



Motor protection
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		0.4...0.63
Rated current (I_n)	A	0.63
Magnetic tripping		13 x I_n
Total power dissipation	W	1.95

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	22
max	lbin	26.5

Max number of wires simultaneously connectable

Nr. 2

Conductor section

AWG/Kcmil

min	16
max	8

Flexible w/o lug conductor section

min	mm ²	1
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Flexible c/w lug conductor section	min	mm ²	1
Flexible with insulated spade lug conductor section	min	mm ²	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
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Operating position

normal allowable	Vertical plan Any
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Fixing

Screw / DIN rail
35mm

Weight

g	320
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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

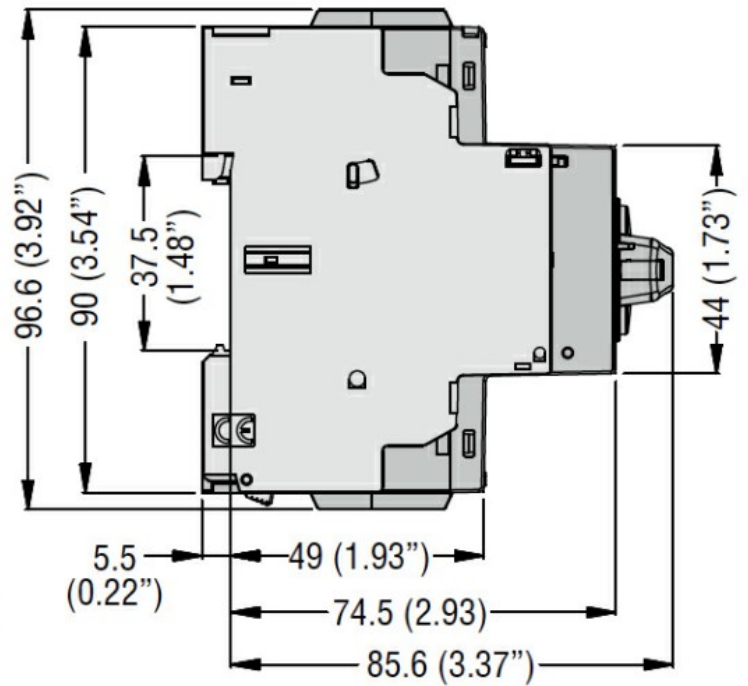
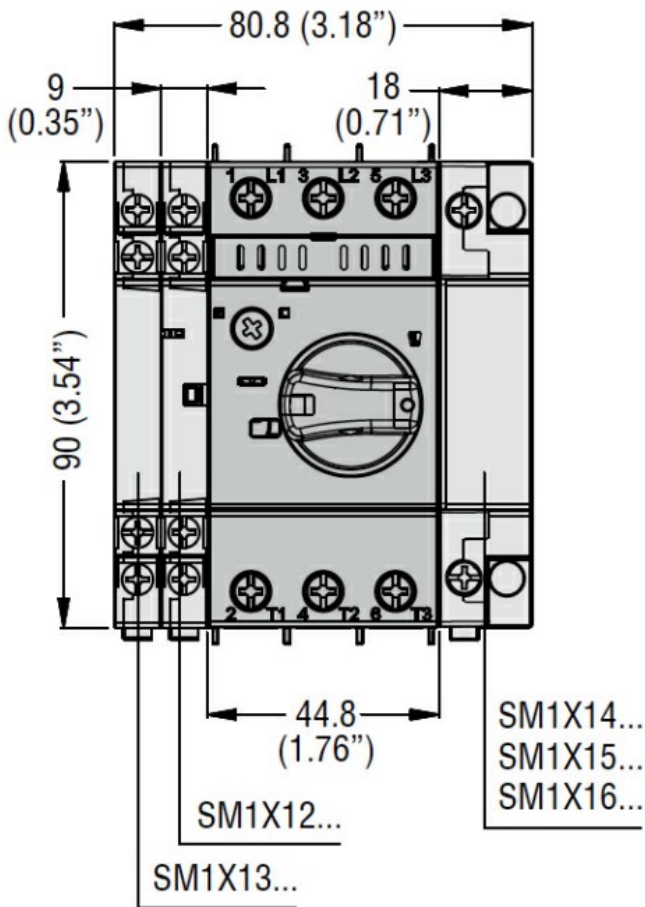
Maximum UL/CSA horsepower ratings single-phase

