



Motor protective circuit  
breaker  
SM1P

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             |     | 9...14     |
| Rated current ( $I_n$ )                   | A   | 14         |
| Magnetic tripping                         |     | 13 x $I_n$ |
| Total power dissipation                   | W   | 2.73       |

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

|      |    |      |
|------|----|------|
| 230V | kA | 100  |
| 400V | kA | 12.5 |
| 440V | kA | 5    |
| 500V | kA | 5    |
| 690V | kA | 3    |

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

|      |    |     |
|------|----|-----|
| 230V | kA | 100 |
| 400V | kA | 25  |
| 440V | kA | 10  |
| 500V | kA | 10  |
| 690V | kA | 3   |

Breaking capacity short-circuit current ( $I_{cn}$ ) at DC

|      |    |   |
|------|----|---|
| 150V | kA | 0 |
| 300V | kA | 0 |
| 450V | kA | 0 |

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 <sup>2</sup> | 1 |
|-----|-----------------|---|

Flexible c/w lug conductor section

|     |                 |   |
|-----|-----------------|---|
| min | mm <sup>2</sup> | 1 |
|-----|-----------------|---|

Flexible with insulated spade lug conductor section

|     |                 |   |
|-----|-----------------|---|
| min | mm <sup>2</sup> | 1 |
|-----|-----------------|---|

Screwdriver

PH2

Power terminal protection according to IEC/EN 60529

IP20

Cable stripping length

main circuit mm 1

**Ambient conditions**

Temperature

Operating temperature

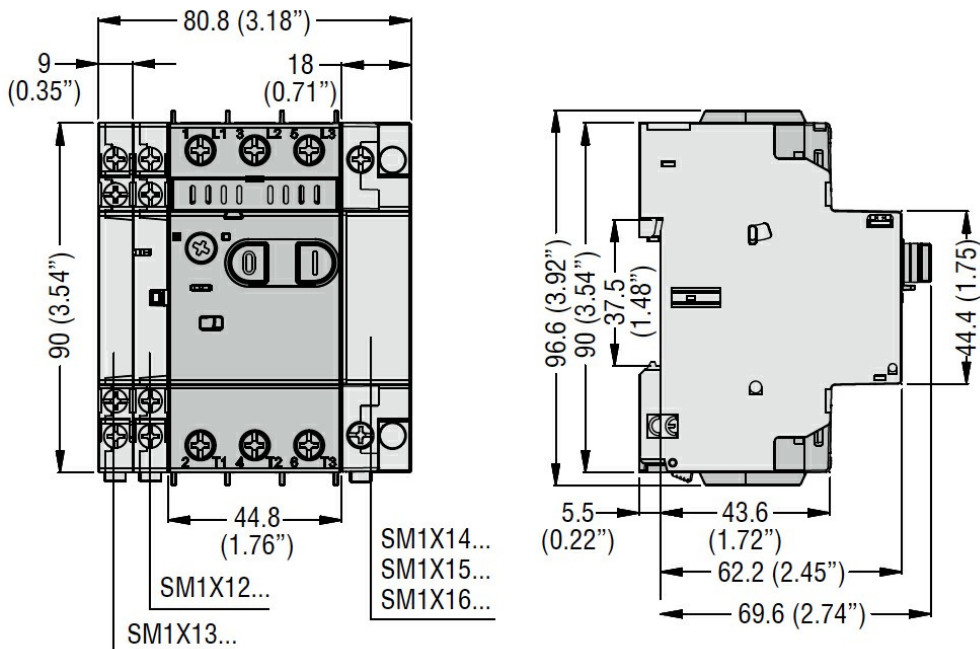
|     |    |     |
|-----|----|-----|
| min | °C | -20 |
| max | °C | 60  |

Storage temperature

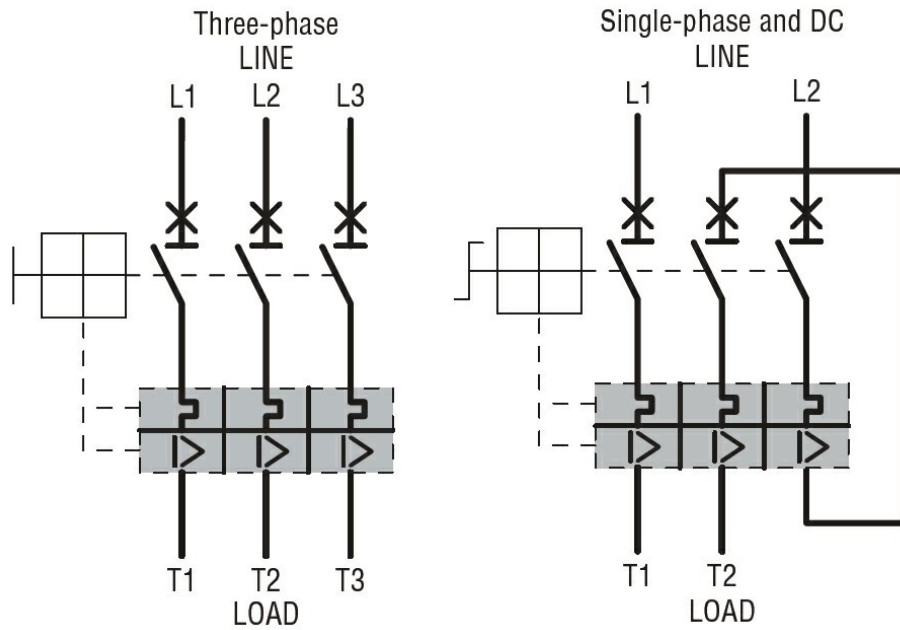
|     |    |     |
|-----|----|-----|
| min | °C | -50 |
| max | °C | 80  |

|  |  |    |                       |
|--|--|----|-----------------------|
| Compensation temperature   | min  | °C | -20                   |
|  | max  | °C | 50                    |
| Max altitude   |  | m  | 3000                  |
| Operating position   | normal allowable   |    | Vertical plan<br>Any  |
| Fixing   |  |    | Screw / DIN rail 35mm |
| Weight   |  | g  | 350                   |
| <b>UL technical data</b>   |  |    |                       |
| UL508 / UL60947-4-1 Manual Motor Controller - Short circuit current                                    |  |    |                       |
| Motor Disconnect   | at 240V  | kA | 30                    |
|  | at 480V  | kA | 30                    |
|  | at 600V  | kA | 30                    |
|  | protection   |    | 100A class J          |
| Group Motor Installation   | at 240V  | kA | 30                    |
|  | at 480V  | kA | 30                    |
|  | at 600V  | kA | 30                    |
|  | protection   |    | 100A class J          |
| 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 |  |    |                       |
|  | UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short-circuit current | 50 |                       |
|  | UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short-circuit current | 50 |                       |
|  | UL508 / UL 60947-4-1 Manual Self Protected Combination Motor Controller (Type E) Short-circuit current | 50 |                       |
| Maximum UL/CSA horsepower ratings single-phase   | at 110V-120V   | hp | 3/4                   |
|  | at 220V-240V   | hp | 2                     |
| Maximum UL/CSA horsepower ratings three-phase, 3-pole  | at 200V-208V   | hp | 3                     |
|  | at 220V-240V   | hp | 3                     |
|  | at 440V-480V   | hp | 10                    |
|  | at 550V-600V   | hp | 10                    |

**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 6 classification**