ENERGY AND AUTOMATION

electric MOTOR PROTECTION CIRCUIT BREAKER TYPE E, IEC BREAKING CAPACITY ICU 100KA AT

400V, 1...1.6A



Product designation			Motor protection circuit breaker
Product type designation			SM1R
Electrical features Number of poles		Nr.	3
Magnetic protection		INI.	_
Thermal protection			yes
Phase failure detection			yes
Rated insulation voltage Ui IEC/EN		V	yes 690
Rated impulse withstand voltage Uimp		kV	6
		Hz	50/60
Rated frequency		П	
Thermal trip adjustment range		Λ	11.6
Rated current (In)		Α	1.6
Magnetic tripping		107	13 x ln
Total power dissipation		W	2.30
Operational short-circuit current breaking capacity (Ics) at AC			
	230V	kA	100
	400V	kA	100
	440V	kA	100
	500V	kA	100
	690V	kA	100
Maximum short-circuit current breaking capacity (Icu) at AC			
	230V	kA	100
	400V	kA	100
	440V	kA	100
	500V	kA	100
	690V	kA	100
Tripping class			10A
IEC Utilization category			Α
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	mm²	1



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	Flexible c/w lug conductor section			
		min	mm²	1
	Flexible with insulated spade lug conductor section			
		min	mm²	1
Screwdriver				PH2
	ction according to IEC/EN 60529			IP20
Cable stripping lengh				
	n	nain circuit	mm	1
Ambient conditions				
Temperature				
	Operating temperature		00	00
		min	°C	-20
	Chara da hama arah wa	max	°C	+60
	Storage temperature	min	°C	-50
		min	°C	-50 +80
	Compensation temperature	max	<u> </u>	1 00
	Compensation temperature	min	°C	-20
		max	°C	+50
Max altitude		max	m	3000
Operating position				3000
operating position		normal		Vertical plan
		allowable		Any
		anowabio		Screw / DIN rail
Fixing				35mm
Weight			g	320
UL technical data				
Motor Disconnect				
		at 480V	kA	50
		at 600V	kA	50
				Fuse or CB
		protection		ruse of CB
Group Motor Installat		protection		ruse of CB
Group Motor Installat		at 480V	kA	50
Group Motor Installat			kA kA	
	ion	at 480V		50
Group Motor Installat	ction	at 480V at 600V protection	kA	50 50 Fuse or CB
	ction at 4	at 480V at 600V protection	kA kA	50 50 Fuse or CB 50
Tap Conductor Prote	ction at 4 at 6	at 480V at 600V protection 80Y/277V 00Y/347V	kA kA kA	50 50 Fuse or CB 50 50
Tap Conductor Prote	ction at 4	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of	kA kA kA	50 50 Fuse or CB 50 50
Tap Conductor Prote	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V	kA kA kA sircuit cur kA	50 50 Fuse or CB 50 50 rrent 50
Tap Conductor Prote	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ	at 480V at 600V protection 80Y/277V 000Y/347V be E) Short of at 240V 80Y/277V	kA kA kircuit cui kA kA	50 50 Fuse or CB 50 50 rrent 50 50
Tap Conductor Prote UL508 / UL 60947-4-	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V	kA kA kA sircuit cur kA	50 50 Fuse or CB 50 50 rrent 50
Tap Conductor Prote UL508 / UL 60947-4-	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 00Y/347V	kA kA kA circuit cur kA kA kA	50 50 Fuse or CB 50 50 rrent 50 50
Tap Conductor Prote UL508 / UL 60947-4-	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 00Y/347V	kA kA sircuit cui kA kA kA	50 50 Fuse or CB 50 50 rrent 50 50 50
Tap Conductor Prote UL508 / UL 60947-4- Maximum UL/CSA ho	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 00Y/347V	kA kA kA circuit cur kA kA kA	50 50 Fuse or CB 50 50 rrent 50 50
Tap Conductor Prote UL508 / UL 60947-4- Maximum UL/CSA ho	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase 1 orsepower ratings three-phase, 3-pole	at 480V at 600V protection 80Y/277V 000Y/347V be E) Short of at 240V 80Y/277V 00Y/347V 10V-120V 20V-240V	kA kA kA circuit cur kA kA kA HP	50 50 Fuse or CB 50 50 rrent 50 50 50
Tap Conductor Prote UL508 / UL 60947-4- Maximum UL/CSA ho	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase 1 2 orsepower ratings three-phase, 3-pole	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 000Y/347V 10V-120V 20V-240V	kA kA circuit cur kA kA HP HP	50 50 Fuse or CB 50 50 rrent 50 50 50
Tap Conductor Prote UL508 / UL 60947-4- Maximum UL/CSA ho	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase 1 orsepower ratings three-phase, 3-pole 2 2 2	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 00Y/347V 10V-120V 20V-240V 00V-208V 20V-240V	kA kA sircuit cur kA kA HP HP	50 50 Fuse or CB 50 50 rrent 50 50 50 - 1/10
Tap Conductor Prote UL508 / UL 60947-4- Maximum UL/CSA ho	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase 1 orsepower ratings three-phase, 3-pole 2 4	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 00Y/347V 10V-120V 20V-240V 00V-208V 20V-240V 40V-480V	kA kA circuit cur kA kA HP HP HP	50 50 Fuse or CB 50 50 rrent 50 50 50 - 1/10
Tap Conductor Prote UL508 / UL 60947-4- Maximum UL/CSA ho	ction at 4 at 6 1 Manual Self Protected Combination Motor Controller (Typ at 4 at 6 orsepower ratings single-phase 1 orsepower ratings three-phase, 3-pole 2 4	at 480V at 600V protection 80Y/277V 00Y/347V be E) Short of at 240V 80Y/277V 00Y/347V 10V-120V 20V-240V 00V-208V 20V-240V	kA kA sircuit cur kA kA HP HP	50 50 Fuse or CB 50 50 rrent 50 50 50 - 1/10

-85.6 (3.37")

80.8 (3.18")

18
(0.71")

9.96 (3.25")

(0.22")

744.8
(1.76")

SM1X14...
SM1X15...

(0.22")

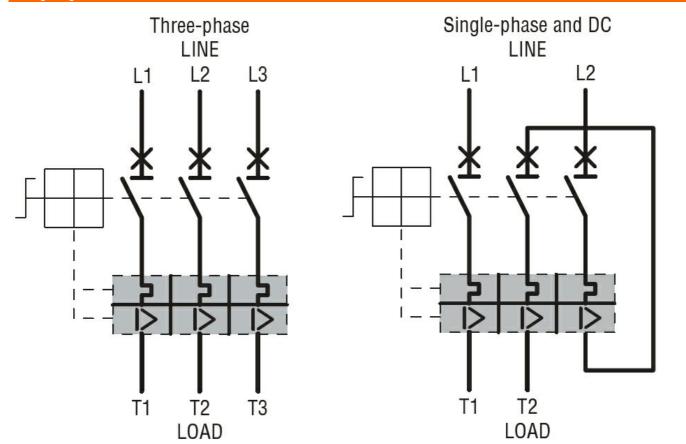
74.5 (2.93)

SM1X16...

Wiring diagrams

SM1X12...

SM1X13...





SM1R0160

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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