



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		2.5...4
Rated current (In)	A	4
Magnetic tripping		13 x In
Total power dissipation	W	2.29
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	Ibin	1.8
max	Ibin	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 ² 1
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Flexible c/w lug conductor section

min	mm ² 1
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Flexible with insulated spade lug conductor section

min	mm ² 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

m 3000

Operating position

normal	Vertical plan
allowable	Any
	Screw / DIN rail 35mm

Fixing

Weight

g 390

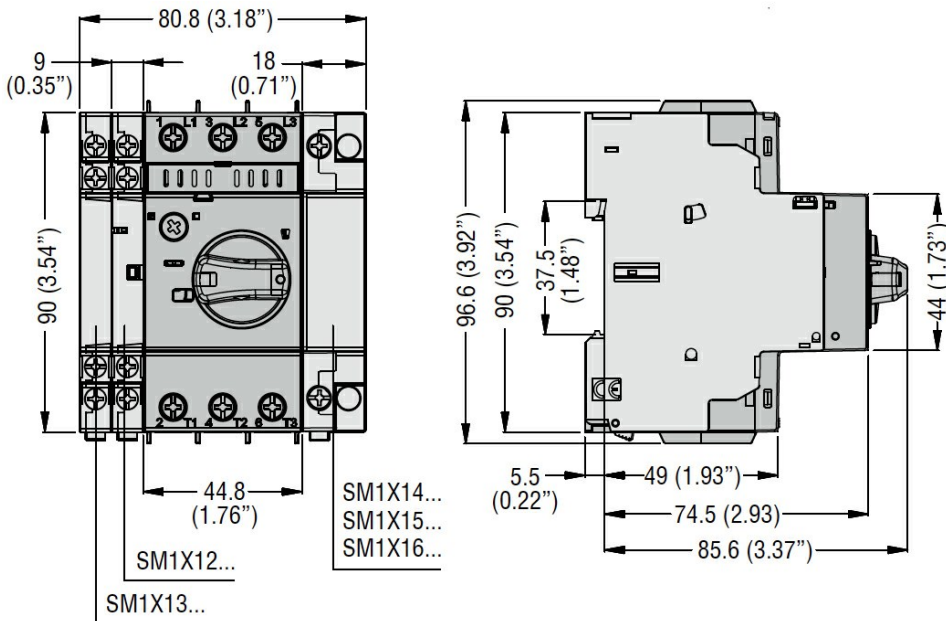
UL technical data

Motor Disconnect

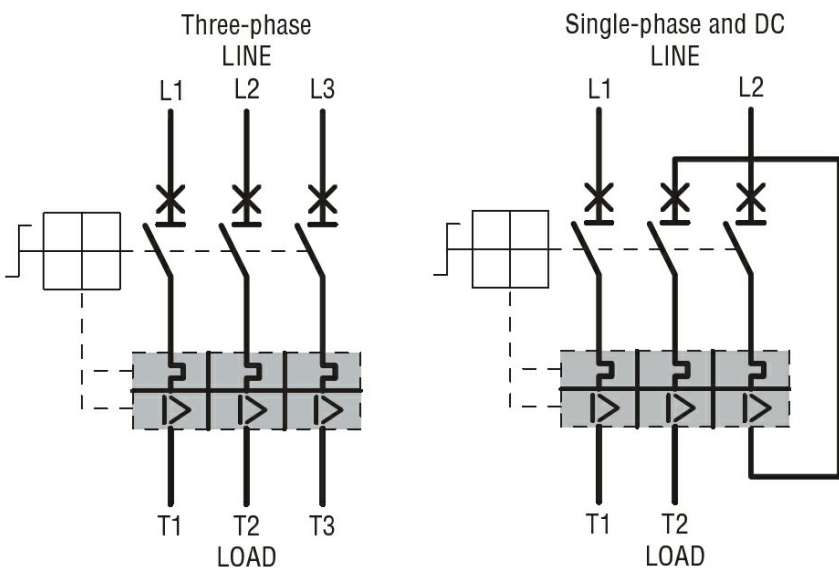
at 480V	kA	30
at 600V	kA	30

	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
	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	1/8
	220V-240V	HP	1/3
Maximum UL/CSA horsepower ratings three-phase, 3-pole	200V-208V	HP	3/4
	220V-240V	HP	3/4
	440V-480V	HP	2
	550V-600V	HP	3

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