

# Product datasheet

Specifications



## Controller system, Modicon TM5 Safety, Safe logic CPU, SERCOS III interface, 20 nodes

TM5CSLC300FS

### Main

|                             |                         |
|-----------------------------|-------------------------|
| Range of product            | Modicon TM5             |
| Product or component type   | Controller system       |
| Device application          | Safety logic controller |
| Reverse polarity protection | Yes                     |

### Complementary

|                                        |                                                                                                                                                                                                                                                                                                         |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communication network type             | SERCOS III (Ethernet)                                                                                                                                                                                                                                                                                   |
| Transmission rate                      | 100 Mbit/s for full duplex                                                                                                                                                                                                                                                                              |
| Cycle time                             | 1 ms                                                                                                                                                                                                                                                                                                    |
| Realtime clock                         | With non-volatile memory                                                                                                                                                                                                                                                                                |
| Number of devices                      | 2 shielded RJ45<br>1 memory key slot                                                                                                                                                                                                                                                                    |
| Function available                     | Support max 20 safety nodes                                                                                                                                                                                                                                                                             |
| Maximum cable distance between devices | 100 m between station                                                                                                                                                                                                                                                                                   |
| Rated voltage                          | 24 V -15...20 %                                                                                                                                                                                                                                                                                         |
| Input protection type                  | Integrated fuse (not interchangeable)                                                                                                                                                                                                                                                                   |
| Power consumption in W                 | 4.3 W                                                                                                                                                                                                                                                                                                   |
| Type of cooling                        | Fanless                                                                                                                                                                                                                                                                                                 |
| Marking                                | CE                                                                                                                                                                                                                                                                                                      |
| Safety level                           | SIL 3 conforming to IEC 61508<br>SIL 3 conforming to IEC 62061<br>PL = e conforming to ISO 13849-1 category 4                                                                                                                                                                                           |
| Safety reliability data                | PFD < 1E-5<br>PFH < 1E-9<br>MTTFd > 100 years                                                                                                                                                                                                                                                           |
| Local signalling                       | 1 LED (green or orange) for application run or machine expert - safety debug mode<br>1 LED (green) for authorization status<br>1 LED (orange) for configuration status (Ready)<br>1 LED (orange) for firmware status<br>1 LED (red) for boot status / FS status<br>1 LED (orange) for memory key status |
| Colour                                 | Red                                                                                                                                                                                                                                                                                                     |
| Width                                  | 62.5 mm                                                                                                                                                                                                                                                                                                 |
| Height                                 | 99 mm                                                                                                                                                                                                                                                                                                   |
| Depth                                  | 75 mm                                                                                                                                                                                                                                                                                                   |
| Net weight                             | 0.208 kg                                                                                                                                                                                                                                                                                                |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

## Environment

|                                       |                                                                          |
|---------------------------------------|--------------------------------------------------------------------------|
| Ambient air temperature for operation | 0...45 °C (vertical installation)<br>0...55 °C (horizontal installation) |
| Ambient air temperature for storage   | -25...70 °C                                                              |
| Relative humidity                     | 5...95 % without condensation                                            |
| IP degree of protection               | IP20                                                                     |
| Operating altitude                    | 0...2000 m                                                               |
| Standards                             | EN 13849-1<br>IEC 61131-2<br>IEC 61508<br>IEC 61511<br>IEC 62061         |
| Product certifications                | cULus                                                                    |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 10.500 cm |
| Package 1 Width              | 11.500 cm |
| Package 1 Length             | 17.000 cm |
| Package 1 Weight             | 310.000 g |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 9         |
| Package 2 Height             | 30.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 3.347 kg  |

## Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

|                                                        |                                               |
|--------------------------------------------------------|-----------------------------------------------|
| Total lifecycle Carbon footprint                       | 203 kg CO2 eq.                                |
| Carbon footprint of the manufacturing phase [A1 to A3] | 19 kg CO2 eq.                                 |
| Carbon footprint of the distribution phase [A4]        | 0 kg CO2 eq.                                  |
| Carbon footprint of the installation phase [A5]        | 0.1 kg CO2 eq.                                |
| Carbon footprint of the use phase [B2, B3, B4, B6]     | 185 kg CO2 eq.                                |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 0.2 kg CO2 eq.                                |
| Environmental Disclosure                               | <a href="#">Product Environmental Profile</a> |

