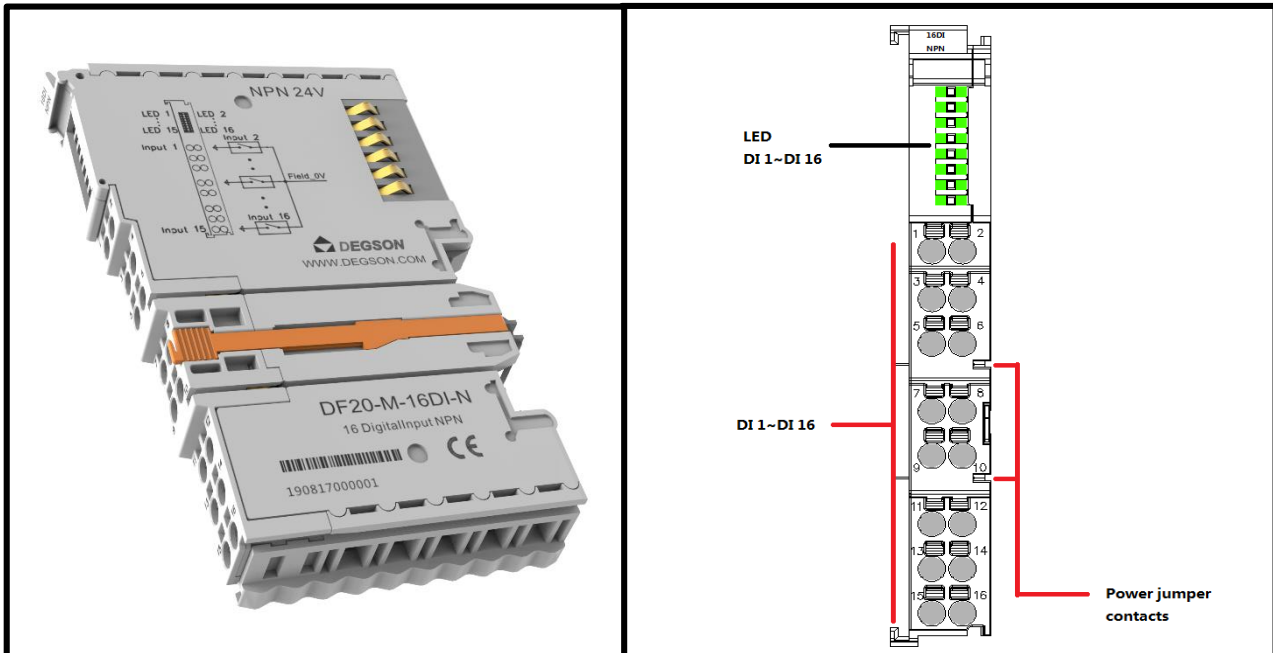


◆ 16 channel Digital input /24VDC/NPN(DF20-M-16DI-N)

- It receives control signals from digital field devices (e.g., sensors).
- 16-channel digital input, active NPN low level.
- Each input module has a noise-rejection filter.
- Each input module is equipped with an LED indicator.
- Field and system levels are Photoelectric isolated.
- Protection level IP20.

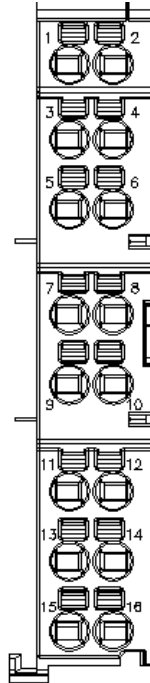


1. Specification

Technical data	
Number of digital inputs	16
Number of Channels	16
Signal type	Voltage
Signal type (voltage)	24VDC NPN
Connection type	1-line
Input characteristic	Low-side switching
Input filter (digital)	0.3ms
Precision	0.20%
Typical input current	3mA
Voltage range for signal (0)	18~32V
Voltage range for signal (1)	0~4V
Data size	2 byte
Supply voltage (system)	5VDC; via data contacts
Current consumption	<15mA
Working voltage	24VDC (-15%~+20%) via power jumper contacts
Isolation	500Vsystem/field Electrical isolation
Reverse protection	Yes
Indicators	16 x LED Green
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Connection data	
Connection technology: inputs / outputs	16 x via pluggable connector
Connection type 1	Inputs/Outputs
Area of wire	0.2~1.5mm ² /28~16AWG
Strip length	8~9mm/0.31~0.35inches
Mounting type	DIN-35 RAIL
Material Data	
Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Conformity marking	CE
Environmental requirements	
Ambient temperature (operation)	-25~60°C
Surrounding air temperature (storage)	-40~85°C
Protection type	IP20
Pollution degree (5)	2, Per IEC 61131-2
Operating altitude	without temperature derating: 0~2000m
Mounting position	Any
Relative humidity (without condensation)	5~95%RH
Vibration resistance	4g, Per IEC 60068-2-6
Shock resistance	15g, Per IEC 60068-2-27
EMC immunity to interference	Per EN 61000-6-2
EMC emission of interference	Per EN 61000-6-3
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible pollutant concentration H ₂ S at a relative humidity < 75%	10ppm
Permissible pollutant concentration SO ₂ at a relative humidity < 75%	25ppm

