

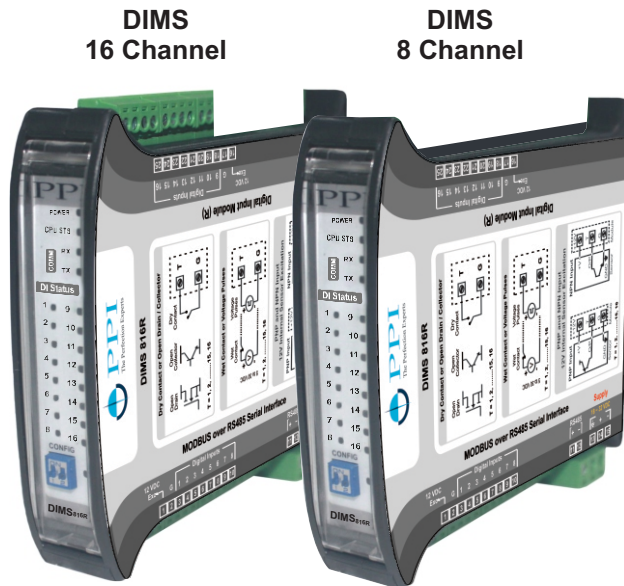
# Digital Input Module

## DIMS 816R

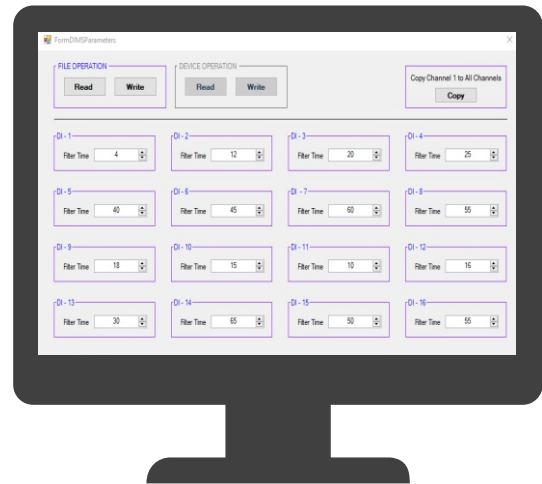
8 / 16 Channels  
 DIN-Rail Mount  
 MODBUS over Serial

**Process Precision Instruments**  
 Vasai Road (E), Dist. Palghar - 401210,  
 Maharashtra, India

www.ppiindia.net



## Configuration Tool



ISOLATION



HI-SPEED



COMPACT



MODBUS



SETUP



PC TOOL



DIN RAIL

### Salient Features

- 8 or 16 Digital Input Channels
- Input Type Programmable as -
  - Dry (Potential-free) Open/Close Contact
  - Wet Contact / High-Low Voltage Levels
  - PNP & NPN Sensor with +12VDC Internal Excitation
  - PNP & NPN Sensor with 5 to 30VDC External Excitation
- Independent Programmable Filter Time Constant for each Input
- Monitors Instantaneous High/Low Input Status
- Monitors Latched Low to High & High to Low Transition Status
- Supports Discrete Coil (Bits) & Input Register (Bit-Mapped) Modbus Data Type for Status Reading
- 2-wire, Half-Duplex, Start-Stop Synchronized, Isolated RS485 Serial Port.
- Industry Standard Modbus RTU Protocol with Programmable Slave ID, Baud Rate & Parity
- Compact DIN-Rail Mount Enclosure : 22.5(W) X 101(H) X 119(D), mm
- Wide Supply Voltage Range : 18 ~ 32 VDC (24 VDC Nominal)

### General Information

<b>Product Type</b>	8 / 16 Channel DIN-Rail Digital Input Module MODBUS over RS485 Serial Interface
<b>Ordering Code</b>	DIMS-8R, 8 Channel Module DIMS-16R, 16 Channel Module
<b>Quantity</b>	1 Unit
<b>Accessories</b>	(Optional) USB to RS485 Converter
<b>Similar Modules</b>	AIMS-4X, AIMS-8X AOMS-4U, AOMS-8U DOMS-12

