, snap action mechanism and toggle actuation (S-type: IEC 934). Breaker has a universal mounting foot so it can be snapped on both NS 35 and NS 32 mounting rail profiles. Available with auxiliary contact (1 x N/O or 1 x N/C) for status signaling. Two and three pole models are internally linked to ensure that both/all poles trip in the event of an overload on one pole, even if the actuator is held in the ON position. This circuit breaker can be supplied in current ratings to 32 A with a choice of characteristic curves. All screw terminals are recessed for safety.

Technical Data		
Maximum Voltage Rating	AC 277 V; 3 AC 480 V (50/60 Hz) DC 65 V	
Current Rating Range	0.1...32 A non-inductive	
Auxiliary Circuit	1 A, AC 277 V / DC 65 V	
Typical Life	10,000 operations at 1xI _N	
Temperature Range	0...+55°C (+32...+131°F)	
Creepage Resistance	PTI 400 to IEC 112	
Insulation Co-ordination		
(IEC 664 and 664A)	Rated Impulse Withstand Voltage	Pollution Degree
Operating Area	2.5 kV	2
Main/Auxiliary Circuit	2.5 kV	2
Pole/Pole	2.5 kV	2
Dielectric Strength		
(IEC 664 and 664A)	Test Voltage	
Operating Area	AC 3,000 V (double insulation)	
Main/Auxiliary Circuit	AC 3,000 V	
Pole/Pole	AC 1,500 V	
Insulation Resistance	>100 MΩ (DC 500 V)	
Interrupting Capacity	0.1...5 A 400 A; 6...32 A 800 A	
(VDE 0660, Part 101, P-2)	Curve T2; 0.1...32 A 15 I _N	
(AC 250/415 V, DC 65 V)	Curve M3; 0.1...2 A 200 A AC	
Interrupting Capacity	I _N	U _N Self Limiting
(UL 1077/EN 60934 PC 1)	0.1...16 A	AC 277 V 5,000 A
	20...32 A	AC 277 V 2,000 A
	0.1...16 A	3 AC 480 V 5,000 A
	20...32 A	3 AC 480 V 2,000 A
	0.1...32 A	DC 65 V 2,000 A
Environmental Protection	Operating Area IP 30	
(IEC 529/DIN 40050)	Terminal Area IP 20	
Vibration	Curve F1: 3g (57-500 Hz) ±0.23 mm (10-57 Hz) Curves M1, M3, T1, T2: 5g (57-500 Hz ±0.38 mm (10-57 Hz) to IEC 68-2-6, Test FC 10 Frequency Cycles/Axis	
Shock	Curve F1: 25g (11 ms), directions 1-5 10g (11 ms), direction 6 Curves M1, M3, T1, T2 25g (11 ms), directions 1-5 20g (11 ms), direction 6 to IEC 68-2-27, Test Ea	
Corrosion	96 hours at 5% saltspray to IEC 68-2-11, Test Ka	
Humidity	240 hours at 95% RH to IEC 68-2-3, Test Ca	
Weight	Approximately 60g per Pole	

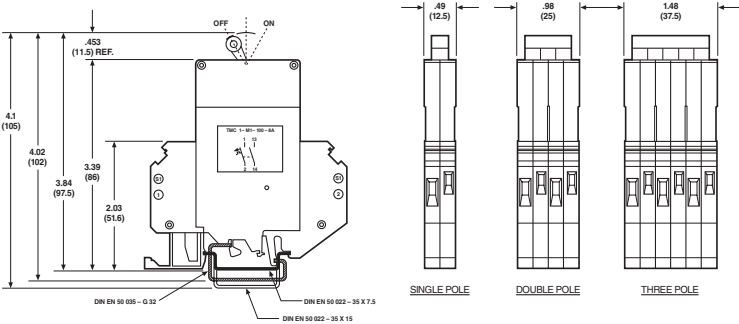


Typical Applications

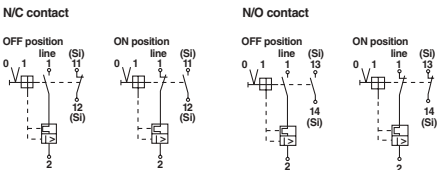
Process control equipment, robotics, machine tool control, communications systems, instrumentation.



