



Product designation

Motor protection  
circuit breaker  
SM1R

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		20...25
Rated current ( $I_n$ )	A	25
Magnetic tripping		13 x $I_n$

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

230V	kA	100
400V	kA	25
440V	kA	5
500V	kA	5
690V	kA	2

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

230V	kA	100
400V	kA	25
440V	kA	50
500V	kA	10
690V	kA	4

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

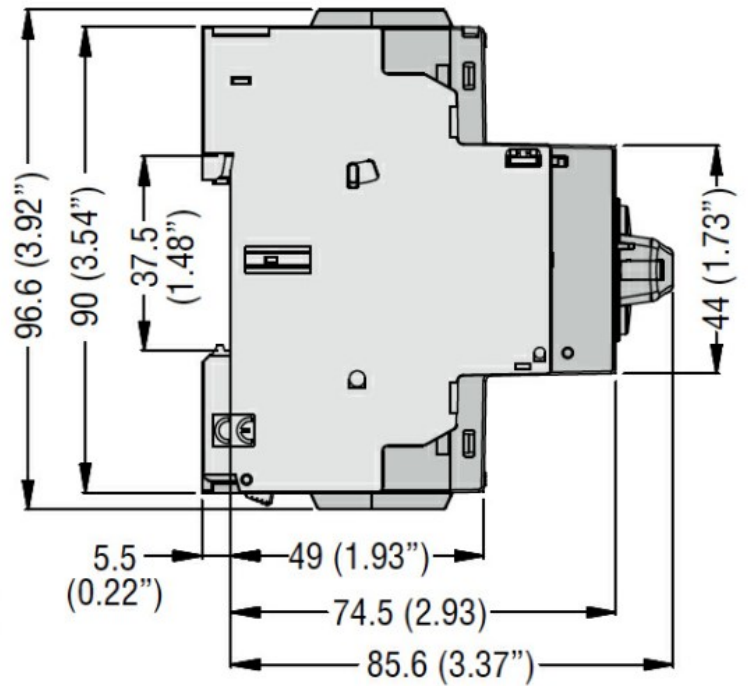
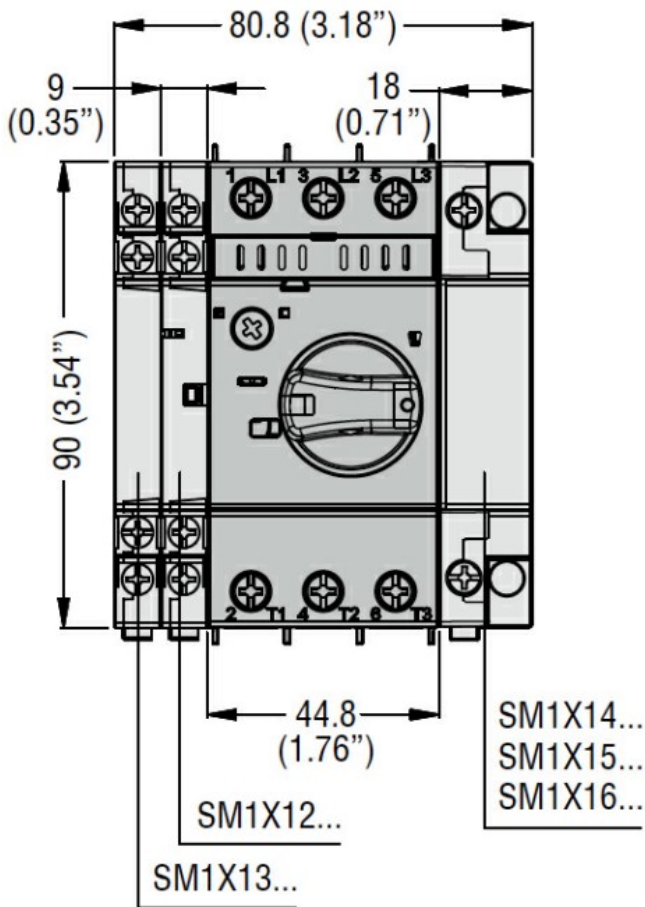
Flexible w/o lug conductor section