## Use Better



### Materials and Substances

|                                        |                                                                                        |
|----------------------------------------|----------------------------------------------------------------------------------------|
| Packaging made with recycled cardboard | No                                                                                     |
| Packaging without single use plastic   | Yes                                                                                    |
| EU RoHS Directive                      | <a href="#">Compliant By Exemption</a>                                                 |
| REACH Regulation                       | <a href="#">Reference contains Substances of Very High Concern above the threshold</a> |

## Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

## Use Again

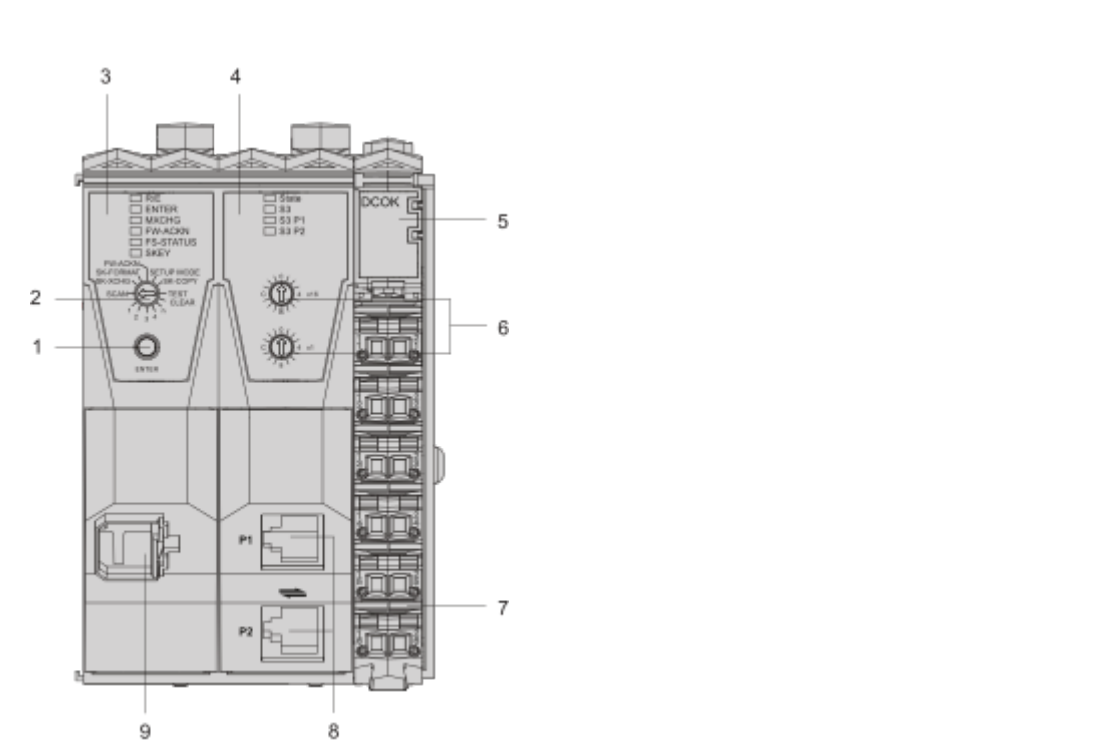


### Repack and remanufacture

|                                 |                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recyclability potential, in %   | 50                                                                                                                                                                                                              |
| End of life manual availability | <a href="#">End of Life Information</a>                                                                                                                                                                         |
| Take-back                       | Nej                                                                                                                                                                                                             |
| WEEE Label                      |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Presentation

