



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		17...23
Rated current (I_n)	A	23
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

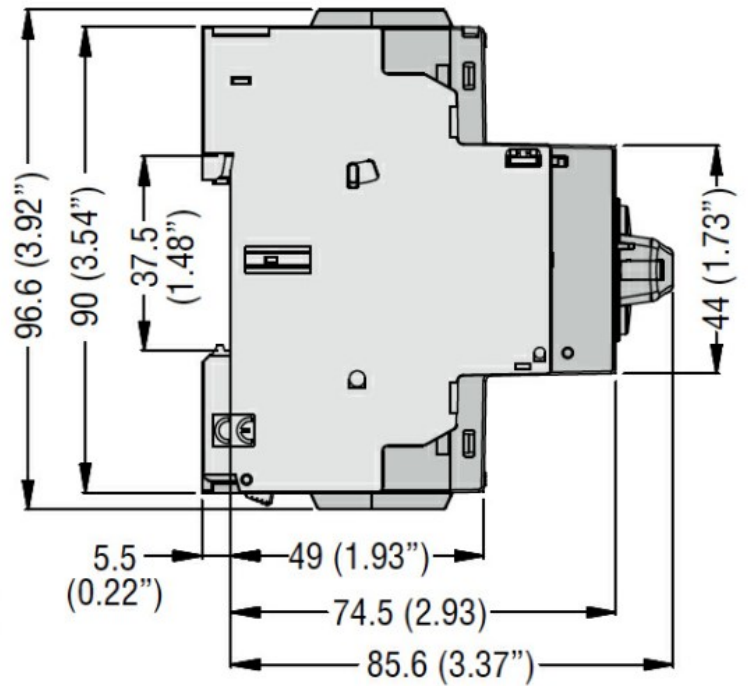
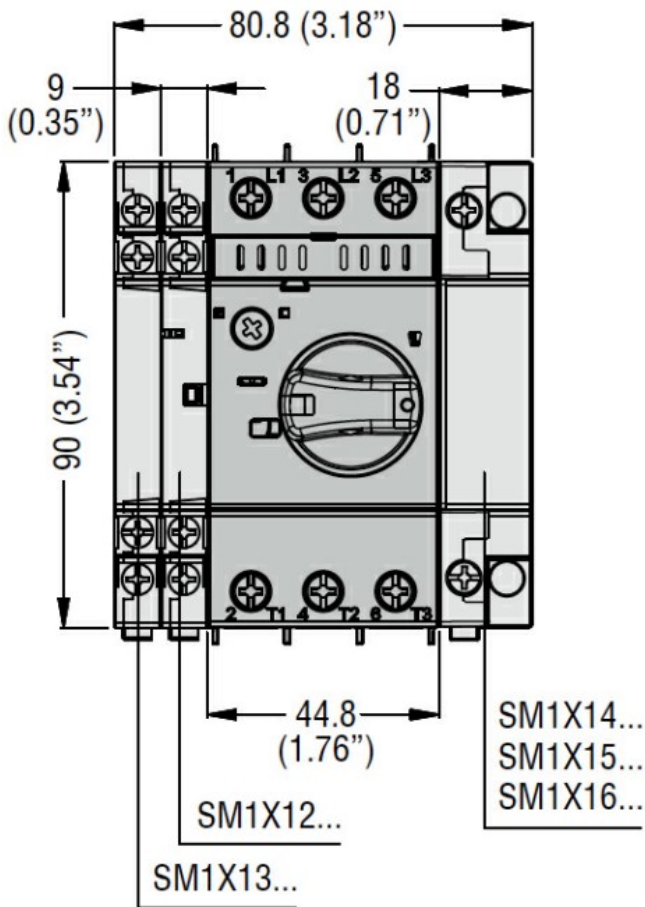
Flexible w/o lug conductor section

min	mm ²	1
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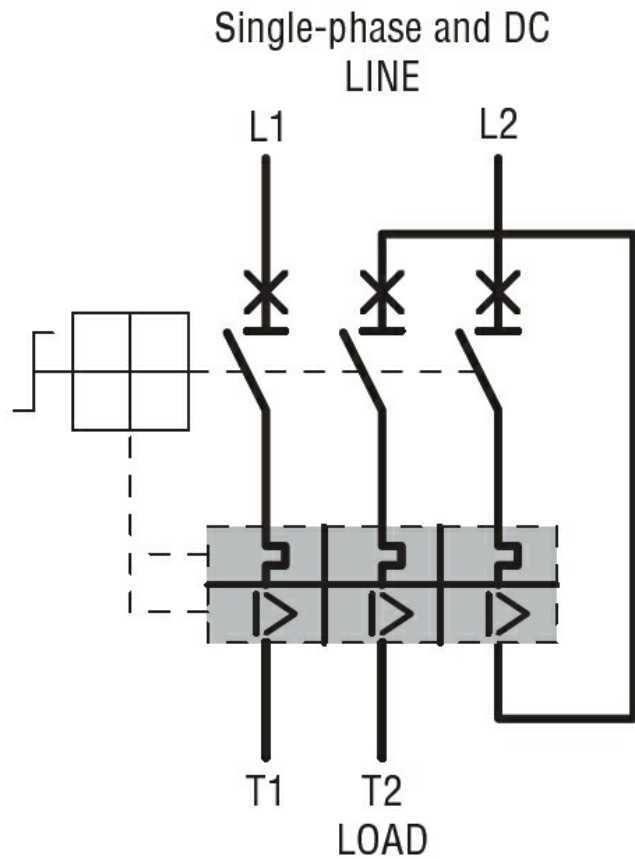
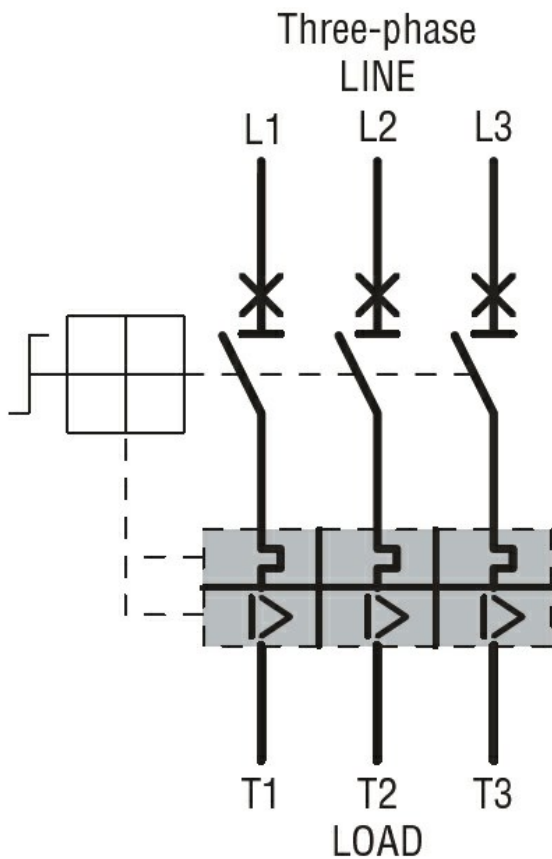
Flexible c/w lug conductor section

		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
Operating position	normal allowable			Vertical plan Any
Fixing				Screw / DIN rail 35mm
Weight			g	390
UL technical data				
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		1.5
	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