



Product designation

Motor protection  
circuit breaker  
SM3R

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	1000
Rated impulse withstand voltage $U_{imp}$	kV	6
Rated frequency	Hz	50/60
Thermal trip adjustment range		70...90
Rated current ( $I_n$ )	A	90
Magnetic tripping		13 x $I_n$

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

230V	kA	100
400V	kA	38
440V	kA	30
500V	kA	6
690V	kA	4

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

230V	kA	100
400V	kA	50
440V	kA	40
500V	kA	8
690V	kA	5

Tripping class	10A
IEC Utilization category	A

### Operations

Mechanical life	cycles	50000
Electrical life	cycles	25000

### Mechanical features

Tightening torque for terminals

min	Nm	4.5
max	Nm	4.5
min	lbin	4.4
max	lbin	4.4

Max number of wires simultaneously connectable	Nr.	2
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Conductor section

AWG/Kcmil

min	18
max	3

Flexible c/w lug conductor section

min	mm <sup>2</sup>	10
max	mm <sup>2</sup>	50

Flexible with insulated spade lug conductor section

	min	mm <sup>2</sup>	10
	max	mm <sup>2</sup>	50
Screwdriver			Allen 4mm
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      +70

Storage temperature

min      °C      -50  
max      °C      +80

Compensation temperature

min      °C      -50  
max      °C      +40

Max altitude      m      3000

Operating position

normal  
allowable      Vertical plan  
Any

Fixing

Screw / DIN rail  
35mm

Weight      g      2200

### UL technical data

Motor Disconnect

at 480V      kA      40  
at 600V      kA      10  
protection      Fuse or CB

Group Motor Installation

at 480V      kA      40  
at 600V      kA      10  
protection      Fuse or CB

Tap Conductor Protection

at 480Y/277V      kA      40  
at 600Y/347V      kA      10

UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current

at 240V      kA      100  
at 480Y/277V      kA      40

Maximum UL/CSA horsepower ratings single-phase

110V-120V      HP      7½  
220V-240V      HP      20

Maximum UL/CSA horsepower ratings three-phase, 3-pole

200V-208V      HP      25  
220V-240V      HP      30  
440V-480V      HP      60  
550V-600V      HP      75

### Dimensions



## SM3R9000

The characteristics described in this document are subject to updates or modifications at any time. The descriptions, technical and functional information, illustrations and instructions in this brochure are purely illustrative, and are consequently not contractually binding.

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