



Field I/O Digital

Field Inputs / Outputs Digital

- Low cost compact Digital I/O modules with DIN rail mounting
- 2 wire RS 485 port provided on pluggable terminal block
- User definable Address, Baud rate and Parity through DIP Switch
- High Speed Modbus RTU (Slave) communication
- LED indication for each Input and Output , COM Port and Power ON
- No configuration software required
- Relay and Transistor outputs available
- CE marked with optional UL/ CSA certification

Specifications

Power	: + 24V DC \pm 10%
Communication Port	: 2 Wire RS485
Digital Inputs -	
Rated Input Voltage	: 24 VDC (Max is 28VDC)
Input Impedance	: 5.6 k
Rated Input Current	: 4mA
Logic '0' Voltage	: 0 to 5V
Logic '1' Voltage	: 12 to 28V
Digital Outputs (Transistor)	
Maximum Load current	: 500 mA
Voltage drop at ON	: 0.4V or less
Digital Outputs (Relay)	
Relay Rating	: 230V AC, 2 Amp. (Max.)

Temperature	
Operating	: 0° to 60° C
Storage	: -20° to 80° C
Humidity	: 10% to 90% (Non condensing)
Mounting	: DIN rail mounting
Size	: 100 W x 70 H x 35 D mm
Immunity to ESD	: as per IEC61000-4-2
Immunity to Fast Transients	: as per IEC61000-4-4
Immunity to Radiated electromagnetic field	: as per IEC61000-4-3
Immunity to Conducted disturbances	: as per IEC61000-4-6
Surge	: as per IEC61000-4-5
Radiated emission	: as per EN61000-6-4

Basic FIOD Operation

Function

The FIOD series products add digital capability to PLC / SCADA. Models are available that offer upto 16 digital inputs and upto 16 digital outputs. The digital inputs and outputs are isolated from the host device. FIOD has one RS 485 (2 Wire) communication port to connect to host device. Communication settings like baud rate, parity and station ID can be set by DIP Switch.

Communication with Host

FIOD module supports Modbus RTU (Slave) Protocol. The communication can be done with Host through 2 wire RS 485 Network.

In case of communication failure with Host, all the outputs are switched OFF.

Modbus Registers Mapping

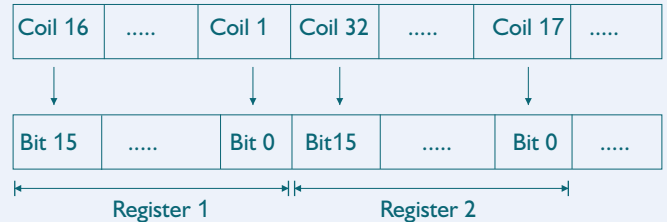
There are 128 Modbus registers supported in FIOD. Out of which, 64 are input registers (1 to 64) which are mapped to input coils 1 to 1024. FIOD has 64 output registers (65 to 128) which are mapped to output coils 1025 to 2048.

First 16 coils from 1 to 16 are assigned for FIOD inputs (1 to 16). Coils from 1025 to 1040 are assigned for FIOD outputs (1 to 16).

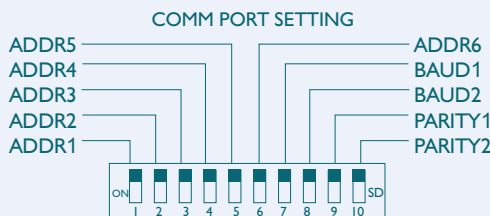
Modbus Mapping of Registers and Coils are mentioned below :

Sr. No.	Register /Coil	Range	Modbus Mapping	Modbus Tag Length
1.	Input Register	1-64	40001-40064	2 -bytes
2.	Output Register	65-128	40065-40128	2 -bytes
3.	Input Coil	1-1024	00001-01024	1-bit
4.	Output Coil	1025-2048	01025-02048	1-bit

Internally Registers (I/P and O/P) are mapped with Coils as mentioned below :



DIP Switch Setting



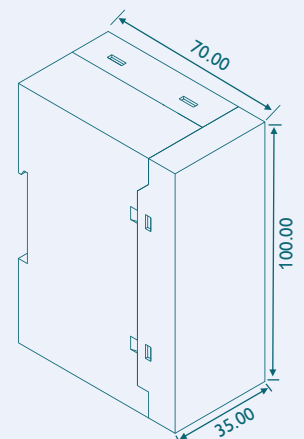
UNIT ID	ADDR6	ADDR5	ADDR4	ADDR3	ADDR2	ADDR1
1	0	0	0	0	0	0
2	0	0	0	0	0	1
:	:	:	:	:	:	:
64	1	1	1	1	1	1

BAUD RATE	BAUD2	BAUD1	PARITY	PARITY2	PARITY1
9600	0	0	NONE	0	0
19200	0	1	NONE	0	0
57600	1	0	ODD	0	1
115200	1	1	EVEN	1	0

Model	Inputs	Outputs
FIOD-0808-R-B	8	8 (Relay)
FIOD-0808-P-B	8	8 (PNP Transistor)
FIOD-0808-C-B	8	8 (NPN Transistor)
FIOD-0404-R-B	4	4 (Relay)
FIOD-0404-P-B	4	4 (PNP Transistor)
FIOD-0404-C-B	4	4 (NPN Transistor)
FIOD-0016-R-B	0	16 (Relay)
FIOD-0016-P-B	0	16 (PNP Transistor)
FIOD-0016-C-B	0	16 (NPN Transistor)
FIOD-0008-R-B	0	8 (Relay)
FIOD-1600-B	16	0

Models

Dimensions



All dimensions are in mm.



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