Dimensions



Internal Wiring Diagram



In the OFF position (contacts between terminals 1 and 2 are open), the auxiliary contacts between terminals 11 and 12 are considered N/C

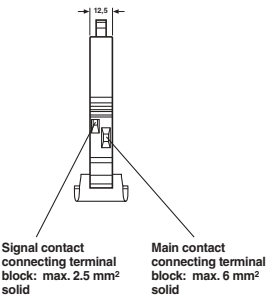
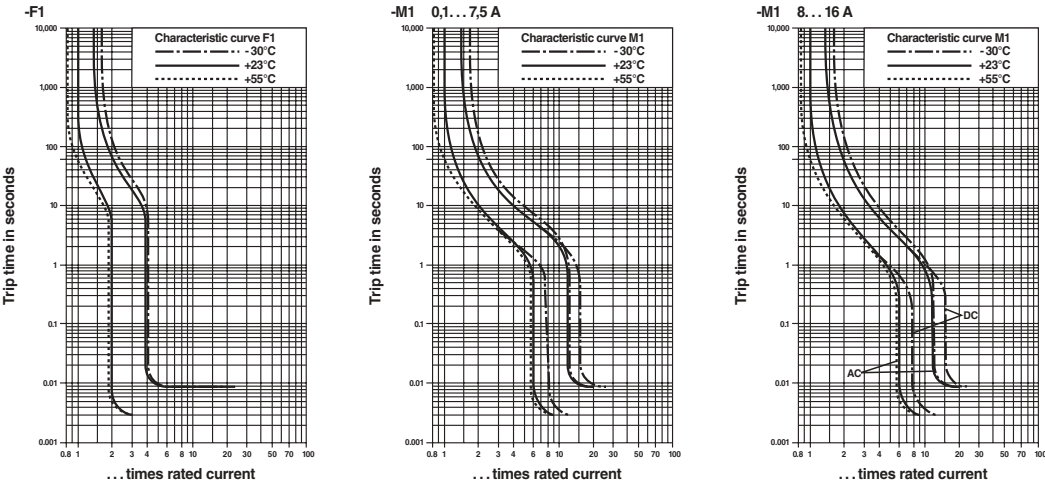
In the OFF position (contacts between terminals 1 and 2 are open), the auxiliary contacts between terminals 13 and 14 are considered N/O

Standard current ratings and typical internal resistance values

Thermal-Magnetic Circuit Breakers							
Internal Resistance per Pole (ohms)	Current Ratings (amps)	TMC 1 M1 100 Single Pole N/O Aux.Con. Part #	TMC 1 M1 200 Single Pole N/C Aux. Con. Part #	TMC 1 F1 100 Single Pole N/O Aux.Con. Part #	TMC 1 F1 200 Single Pole N/C Aux.Con. Part #	TMC 2 M1 120 Double Pole NO/NC Aux.Con. Part #	TMC 3 M1 122 Triple Pole 1N/O 2N/C Aux.Con. Part #
92	0.1	5650299*	5650418*	N/A	N/A	5650425*	5650467*
26.1	0.2	5531422	5531040*	5650525*	5531231	5650426*	5650470*
11.6	0.3	5650267*	5650416*	5650526*	N/A	5650427*	5650471*
6.6	0.4	5650411*	5650417*	5650527*	N/A	5650428*	5650472*
4.1	0.5	5531370	5531752*	5650528	5651057*	5650429*	5650473*
3	0.6	5650412*	5650419*	5531817*	N/A	5650430*	5650435*
1.65	0.8	5531273	5650420*	5650529*	N/A	5650431*	5650436*
1.1	1.0	5531723	5531341*	5531914	5531532	5650254	5532997
0.47	1.5	5531176*	5531558	5650530*	5650282*	5650385*	5650437*
0.28	2.0	5531820	5531448*	5530928	5650352*	5517967*	5650438*
0.183	2.5	5531079*	5650421*	5650531*	N/A	5650432	5650439*
0.124	3.0	5531927	5531545*	5531024	N/A	5650255	5650440*
0.077	4.0	5530973	5531354*	5531875	5650829*	5650266	5650441*
0.063	5.0	5530931	5531642	5531121	5650830*	5512014	5650384
0.045	6.0	5531969	5600358*	5650532*	5650366*	5530863	5650442*
≤0.02	8.0	5531037	5531749*	5531228*	5650831	5517954	5650443*
≤0.02	10	5531862	5530957	5650533	5650283*	5511170	5650354
≤0.02	12	5531134	5531846*	5650534*	N/A	5650433*	5518979
≤0.02	15	5510757	5650475*	N/A	N/A	5600432	5650353
≤0.02	16	5531765	5531943*	5531574	5651032*	5530892	5530876
≤0.02	20	5650413*	5650422*	N/A	N/A	5650308	5650445
≤0.02	25	5650414*	5650423*	N/A	N/A	5650476*	5650446*
≤0.02	32	5650415*	5650424*	N/A	N/A	5650434	5650447

* Indicates breakers that are made-to-order and may require an 8 to 10 week lead time.

Typical time/current characteristics at 23°C



Direct Current – Magnetic tripping currents are increased by 30% in DC circuits with the effect of shifting the magnetic trip range 30% to the right of AC trip curves.

The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below.

Ambient temperature °F	-22	-4	+14	+32	+50	+73.5	+86	+104	+122	+140
°C	-30	-20	-10	0	+10	+23	+30	+40	+50	+60

Multiplication factor