



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 Ui IEC/EN	V	690	
Rated impulse withstand voltage Uimp	kV	6	
Rated frequency	Hz	50/60	
Thermal trip adjustment range		1.6...2.5	
Rated current (In)	A	2.5	
Magnetic tripping		13 x In	
Total power dissipation	W	1.63	
Operational short-circuit current breaking capacity (Ics) at AC			
	230V	kA	100
	400V	kA	100
	440V	kA	100
	500V	kA	100
	690V	kA	10

Maximum short-circuit current breaking capacity (Icu) at AC

	230V	kA	100
	400V	kA	100
	440V	kA	100
	500V	kA	100
	690V	kA	10

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	1.8
max	lbin	2.2

Max number of wires simultaneously connectable

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 length

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

3000

Operating position

normal	Vertical plan
allowable	Any

Fixing

Screw / DIN rail 35mm

Weight

g 320

**UL technical data**

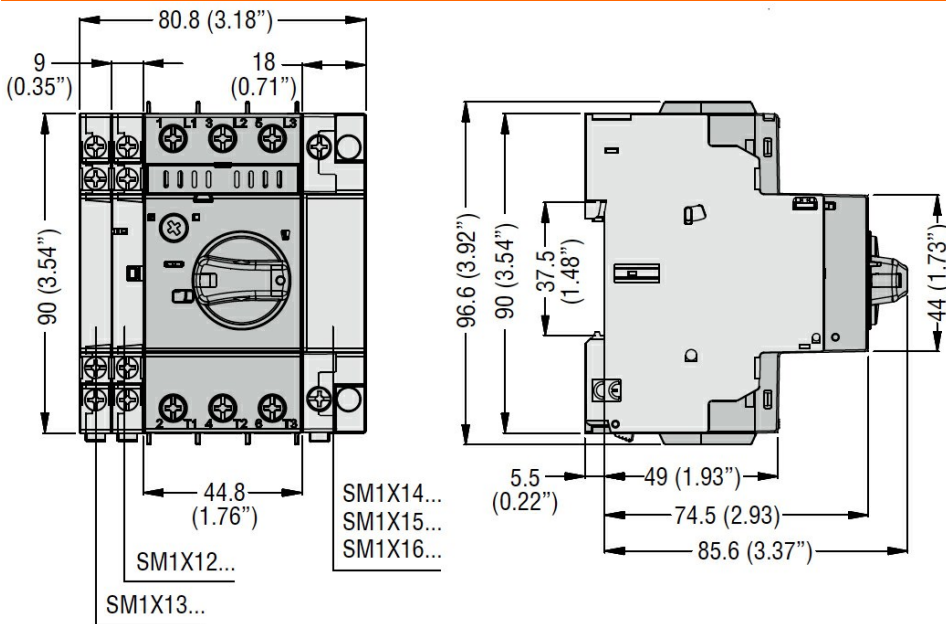
UL508 / UL60947-4-1 Manual Motor Controller - Short circuit current

Motor Disconnect

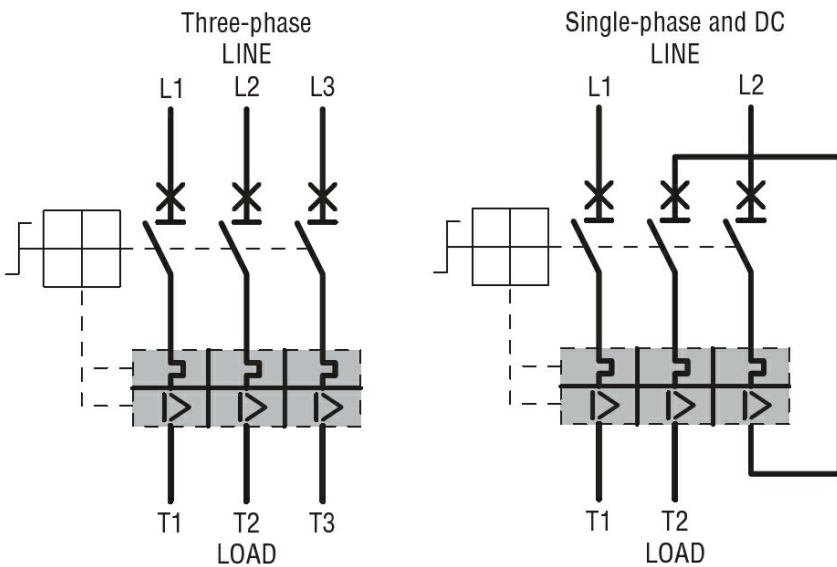
at 480V	kA	30
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Group Motor Installation	at 600V protection	kA	30 Fuse or CB
Tap Conductor Protection	at 480V protection	kA	30 Fuse or CB
	at 600V protection	kA	30 Fuse or CB
UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current	at 480Y/277V	kA	30
	at 600Y/347V	kA	30
Maximum UL/CSA horsepower ratings single-phase	at 110V-120V	hp	-
	at 220V-240V	hp	1/6
Maximum UL/CSA horsepower ratings three-phase, 3-pole	at 200V-208V	hp	1/2
	at 220V-240V	hp	1/2
	at 440V-480V	hp	1
	at 550V-600V	hp	1.5

**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

Compliance	UL508
	cULus
	EAC

ETIM 6 classification