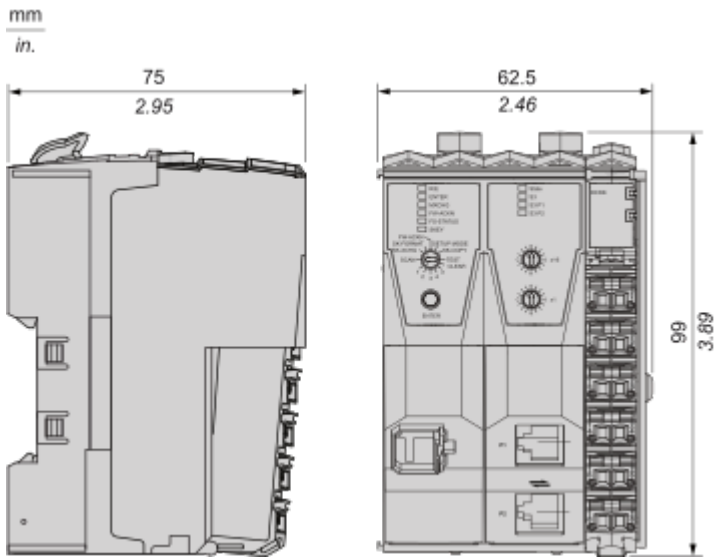
TM5 Safety logic Controller Module



- (1) Confirmation button
- (2) Selection switch
- (3) Logic processor
- (4) SERCOS III interface
- (5) Integrated power supply
- (6) SERCOS III address switches
- (7) Terminal block for Safe Logic Controller supply
- (8) SERCOS III connection with 2 x RJ45
- (9) Memory Key slot

## Dimensions Drawings

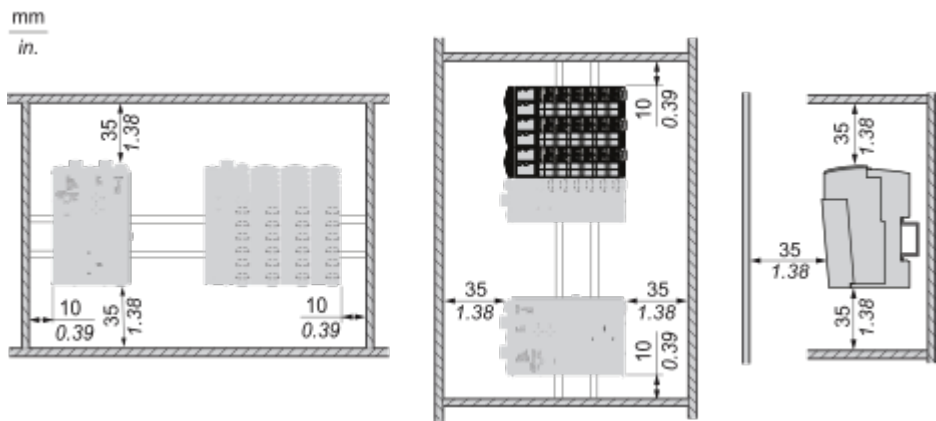
## TM5 Safety logic Controller



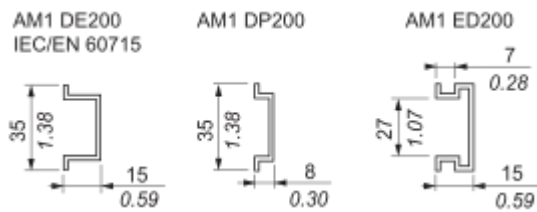
Mounting and Clearance

Mounting and Clearances

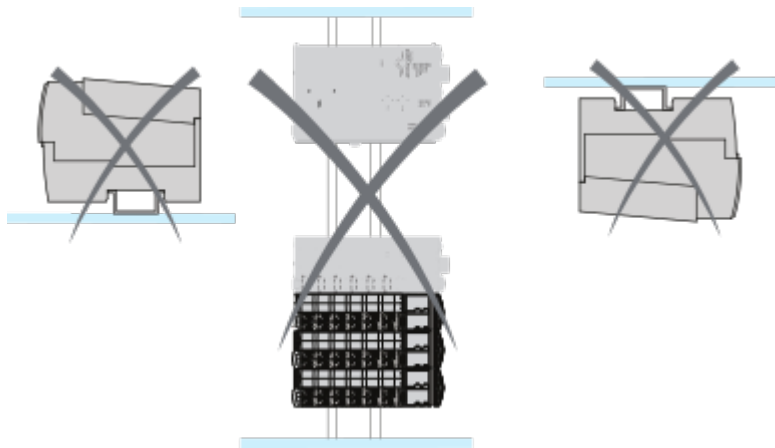
Spacing Requirements



Mounting on a DIN Rail



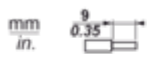
Incorrect Mounting



Connections and Schema

TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

|                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|  |  |  |  |  |
| mm <sup>2</sup>                                                                   | 0,08...2,5                                                                        | 0,25...2,5                                                                        | 0,25...1,5                                                                        | 2 x 0,25...2 x 0,75                                                               |
| AWG                                                                               | 28...14                                                                           | 24...14                                                                           | 24...16                                                                           | 2 x 24...2 x 18                                                                   |