



Motor protection
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 U_i IEC/EN | V | 690 |
| Rated impulse withstand voltage U_{imp} | kV | 6 |
| Rated frequency | Hz | 50/60 |
| Thermal trip adjustment range | | 0.63...1 |
| Rated current (I_n) | A | 1 |
| Magnetic tripping | | 13 x I_n |
| Power dissipation per pole | | |

| | | |
|-----|---|------|
| min | W | 0.85 |
| max | W | 2.14 |

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

| | | |
|------|----|-----|
| 230V | kA | 100 |
| 400V | kA | 100 |
| 440V | kA | 100 |
| 500V | kA | 100 |
| 690V | kA | 100 |

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

| | | |
|------|----|-----|
| 230V | kA | 100 |
| 400V | kA | 100 |
| 440V | kA | 100 |
| 500V | kA | 100 |
| 690V | kA | 100 |

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 | 22 |
| max | lbin | 26.5 |

Max number of wires simultaneously connectable Nr. 2

Conductor section

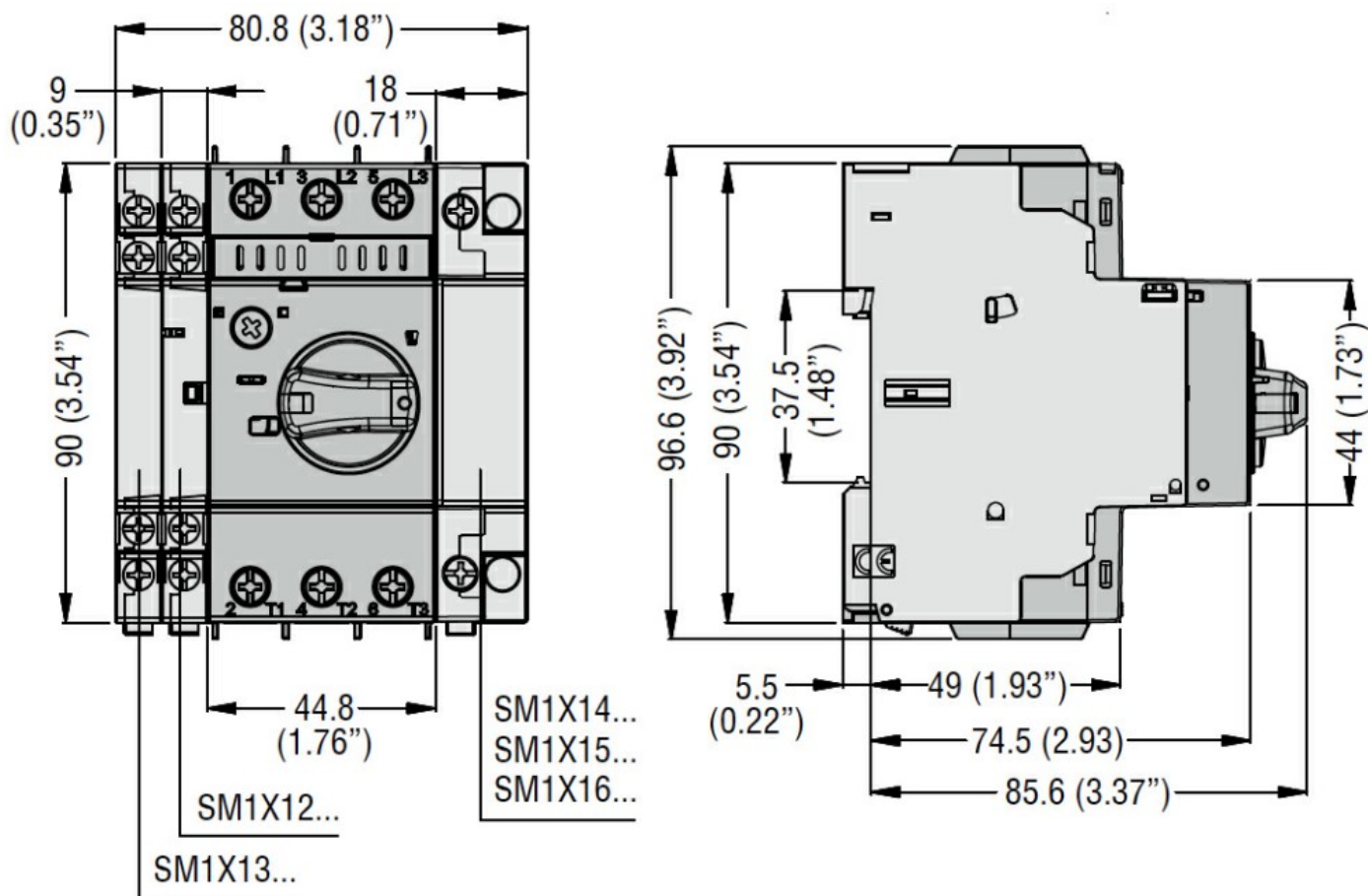
AWG/Kcmil

| | |
|-----|----|
| min | 16 |
| max | 8 |

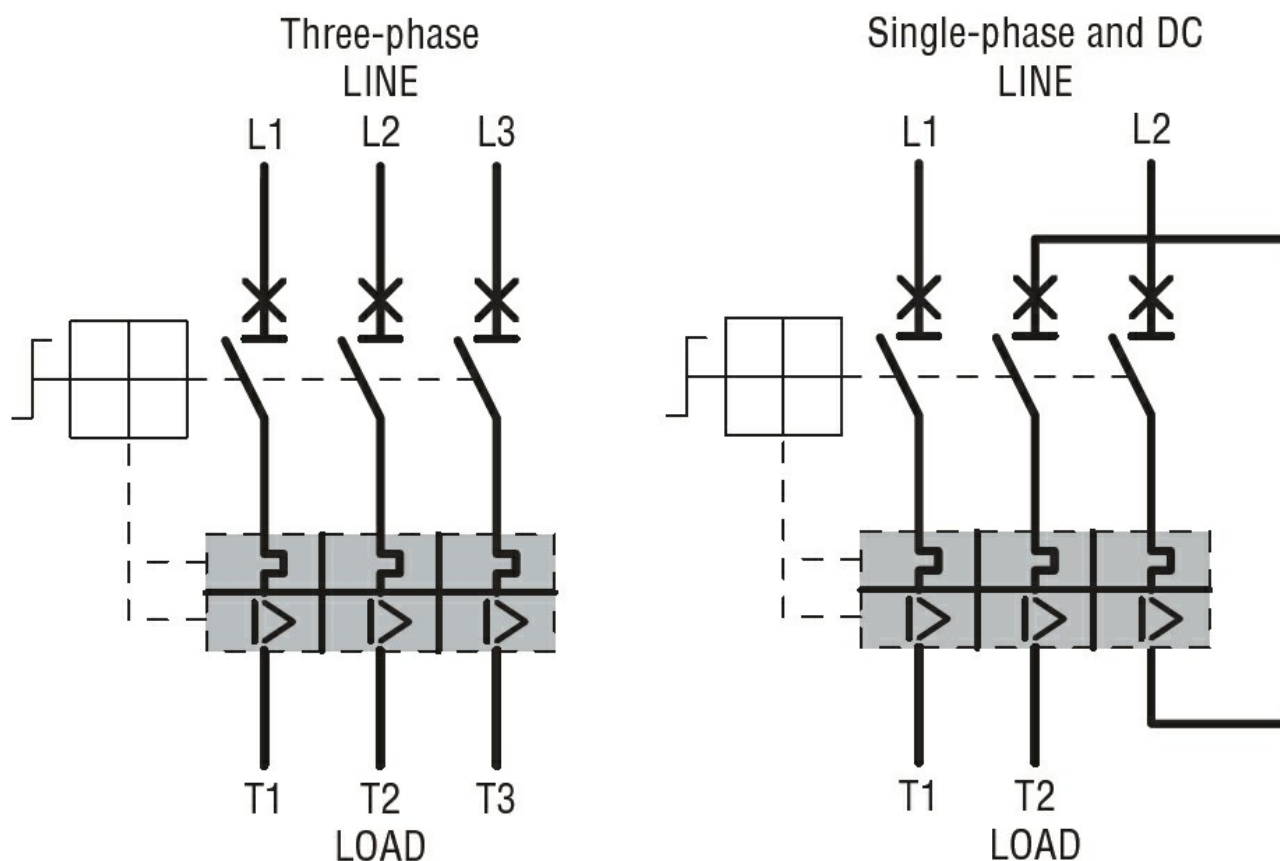
| | | | |
|--|------------------|----------------------|--------------------------|
| Flexible w/o lug conductor section | | | |
| | min | mm ² | 1 |
| | max | mm ² | 10 |
| Flexible c/w lug conductor section | | | |
| | min | mm ² | 1 |