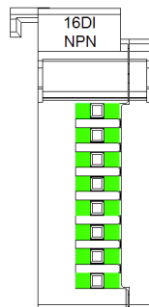
2. Hardware Interface

● Wiring Terminal



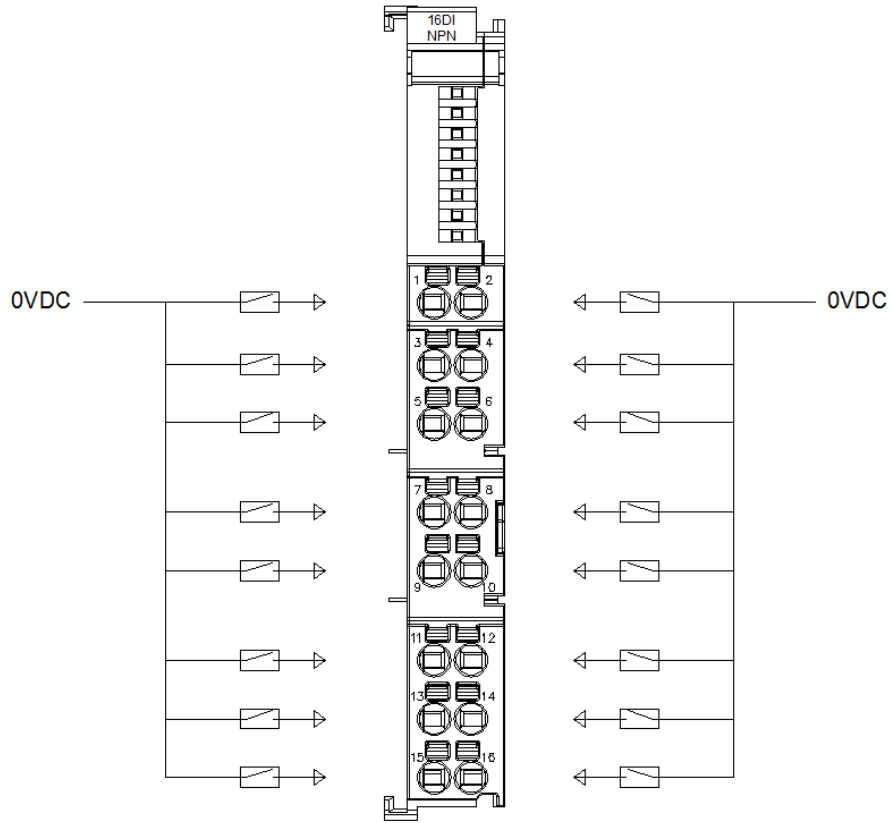
No.		Signal		Description
1	2	DI 1	DI 2	Low level signal input
3	4	DI 3	DI 4	
5	6	DI 5	DI 6	
7	8	DI 7	DI 8	
9	10	DI 9	DI 10	
11	12	DI 11	DI 12	
13	14	DI 13	DI 14	
15	16	DI 15	DI 16	

● LED Indicator



1~16 channel Indicators	Definition
ON	Input signal valid
OFF	Input signal invalid

● **Wiring**



3.Process data definition

DF20-M-16DI-N Module process data definition

Input data								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	DI Channel 8	DI Channel 7	DI Channel 6	DI Channel 5	DI Channel 4	DI Channel 3	DI Channel 2	DI Channel 1
Byte 1	DI Channel 16	DI Channel 15	DI Channel 14	DI Channel 13	DI Channel 12	DI Channel 11	DI Channel 10	DI Channel 9

Data description:

DI Channel (1~16): When the corresponding channel input signal is valid, the bit is 1, and when the input is invalid, it is 0.

1: Input signal valid 0: Input signal invalid

4.Machinery installation

● Dimension drawing

The installation size is shown in the following figure (unit: mm):

