



Product designation  
Product type designation  
Number of DIN modules

Time relay  
TMST  
1

### General characteristics

Description

Time relay for  
star-delta starting,  
multiscale

Function

Star-delta

### Supply circuit

Rated auxiliary supply voltage  $U_s$

380...440VAC

Rated auxiliary supply voltage  $U_s$   
AC

|     |     |     |
|-----|-----|-----|
| min | VAC | 380 |
| Max | VAC | 440 |

Rated frequency

Hz 50/60

Operating voltage range

0.85...1.1  $U_s$

Maximum power consumption / dissipation

W 19VA/1.7W  
(380...440VAC)

Immunity time for microbreakings

ms  $\leq 30$

### Timing circuit

Time setting range

0.1s...10min

Setting accuracy

%  $\leq \pm 9$

Repeat accuracy

%  $\leq \pm 0.5$

Influence of voltage variation

%  $\leq \pm 0.1$

Influence of temperature variation

%  $\leq \pm 0.2$

Resetting time

|               |    |            |
|---------------|----|------------|
| During timing | ms | $\geq 100$ |
| Elapsed time  | ms | $\geq 50$  |

### Relay outputs

Number of relays

Nr. 1

Contact arrangement

1 with 2 N/O with  
common pole

Maximum switching voltage

VAC 250

IEC Conventional free air thermal current  $I_{th}$

A 8

UL/CSA and IEC/EN 60947-5-1 designation

B300

### Insulation (input-output)

Rated insulation voltage  $U_i$

V 250

Rated impulse withstand voltage  $U_{imp}$

kV 4

Power frequency withstand voltage

kV 2

### Connections

Terminals type

Screw

Tightening torque (Max)

|                       |      |              |
|-----------------------|------|--------------|
| Tightening torque Max | Nm   | 0.8          |
| Tightening torque Max | Ibin | 7 / 7...9 UL |

Conductor section

AWG/Kcmil

|     |         |
|-----|---------|
| min | 24...12 |
| max | 12...18 |

IEC

|     |                 |     |
|-----|-----------------|-----|
| min | mm <sup>2</sup> | 0.2 |
| max | mm <sup>2</sup> | 4   |

## Operations

|                 |        |          |
|-----------------|--------|----------|
| Mechanical life | cycles | 30000000 |
|-----------------|--------|----------|

|                                   |        |        |
|-----------------------------------|--------|--------|
| Electrical life (with rated load) | cycles | 100000 |
|-----------------------------------|--------|--------|

## Ambient conditions

Temperature

Operating temperature

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

Storage temperature

|     |    |     |
|-----|----|-----|
| min | °C | -30 |
| max | °C | +80 |

|                   |   |      |
|-------------------|---|------|
| Relative humidity | % | <90% |
|-------------------|---|------|

|                          |   |
|--------------------------|---|
| Maximum Pollution degree | 2 |
|--------------------------|---|

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
|----------------------|-----|

## Housing

|                           |   |
|---------------------------|---|
| Execution (n° of modules) | 1 |
|---------------------------|---|

|          |                              |
|----------|------------------------------|
| Material | Self-extinguishing polyamide |
|----------|------------------------------|

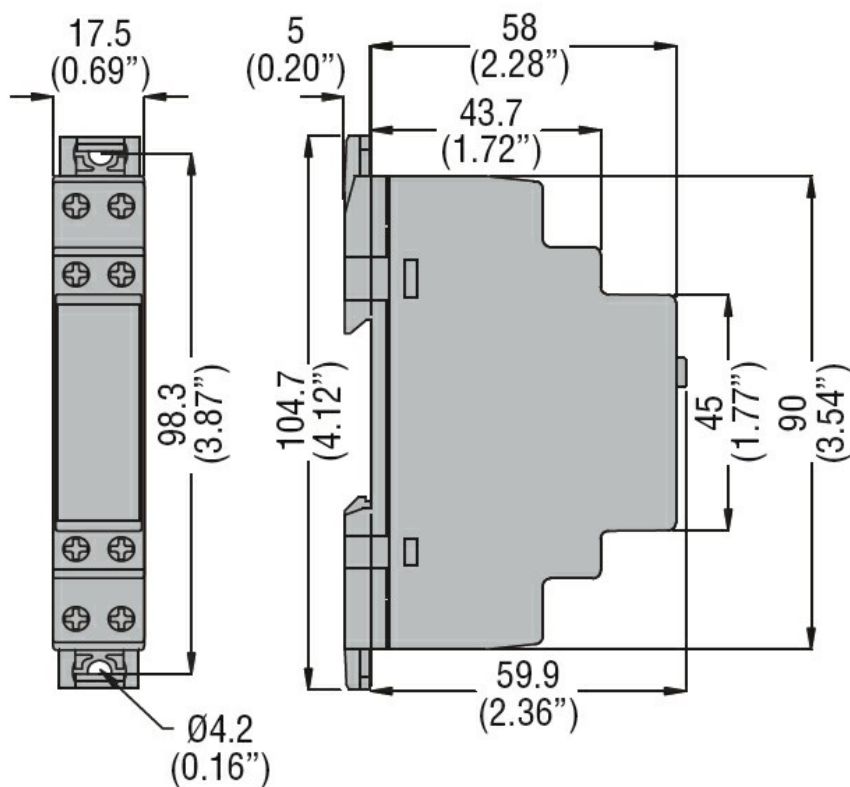
|          |                |
|----------|----------------|
| Mounting | DIN rail 35 mm |
|----------|----------------|

|                      |                                  |
|----------------------|----------------------------------|
| Degree of protection | IP40 on front,<br>IP20 terminals |
|----------------------|----------------------------------|

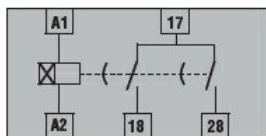
|                        |    |                        |
|------------------------|----|------------------------|
| Dimensions (W x H x D) | mm | 17.5 x 104.7 x<br>64.9 |
|------------------------|----|------------------------|

|        |   |    |
|--------|---|----|
| Weight | g | 90 |
|--------|---|----|

## Dimensions



## Wiring diagrams



## Certifications and compliance

### Compliance

CSA C22.2 n°14

IEC/EN 61812-1

UL508

### Certificates

CCC

cULus

EAC

## ETIM classification

ETIM 8.0

EC001439 -  
Timer relay