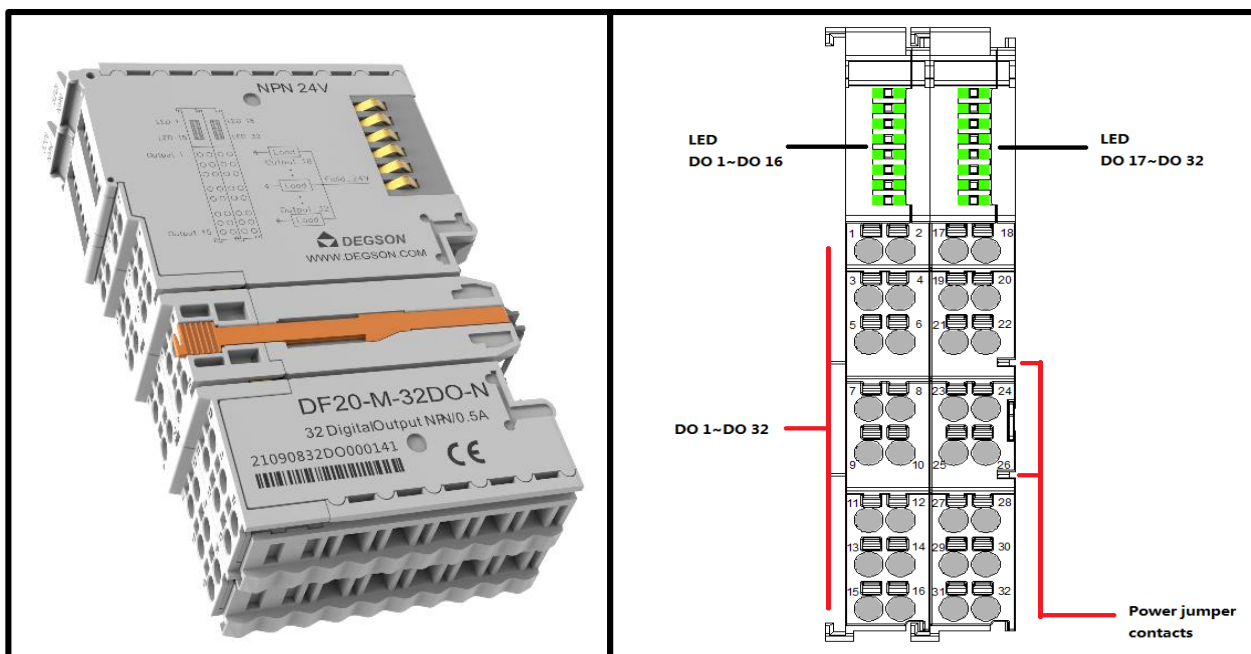


◆ 32 channel Digital output /24VDC/NPN(DF20-M-32DO-N)

- It transmits binary control signals from the automation device to the connected actuators (e.g., magnetic valves)
- 32-channel digital output, active NPN high level.
- Each output module has a noise-rejection filter.
- Each output module is equipped with an LED indicator.
- Field and system levels are Photoelectric isolated.
- Protection level IP20.

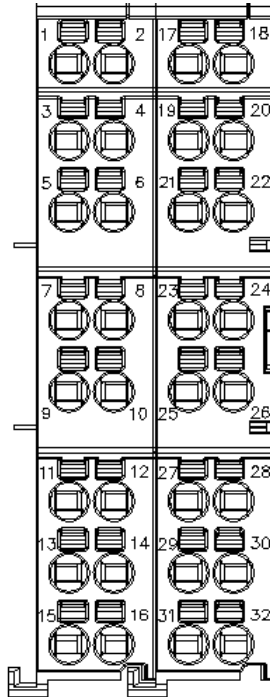


1. Specification

Technical data	
Number of digital outputs	32
Number of Channels	32
Signal type	Voltage
Signal type (voltage)	24V DC NPN
Connection type	1-line
Output characteristic	High-side switching
Switching Frequency (resistance/lamp load)	<1000Hz
Switching Frequency (Inductive load)	<0.2Hz
Response Time of the Protection Circuit	<100us
Output current per channel(MAX)	500 mA
Load type	Inductance, resistance, lamp
"0" signal voltage	high-impedance state
"1" signal voltage	0V DC
Data size	4 byte
Supply voltage (system)	5VDC; via data contacts
Current consumption	<100mA
Working voltage	24VDC (-15%~+20%) via power jumper contacts
Isolation	500Vsystem/field Electrical isolation
Reverse protection	Yes
Indicators	32 x LED Green
Number of incoming power jumper contacts	2
Number of outgoing power jumper contacts	2
Connection data	
Connection technology: inputs / outputs	32 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

