



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

Power dissipation per pole

min	W	1.81
max	W	2.83

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	50
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

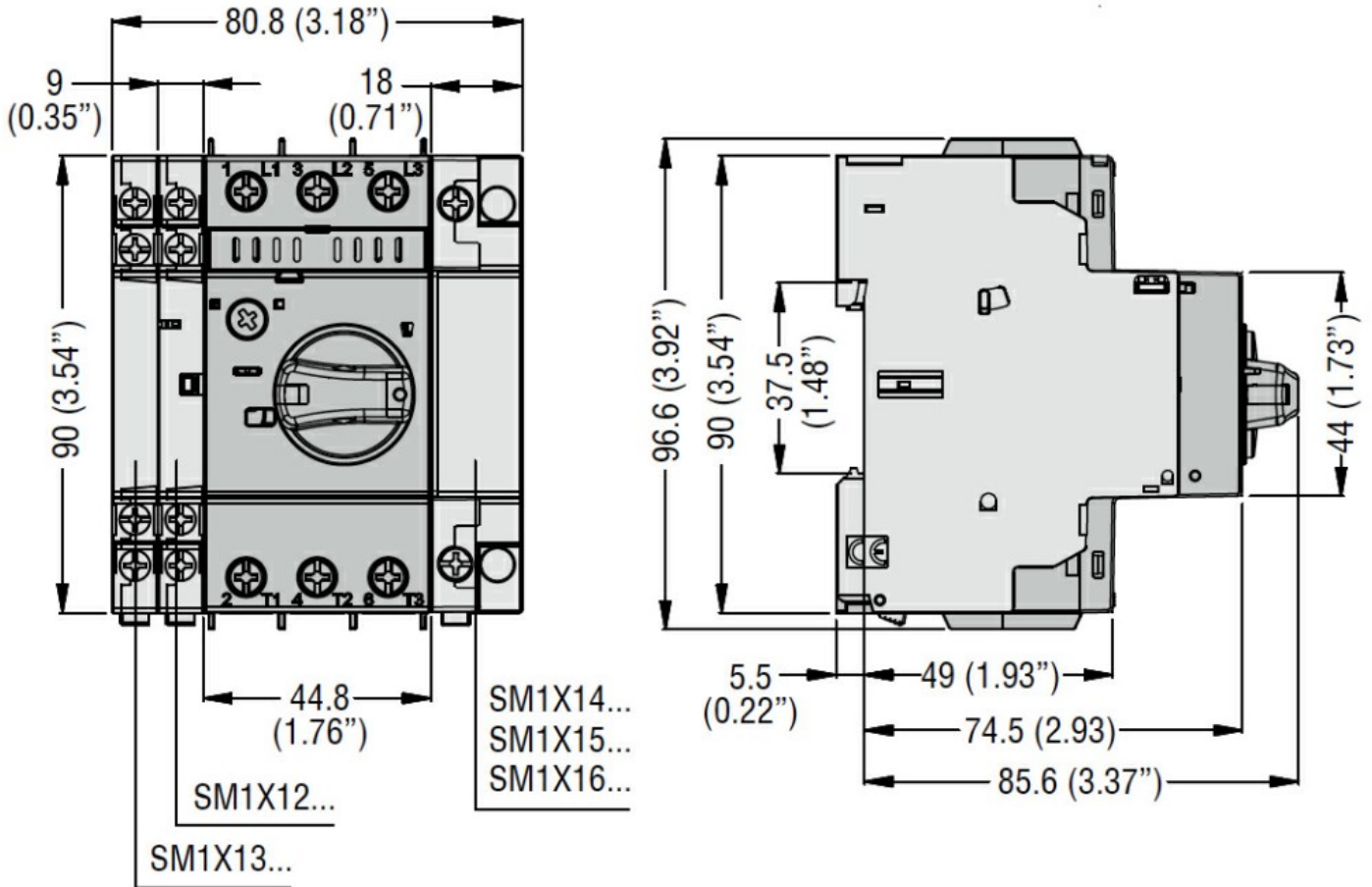
AWG/Kcmil

min	16
max	8

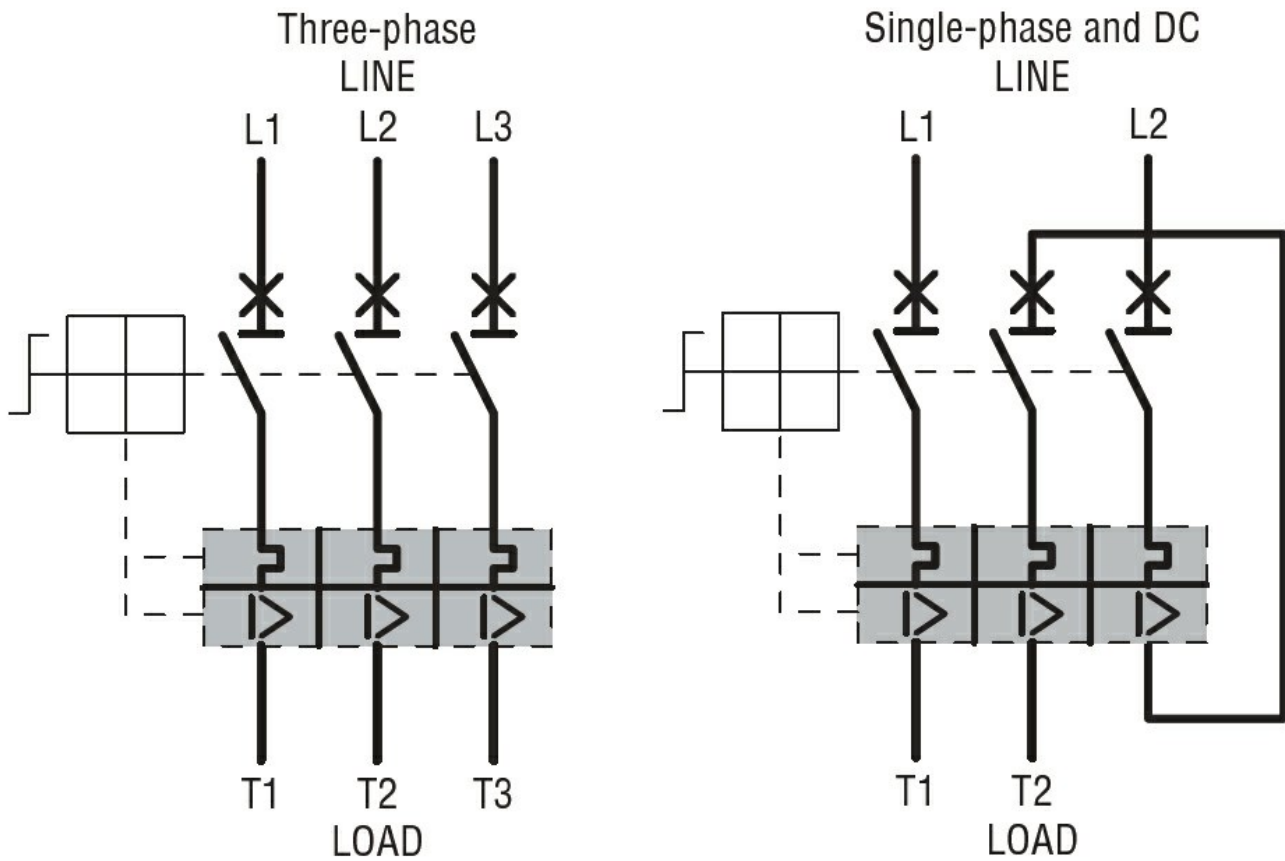
Flexible w/o lug conductor section	min	mm ²	1
	max	mm ²	10
Flexible c/w lug conductor section	min	mm ²	1
	max	mm ²	10
Flexible with insulated spade lug conductor section	min	mm ²	1
	max	mm ²	10
Screwdriver			PH2
Power terminal protection according to IEC/EN 60529			IP20 on front
Cable stripping length	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 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 480Y/277V	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 -
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