## Channel Specifications

Number of Channels	8 / 16
Input Types	All 8 or 16 Channels are Programmable as : (a) Dry Contact : Potential-Free Contacts / Open Drain / Open Collector (b) Wet Contact / Voltage Level : 5 to 30 VDC
Input Logic Levels	<ul style="list-style-type: none"><li>• <b>Dry Contact</b> : Logic Low : Open Logic High : Close to Ground</li><li>• <b>Voltage Level</b> : Logic Low : 2 VDC max Logic High : 5 to 30 VDC</li><li>• <b>NPN/PNP Sensor</b> : Logic Low : Transistor Off-State Logic High : Transistor On-State</li></ul>
Filter Time Constant	Programmable from 1 to 30000 mS. <i>A 'Low to High' or 'High to Low' state change is registered if the changed state persists for at least the set Filter Time Constant. This helps in suppressing noise.</i>
Isolation	Three-way Isolation Eliminates Potential Ground Loops between Power, Inputs & RS485 Serial Port 1500VAC for 1 second or 250VAC continuous

## Serial Communication

Port	RS485, 2-wire, Half Duplex, Start-Stop Synchronized
Protocol	MODBUS RTU
Baud Rate	Settable : 2400, 4800, 9600, 19200, 38400
Parity	Settable : None, Even, Odd
Max. Units per Loop	31
Max. Distance	1200 Meters

## Power Supply

Type	Switch Mode (SMPS)
Power Requirement	18 ~ 32 VDC, nominal 24 VDC @ <b>300mA Max.</b> <b>Note</b> : In case of looping multiple modules on one power source, make sure that the power source is capable of supplying minimum 300mA current per module.
Consumption	7 VA Max @ 24 VDC

## Physical

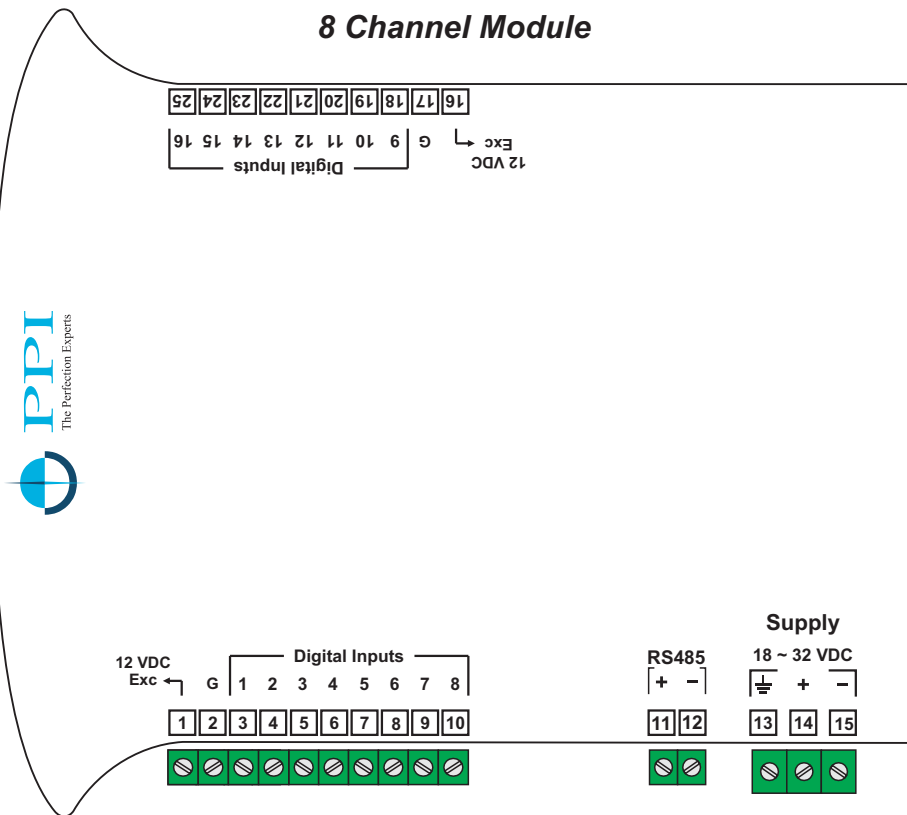
Mounting	DIN-Rail
Overall Dimensions	22.5(W) X 101(H) X 119(D), mm
Terminals	Screw Type, Pluggable
Weight	400 gm, Appx.