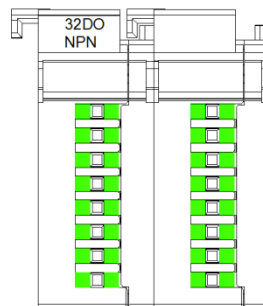
2. Hardware Interface

● Wiring Terminal



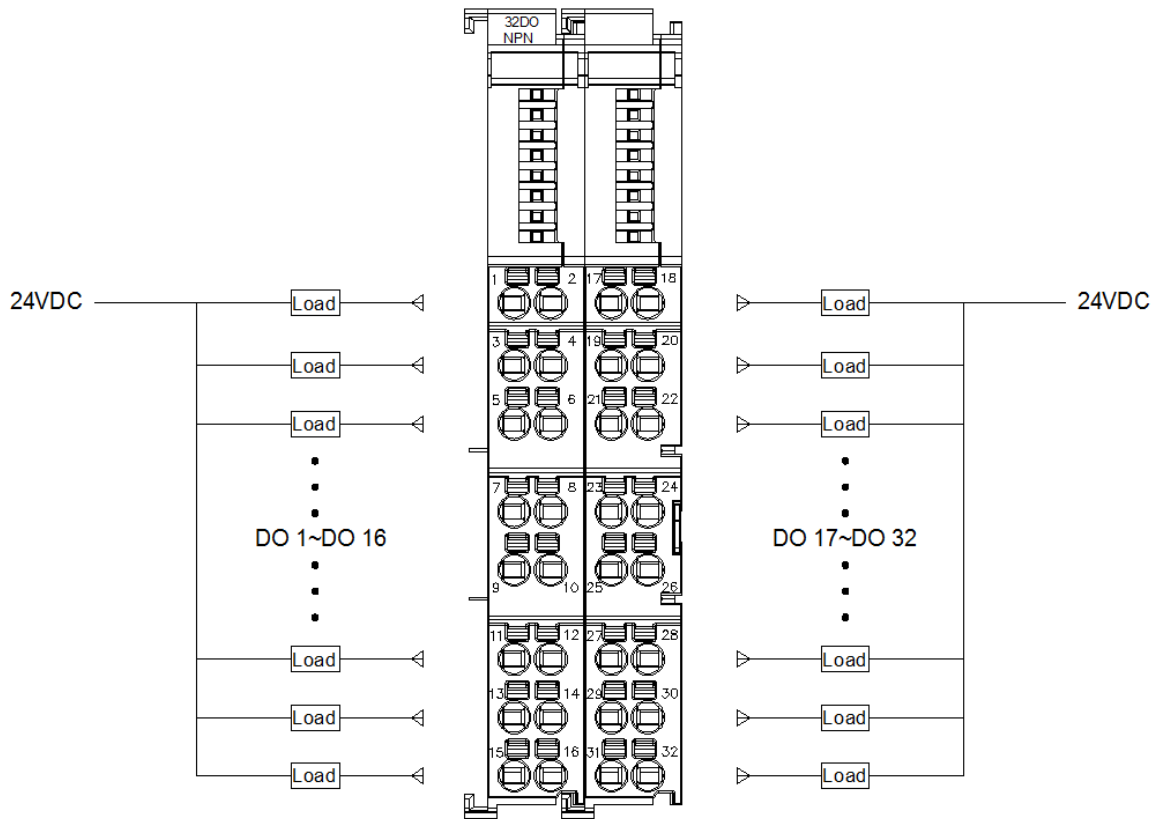
No.				Signal				Description
1	2	17	18	DO 1	DO 2	DO 17	DO 18	
3	4	19	20	DO 3	DO 4	DO 19	DO 20	
5	6	21	22	DO 5	DO 6	DO 21	DO 22	
7	8	23	24	DO 7	DO 8	DO 23	DO 24	
9	10	25	26	DO 9	DO 10	DO 25	DO 26	
11	12	27	28	DO 11	DO 12	DO 27	DO 28	
13	14	29	30	DO 13	DO 14	DO 29	DO 30	
15	16	31	32	DO 15	DO 16	DO 31	DO 32	

● LED Indicator



1~32 channel Indicators	Definition
ON	Output signal valid
OFF	Output signal invalid

● Wiring



3.Process data definition

DF20-M-32DO-N Module process data definition

Output data								
Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	DO Channel 8	DO Channel 7	DO Channel 6	DO Channel 5	DO Channel 4	DO Channel 3	DO Channel 2	DO Channel 1
Byte 1	DO Channel 16	DO Channel 15	DO Channel 14	DO Channel 13	DO Channel 12	DO Channel 11	DO Channel 10	DO Channel 9
Byte 2	DO Channel 24	DO Channel 23	DO Channel 22	DO Channel 21	DO Channel 20	DO Channel 19	DO Channel 18	DO Channel 17
Byte 3	DO Channel 32	DO Channel 31	DO Channel 30	DO Channel 29	DO Channel 28	DO Channel 27	DO Channel 26	DO Channel 25

Data description:

DO Channel (1~32): When the bit is 1, the output signal of the corresponding channel is effective, the output is low level, and the output is invalid when it is 0.

1: Output signal valid 0: Output signal invalid

4.Machinery installation

● Dimension drawing

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

