



Motor protective 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		4...6.5
Rated current ( $I_n$ )	A	6.5
Magnetic tripping		13 x $I_n$
Total power dissipation	W	1.99

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

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

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

230V	kA	100
400V	kA	100
440V	kA	100
500V	kA	100
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	$I_{bin}$	1.8
max	$I_{bin}$	2.2

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
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Flexible with insulated spade lug conductor section

min	mm <sup>2</sup>	1
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Screwdriver

PH2

Power terminal protection according to IEC/EN 60529

IP20

Cable stripping lenght

main circuit	mm	1
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**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
	Screw / DIN rail 35mm

Fixing

Weight

g 390

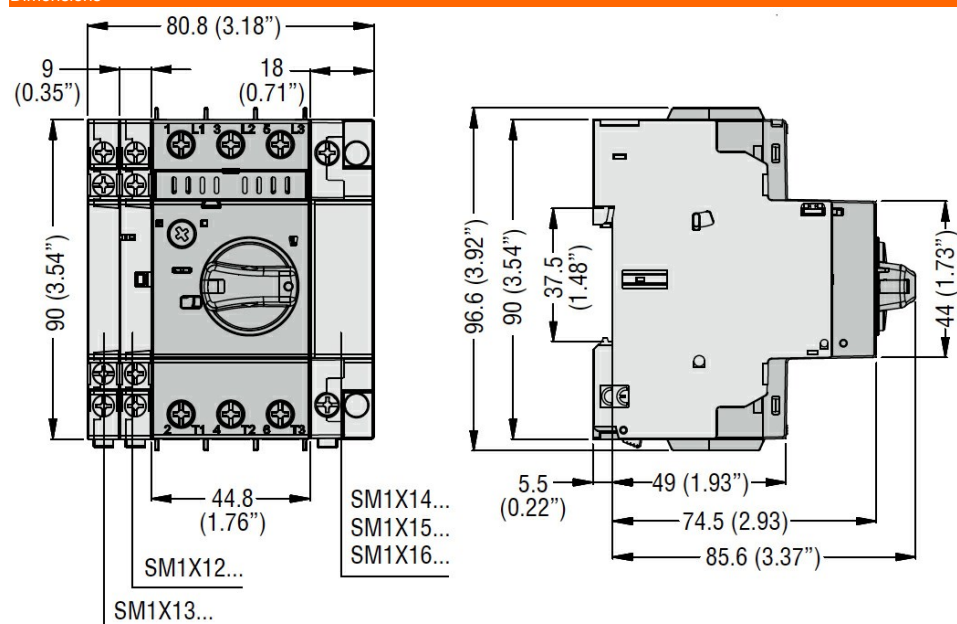
**UL technical data**

Motor Disconnect

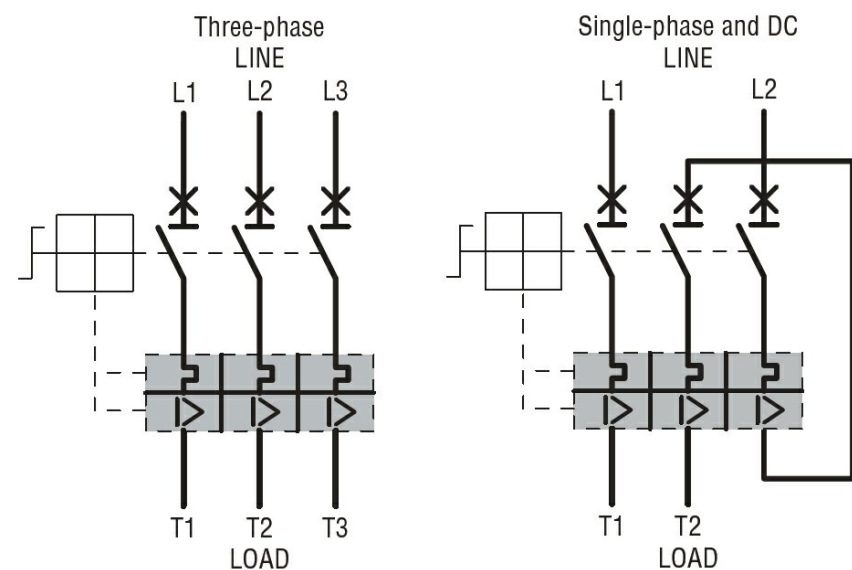
at 480V	kA	30
at 600V	kA	30

	protection		Fuse or CB
Group Motor Installation	at 480V	kA	30
	at 600V	kA	30
	protection		Fuse or CB
Tap Conductor Protection	at 480Y/277V	kA	30
	at 600Y/347V	kA	30
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current			
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short-circuit current at 240		kA	30
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short-circuit current at 480		kA	30
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short-circuit current at 600		kA	30
Maximum UL/CSA horsepower ratings single-phase			
	110V-120V	HP	1/4
	220V-240V	HP	1/2
Maximum UL/CSA horsepower ratings three-phase, 3-pole			
	200V-208V	HP	1.5
	220V-240V	HP	1.5
	440V-480V	HP	3
	550V-600V	HP	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	