## Environmental

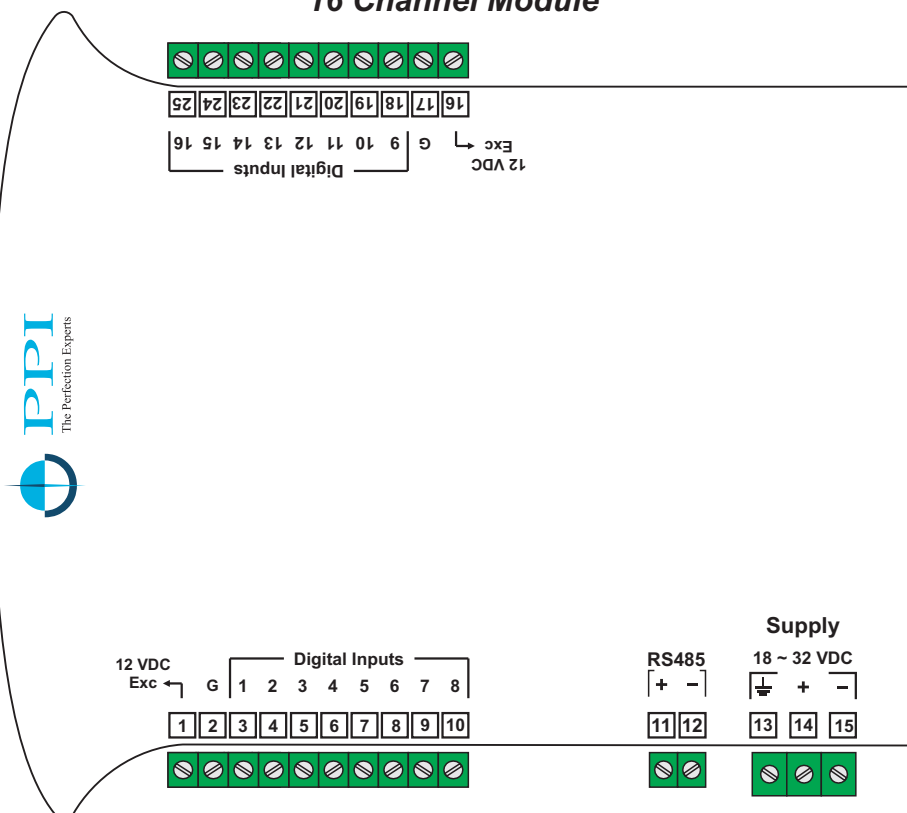
Operating Ambient	0 to 55°C & 5 to 90%RH Non-condensing
Storage Temperature	-10 to +70°C
Atmospheres	Not Suitable for use in Corrosive or Explosive Atmospheres. The Panel in which the Instrument is Mounted must be free of Electrically Conductive Pollution.