| | max | mm ² | 10 |
| Flexible with insulated spade lug conductor section | | | |
| | min | mm ² | 1 |
| | max | mm ² | 10 |
| Screwdriver | | | PH2 |
| Power terminal protection according to IEC/EN 60529 | | | IP20 on front |
| Cable stripping lenght | | | |
| | main circuit | mm | 12 |
| 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 allowable | Vertical plan Any | |
| Fixing | | | Screw / DIN rail 35mm |
| Weight | | g | 320 |
| UL technical data | | | |
| Motor Disconnect | | | |
| | at 480V | kA | 50 |
| | at 600V | kA | 50 |
| | protection | Fuse or CB | |
| Group Motor Installation | | | |
| | at 480V | kA | 50 |
| | at 600V | kA | 50 |
| | protection | Fuse or CB | |
| Tap Conductor Protection | | | |
| | at 480Y/277V | kA | 50 |
| | at 600Y/347V | kA | 50 |
| UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short circuit current | | | |
| | at 240V | kA | 65 |
| | at 480Y/277V | kA | 65 |
| | at 600Y/347V | kA | 50 |
| Maximum UL/CSA horsepower ratings single-phase | | | |
| | 110V-120V | HP | - |
| | 220V-240V | HP | - |
| Maximum UL/CSA horsepower ratings three-phase, 3-pole | | | |
| | 200V-208V | HP | - |
| | 220V-240V | HP | - |

| | | |
|-----------|----|-----|
| 440V-480V | HP | 1/2 |
| 550V-600V | HP | 1/2 |

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