min	mm <sup>2</sup>	1
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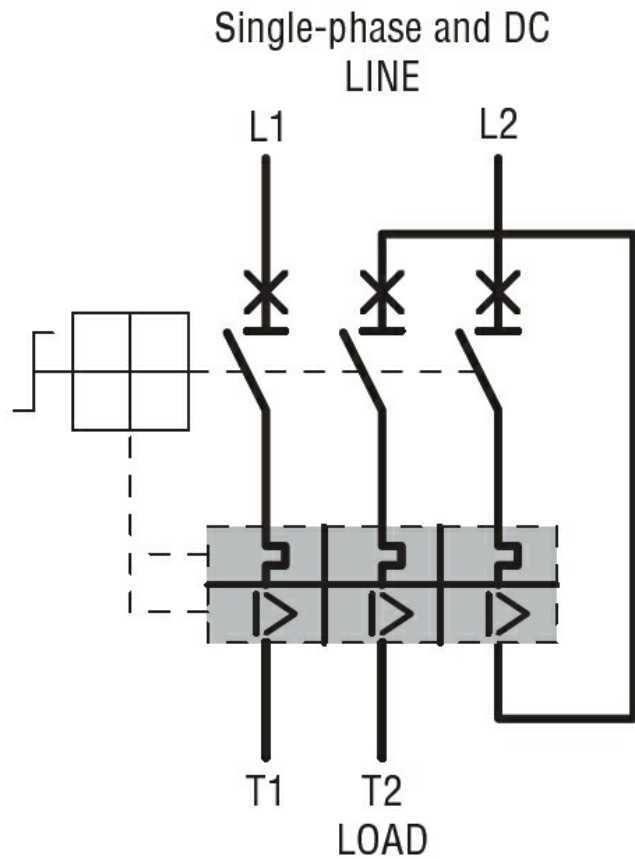
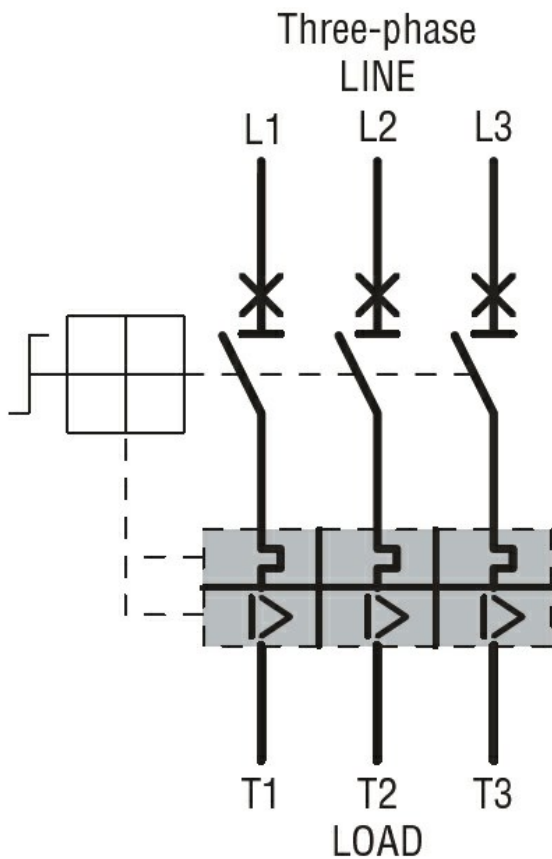
Flexible c/w lug conductor section

		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
<b>Ambient conditions</b>				
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
				Screw / DIN rail
				35mm
Fixing				
				390
Weight				
<b>UL technical data</b>				
Motor Disconnect				
	at 240V	kA		30
	at 480V	kA		30
	at 600V	kA		30
	protection			200A class J
Group Motor Installation				
	at 240V	kA		30
	at 480V	kA		30
	at 600V	kA		30
	protection			200A class J
Tap Conductor Protection				
	at 480Y/277V	kA		30
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current				
	at 240V	kA		30
	at 600Y/347V	kA		30
Maximum UL/CSA horsepower ratings single-phase				
	110V-120V	HP		2
	220V-240V	HP		3
Maximum UL/CSA horsepower ratings three-phase, 3-pole				
	200V-208V	HP		5
	220V-240V	HP		7.5
	440V-480V	HP		15
	550V-600V	HP		20

**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