110V-120V	HP	-
220V-240V	HP	-

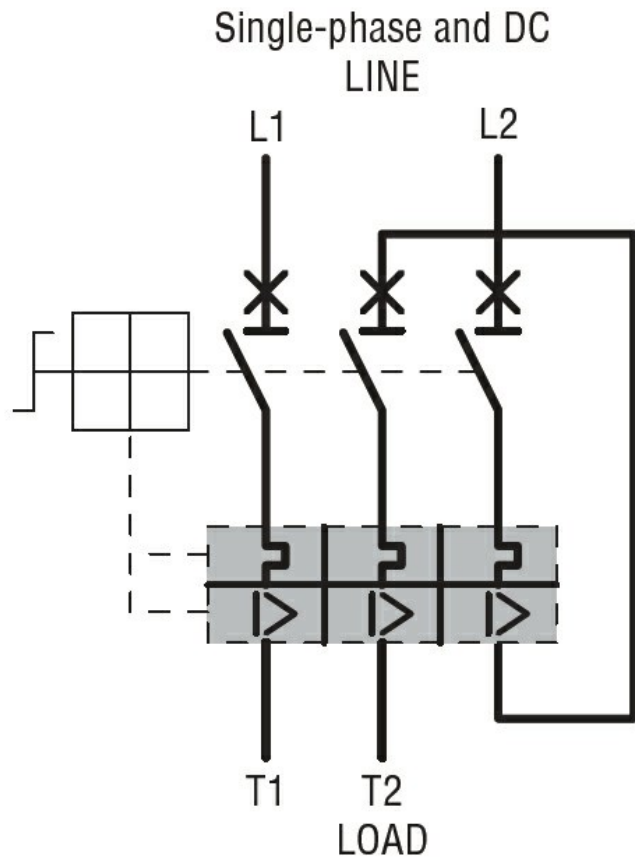
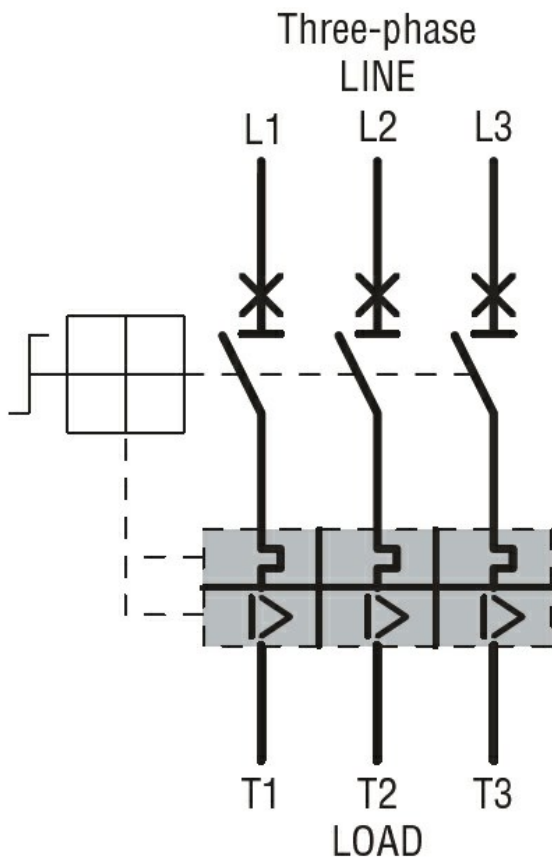
Maximum UL/CSA horsepower ratings three-phase, 3-pole

200V-208V	HP	-
220V-240V	HP	-
440V-480V	HP	-
550V-600V	HP	-

Dimensions



Wiring diagrams



Certifications and compliance

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