

Product designation				Motor protection circuit breaker
Product type designation				SM1R
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				2.5...4
Rated current (I_n)	A			4
Magnetic tripping				13 x I_n
Total power dissipation	W			2.29
Operational short-circuit current breaking capacity (I_{cs}) at AC				
	230V	kA	100	
	400V	kA	100	
	440V	kA	100	
	500V	kA	100	
	690V	kA	10	
Maximum short-circuit current breaking capacity (I_{cu}) 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		Nr.	2	
Conductor section	AWG/Kcmil			
	min			16
	max			8
Flexible w/o lug conductor section	min	mm ²	1	
Flexible c/w lug conductor section	min	mm ²	1	
Flexible with insulated spade lug conductor section	min	mm ²	1	
Screwdriver				PH2
Power terminal protection according to IEC/EN 60529				IP20
Cable stripping length				
	main circuit	mm	1	

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
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Operating position

normal allowable	Vertical plan Any
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Fixing

Screw / DIN rail 35mm

Weight

g	390
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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

at 240V	kA	30
at 480Y/277V	kA	30
at 600Y/347V	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