



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		6.3...10
Rated current ( $I_n$ )	A	10
Magnetic tripping		13 x $I_n$

Power dissipation per pole

min	W	1.03
max	W	2.61

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

230V	kA	100
400V	kA	100
440V	kA	42
500V	kA	42
690V	kA	2

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

230V	kA	100
400V	kA	100
440V	kA	100
500V	kA	42
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

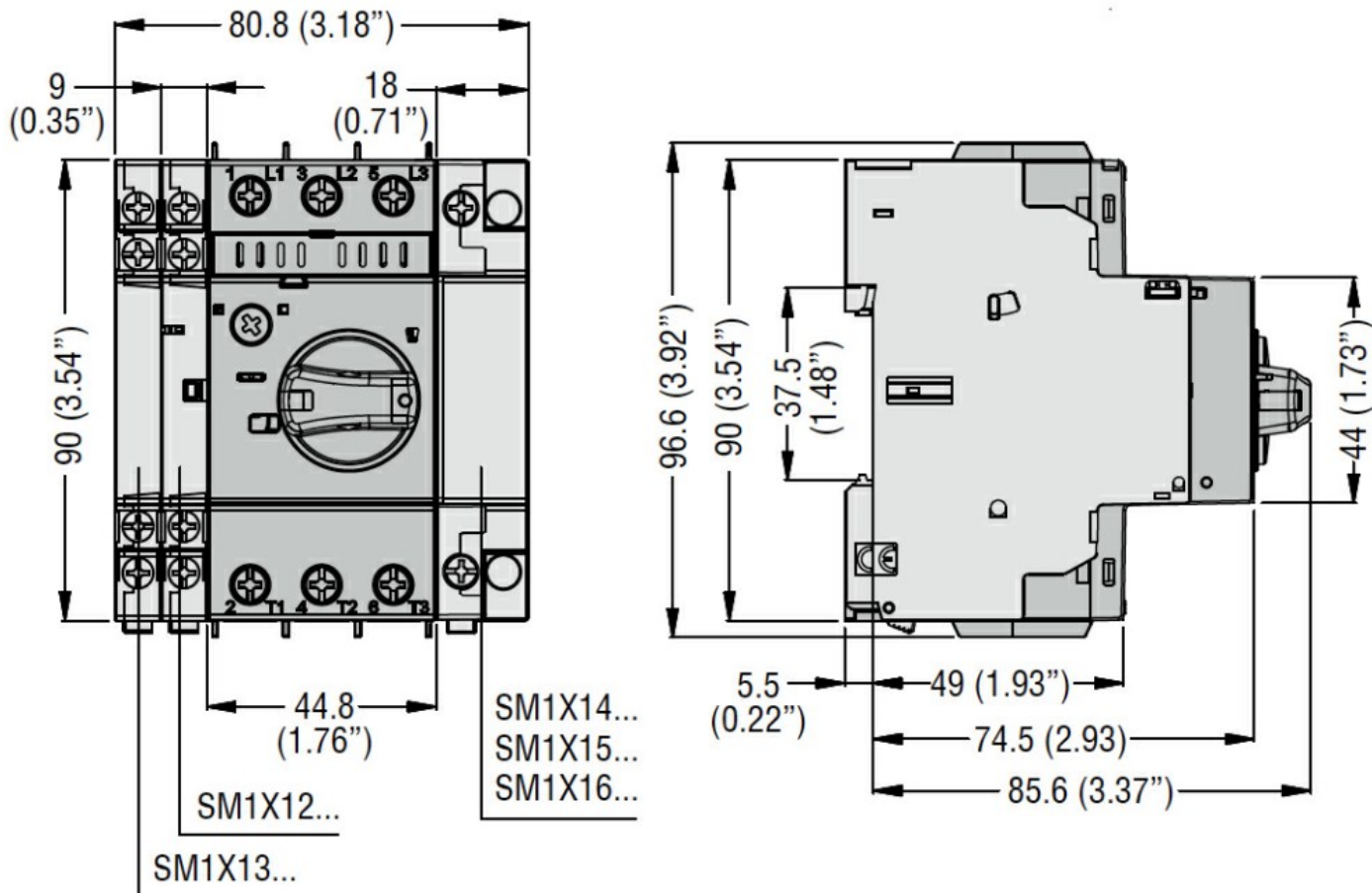
AWG/Kcmil

min	16
max	8

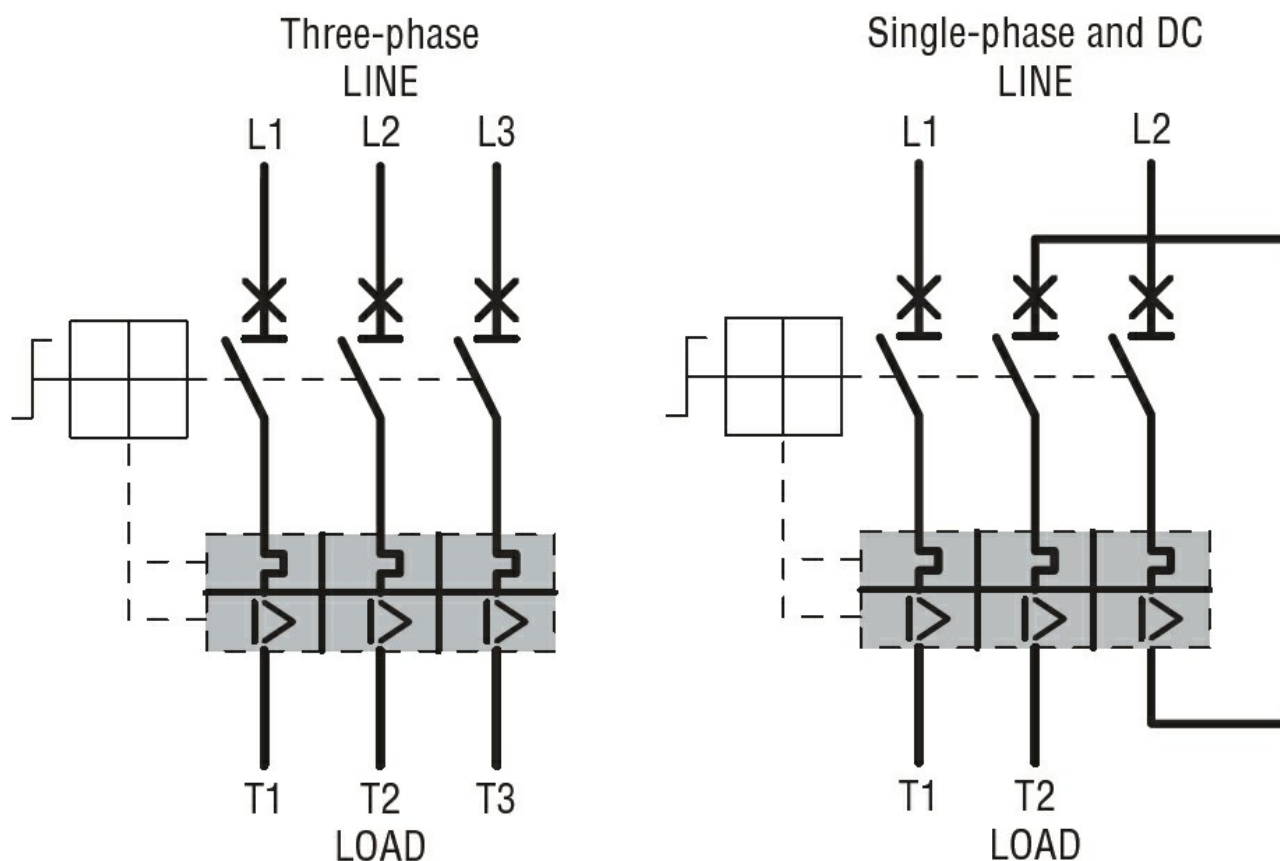
Flexible w/o lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Flexible c/w lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Flexible with insulated spade lug conductor section			
	min	mm <sup>2</sup>	1
	max	mm <sup>2</sup>	10
Screwdriver			PH2
Power terminal protection according to IEC/EN 60529			IP20 on front
Cable stripping length			
	main circuit	mm	12
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		Vertical plan
	allowable		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		100A class J
Group Motor Installation			
	at 240V	kA	30
	at 480V	kA	30
	at 600V	kA	30
	protection		100A class J
Tap Conductor Protection			
	at 480Y/277V	kA	65
	at 600Y/347V	kA	30
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current			
	at 240V	kA	65
	at 480Y/277V	kA	65
	at 600Y/347V	kA	30
Maximum UL/CSA horsepower ratings single-phase			
	110V-120V	HP	1/2
	220V-240V	HP	1.5
Maximum UL/CSA horsepower ratings three-phase, 3-pole			

200V-208V	HP	2
220V-240V	HP	3
440V-480V	HP	5
550V-600V	HP	7.5

## 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