



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		13...18
Rated current ( $I_n$ )	A	18
Magnetic tripping		13 x $I_n$
Power dissipation per pole	min	W 1.34
	max	W 2.57

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

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

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

230V	kA	100
400V	kA	100
440V	kA	10
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

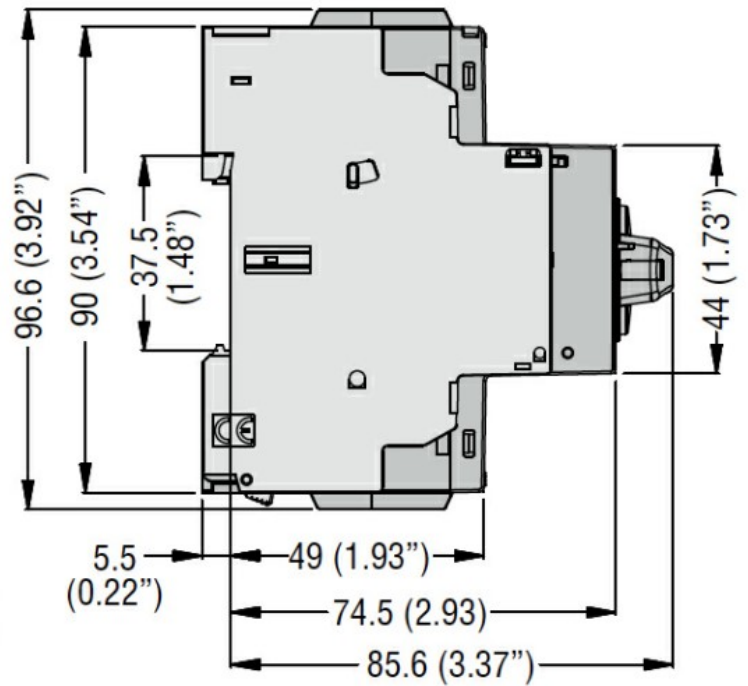
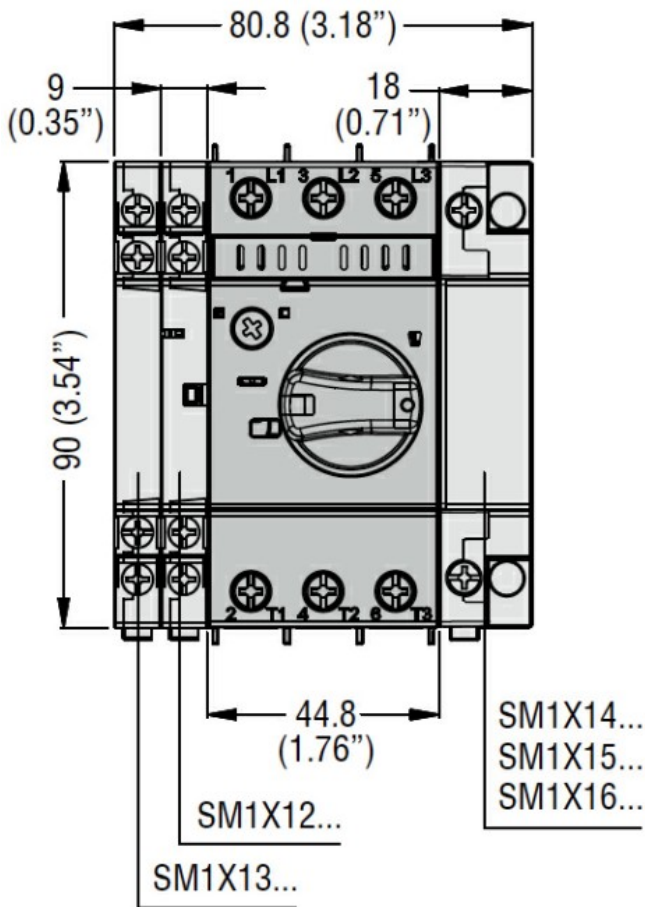
Nr. 2

