

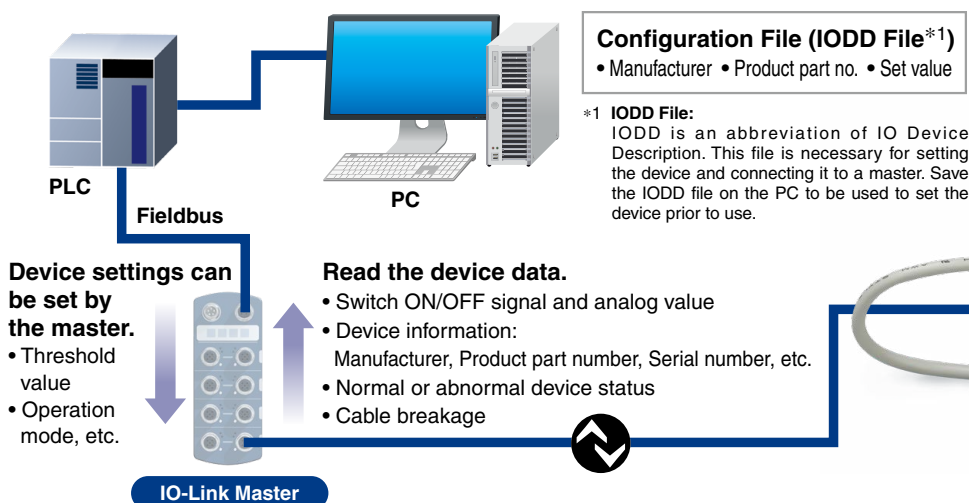
IO-Link Compatible PF3W7□-X445

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Supports the IO-Link communication protocol



IO-Link is an open communication interface technology between the sensor/actuator and the I/O terminal that is an international standard, IEC61131-9.



IO-Link Compatible Device:
Digital Flow Switch for Water

Implement diagnostic bits in the process data.

The diagnostic bit in the cyclic process data makes it easy to find problems with the equipment.

It is possible to find problems with the equipment in real time using the cyclic (cycle) data and to monitor such problems in detail with the noncyclic (aperiodic) data.

Process Data

Process Data

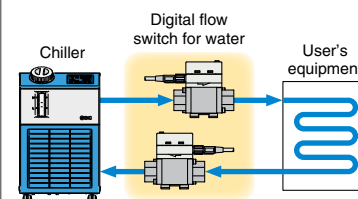
Bit offset	Item	Note	Diagnosis items													
0	OUT1 output	0: OFF 1: ON	<ul style="list-style-type: none">• Over current error• Above the rated flow range• Accumulated flow error• Above the rated temperature range• Below the rated temperature range• Internal product malfunction• Temperature sensor failure													
1	OUT2 output	0: OFF 1: ON														
8	Diagnosis (error)	0: OFF 1: ON														
9	Diagnosis (flow rate)	0: OFF 1: ON														
10	Diagnosis (temperature)	0: OFF 1: ON														
16 to 31	Measured temperature value	Signed 16 bit														
32 to 47	Measured flow rate value	Signed 16 bit														
Bit offset	47	46		45	44	43	42	41	40	39	38	37	36	35	34	33
Item	Measured flow rate value (PD)															
Bit offset	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
Item	Measured temperature value (PD)															
Bit offset	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Item	Reservation					Flow rate			Error	Reservation					OUT2	OUT1
						Diagnosis									Switch output	

Application Examples

For the predictive maintenance of cooling water problems

Monitors flow rate and temperature's "switch ON/OFF signals" and "analog values" to determine the cooling status

The process and cooling status can be compared.



Display function

Displays the output communication status and indicates the presence of communication data



Operation and Display

Communication with master	IO-Link status indicator light	Status	Screen display	Description
Yes		Normal	Operate	Normal communication status (readout of measured value)
		Start up	Mode Start	At the start of communication
		Preoperate	Mode Pre	
No		IO-Link mode	Version does not match	The IO-Link version does not match that of the master. The master uses version 1.0.
		Abnormal	Lock	Backup and restore required due to data storage lock.
		Communication disconnection	Mode aPE Mode Start Mode Pre	Normal communication was not received for 1 second or longer.
	OFF	SIO mode	Mode Sio	General switch output

*1 In IO-Link mode, the IO-Link indicator will be ON or flashing.