

---

# TM2DDI16DT Digital Input Module

# 5

---

## Overview

This chapter describes the TM2DDI16DT module, its characteristics and its connection to the different sensors.

## What's in this Chapter?

This chapter contains the following topics:

Topic	Page
Presentation of the TM2DDI16DT Module	50
Characteristics of the TM2DDI16DT Module	51
Connecting the TM2DDI16DT Module	53

## Presentation of the TM2DDI16DT Module

### TM2DDI16DT Main Characteristics

Number of input channels	16
Input type	Type 1
Signal type	Sink/Source
Rated input voltage	24 Vdc
Connection type	Removable screw terminal block

## Characteristics of the TM2DDI16DT Module

### Introduction

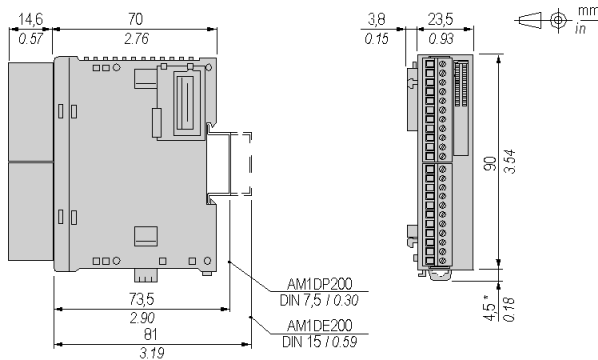
This section provides a description of the electrical and the input characteristics of the TM2DDI16DT module.

See also Environmental Characteristics (*see page 35*).

<h2 style="margin: 0;">⚠ WARNING</h2>
<p><b>UNINTENDED EQUIPMENT OPERATION</b></p> <p>Do not exceed any of the rated values specified in the following tables.</p> <p><b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b></p>

### Dimensions

The following diagrams show the dimensions for the TM2DDI16DT module.



**NOTE:** \* 8.5 mm (0.33 in) when the clamp is pulled out.

### TM2DDI16DT Electrical Characteristics

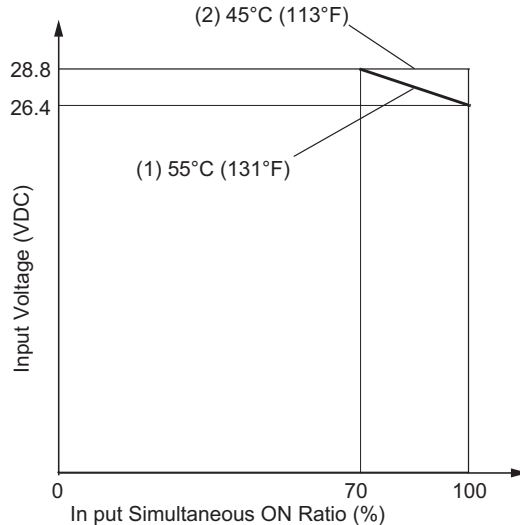
Isolation	Between input and internal bus: 500 Vac Between input terminals: not isolated
Connector insertion/removal durability	Over 100 times
Current draw on 5 Vdc internal bus	40 mA (all inputs on) 5 mA (all inputs off)
Current draw on 24 Vdc internal bus	0 mA (all inputs on) 0 mA (all inputs off)

### TM2DDI16DT Input Characteristics

Number of input channels	16
Common lines	1
Input signals type	sink or source
Rated input voltage	24 Vdc
Input voltage range	20.4...28.8 Vdc
Rated input current at 24 Vdc	7 mA
Input impedance	3.4 kΩ
OFF state	U < 5 Vdc
ON state	U > 15 Vdc I > 2 mA
Turn on time	4 ms
Turn off time	4 ms
Input type	Type 1 (IEC 61131-2)

### Usage Limits

When using TM2DDI16DT:



- 1 At 55°C (131 °F) in the normal mounting direction, limit the inputs which turn on simultaneously along line.
- 2 At 45°C (113 °F), all inputs can be turned on simultaneously at 28.8 Vdc as indicated with line.

# Connecting the TM2DDI16DT Module

## Introduction

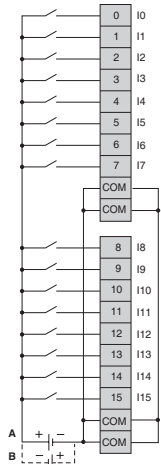
TM2DDI16DT is a 16-channel, 24 Vdc input module. This module is fitted with a removable connection screw terminal block for the connection of inputs and power supply.

## Wiring Rules

See Wiring Requirements (see page 29).

## TM2DDI16DT Wiring Diagram

The following diagram shows the connection of the inputs module (on the right) to the sensors (on the left).



- The COM terminals are connected together internally.
- Both sink and source input wiring are supported.
- A is the sink wiring (positive logic).
- B is the source wiring (negative logic).

<b>⚠ WARNING</b>
<b>UNINTENDED EQUIPMENT OPERATION</b>
Do not connect wires to unused terminals or terminals marked “Not Connected (N.C.)”.
<b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b>