Conductor section

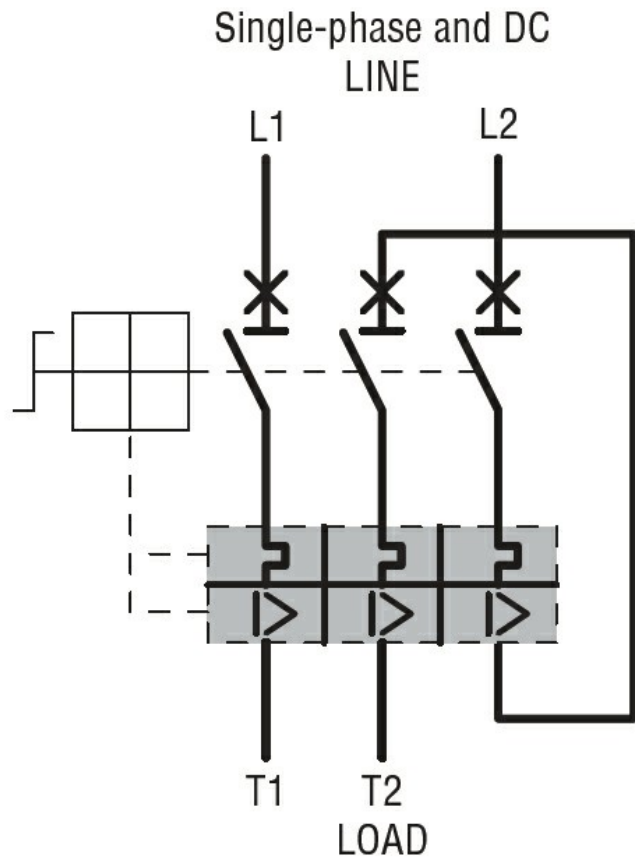
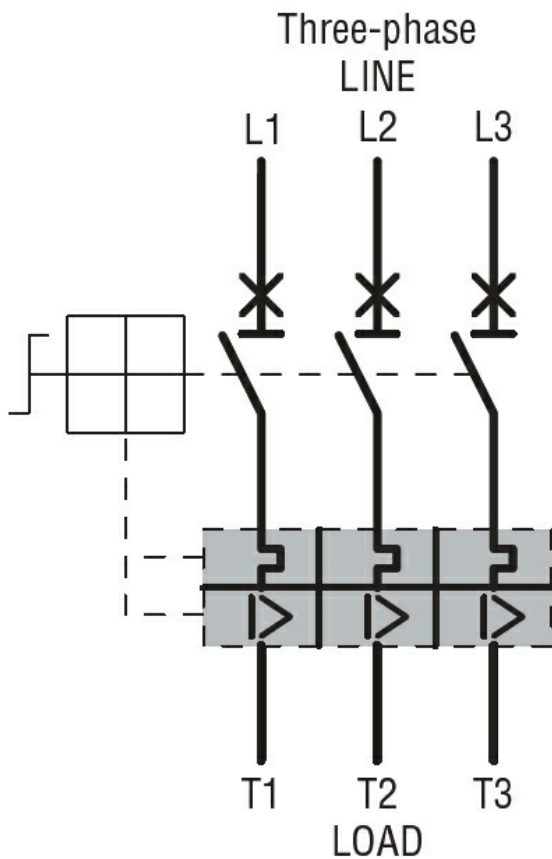
AWG/Kcmil

min	16
max	8

Flexible w/o lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Flexible c/w lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Flexible with insulated spade lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Screwdriver			PH2
Power terminal protection according to IEC/EN 60529			IP20 on front
Cable stripping length			
	main circuit	mm	12
<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
Fixing			Screw / DIN rail 35mm
Weight			g 390
<b>UL technical data</b>			
Motor Disconnect			
	at 480V	kA	30
	at 600V	kA	30
	protection		200A class J
Group Motor Installation			
	at 480V	kA	30
	at 600V	kA	30
	protection		200A class J
Maximum UL/CSA horsepower ratings single-phase			
	110V-120V	HP	1
	220V-240V	HP	3
Maximum UL/CSA horsepower ratings three-phase, 3-pole			
	200V-208V	HP	5
	220V-240V	HP	5
	440V-480V	HP	10
	550V-600V	HP	15
<b>Dimensions</b>			



**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