## Terminations

### 8 Channel Module



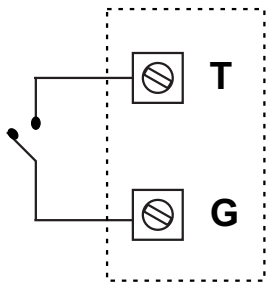
### 16 Channel Module



# Digital Input Module

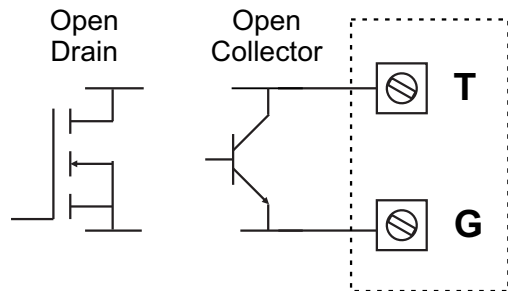
## Electrical Connections

Dry Contact



Module

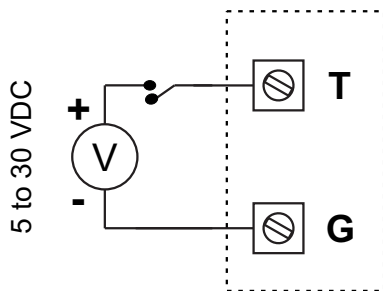
Open Drain / Collector



T = 1, 2, .....15, 16

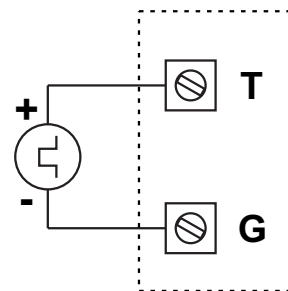
Module

Wet Contact



Module

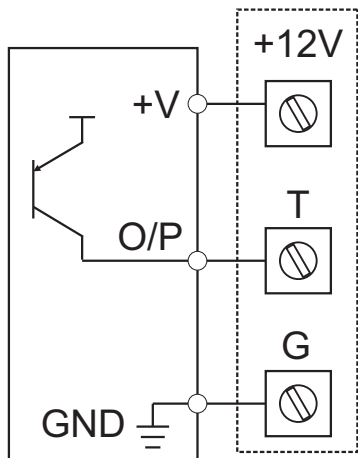
Voltage Level



T = 1, 2, .....15, 16

Module

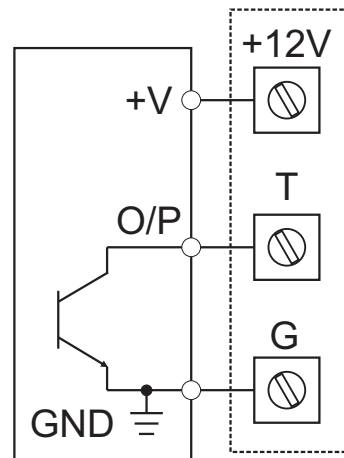
PNP Input  
(12V Internal Sensor Excitation)



Sensor

Module

NPN Input  
(12V Internal Sensor Excitation)



Sensor

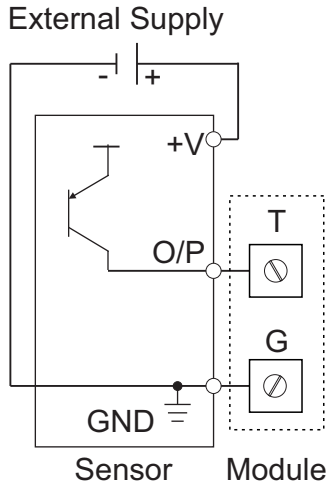
Module

T = 1, 2, .....15, 16

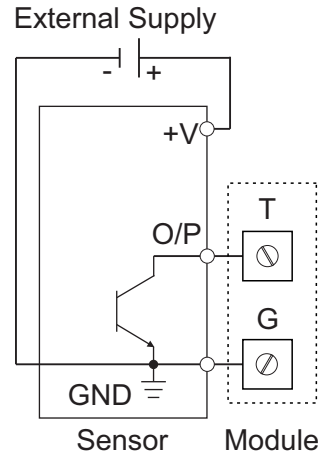
# Digital Input Module

## Electrical Connections

PNP Input  
(5 to 30VDC External Sensor Excitation)



NPN Input  
(5 to 30VDC External Sensor Excitation)



**T = 1, 2, .....15, 16**

### Process Precision Instruments (An ISO 9001 : 2008 Company)

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