



Motor protective circuit breaker SM1R

Product designation

Product type designation

**Electrical features**

Number of poles	nr.	3
Magnetic protection		yes
Thermal protection		yes
Phase failure detection		Yes
Rated insulation voltage $U_i$ IEC/EN	V	690
Rated impulse withstand voltage $U_{imp}$	kV	6
Rated frequency	Hz	50/60
Thermal trip adjustment range		0.16...0.25
Rated current ( $I_n$ )	A	0.25
Magnetic tripping		10 x $I_n$
Total power dissipation	W	1.97

Operational short-circuit current breaking capacity ( $I_{cs}$ ) at AC

230V	kA	100
400V	kA	100
440V	kA	100
500V	kA	100
690V	kA	100

Maximum short-circuit current breaking capacity ( $I_{cu}$ ) at AC

230V	kA	100
400V	kA	100
440V	kA	100
500V	kA	100
690V	kA	100

Tripping class

10A

IEC Utilization category

A

**Operations**

Mechanical life	cycles	100000
Electrical life	cycles	100000

**Mechanical features**

Tightening torque for terminals

min	Nm	2.5
max	Nm	3
min	lbin	1.8
max	lbin	2.2

Max number of wires simultaneously connectable

nr. 2

Conductor section

AWG/Kcmil

min	16
max	8

Flexible w/o lug conductor section

min	mm <sup>2</sup>	1
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Flexible c/w lug conductor section	min	mm <sup>2</sup>	1
Flexible with insulated spade lug conductor section	min	mm <sup>2</sup>	1
Screwdriver			PH2
Power terminal protection according to IEC/EN 60529			IP20
Cable stripping length	main circuit	mm	1

**Ambient conditions**

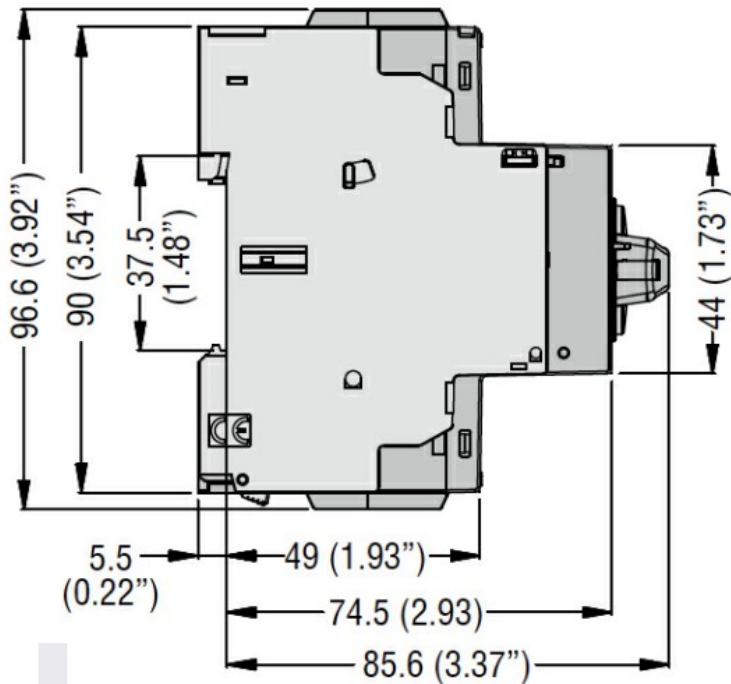
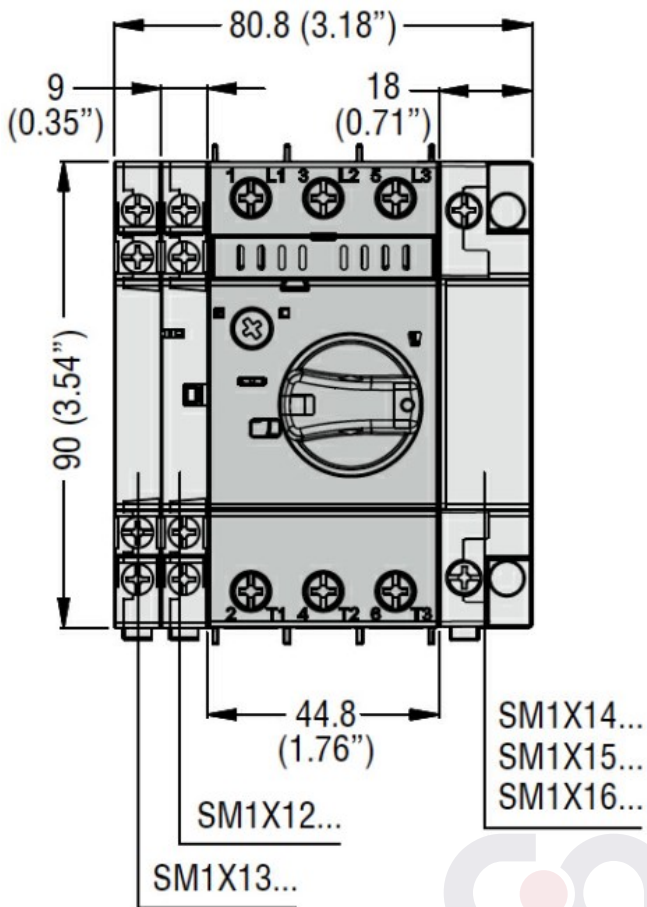
Temperature			
Operating temperature			
	min	°C	-20
	max	°C	60
Storage temperature			
	min	°C	-50
	max	°C	80
Compensation temperature			
	min	°C	-20
	max	°C	50
Max altitude		m	3000

Operating position	normal allowable	Vertical plan Any
Fixing		Screw / DIN rail 35mm
Weight	g	320

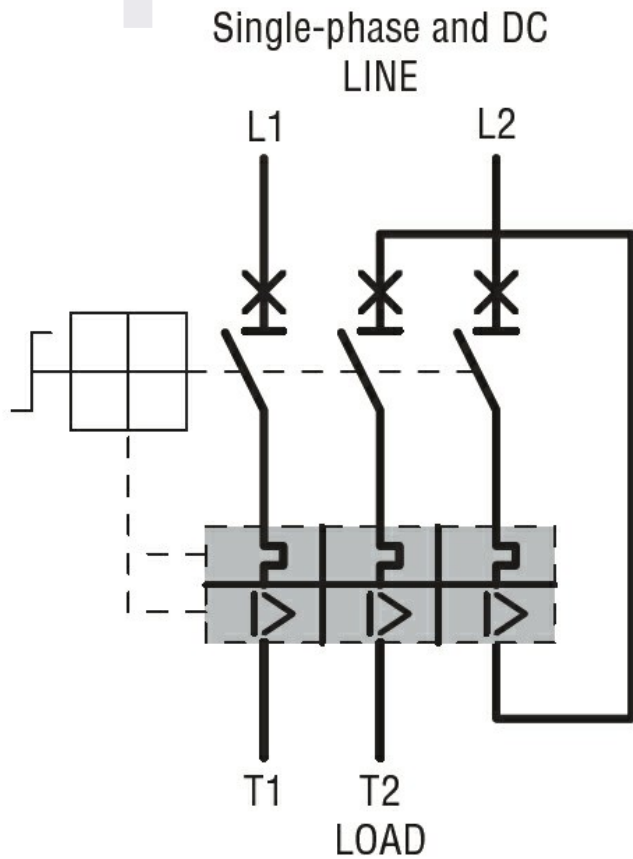
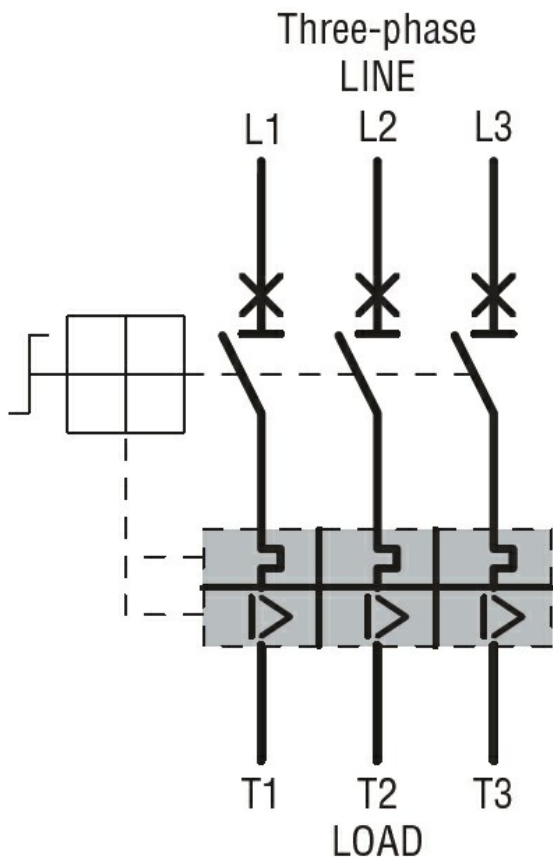
**UL technical data**

Motor Disconnect			
	at 480V	kA	50
	at 600V	kA	50
	protection		Fuse or CB
Group Motor Installation			
	at 480V	kA	50
	at 600V	kA	50
	protection		Fuse or CB
Tap Conductor Protection			
	at 480Y/277V	kA	50
	at 600Y/347V	kA	50
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current			
	at 240V	kA	50
	at 480Y/277V	kA	50
	at 600Y/347V	kA	50
Maximum UL/CSA horsepower ratings single-phase			
	110V-120V	HP	-
	220V-240V	HP	-
Maximum UL/CSA horsepower ratings three-phase, 3-pole			
	200V-208V	HP	-
	220V-240V	HP	-
	440V-480V	HP	-
	550V-600V	HP	-

**Dimensions**



Wiring diagrams



Certifications and compliance



MOTOR PROTECTION CIRCUIT BREAKER TYPE E, IEC BREAKING CAPACITY ICU 100KA AT  
400V, 0.16...0.25A

**SM1R0025**

Certifications

CSA C22.2 n° 14

IEC/EN 60947-1

IEC/EN 60947-2

IEC/EN 60947-4-1

UL508

Compliance

cULus

EAC

ETIM classification

ETIM 8.0

EC000074 -  
Motor protection  
circuit-breaker

