IO-Link Compatible Products

IO-Link

3-Screen Display

High-Precision Digital Pressure Switch

ZSE20B(F)-L/ ISE20B-L Series

3-Screen Display

High-Precision Digital Pressure Switch

ISE7□ Series

For Air

3-Screen Display

High-Precision Digital Pressure Switch

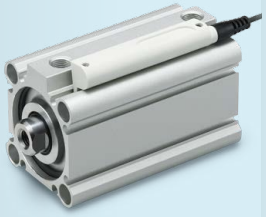
ISE7□G Series

For General Fluids

3-Color Display

Digital Flow Switch for Water

PF3W7□-X445



Actuator Position Sensor

D-MP□ Series

SI Unit

EX260-SIL1-X207/ X210

Electro-Pneumatic Regulator

ITV10□0/20□0/ 30□0-X395

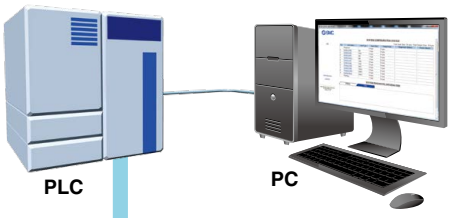
Step Motor Controller

JXCL1 Series

IO-Link Master

EX600-GILB-X60

IO-Link Compatible Products



Configuration File (IODD File*1)
- Manufacturer
- Product part no.
- Set value

*1 **IODD File:** IODD is an abbreviation of IO Device Description. This file is necessary for setting the device and connecting it to a master. Save the IODD file on the PC to be used to set the device prior to use.

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

Various fieldbusses

Device settings can be set by the master.
- Parameter value
- Control data, etc.

Read the device data.
- Sensor measured values and ON/OFF signals
- Device information and parameter values
- Status information and diagnostic data

PROFINET compatible

SI unit	IO-Link master
EX600-SPN3 EX600-SPN4	EX600-L□B1

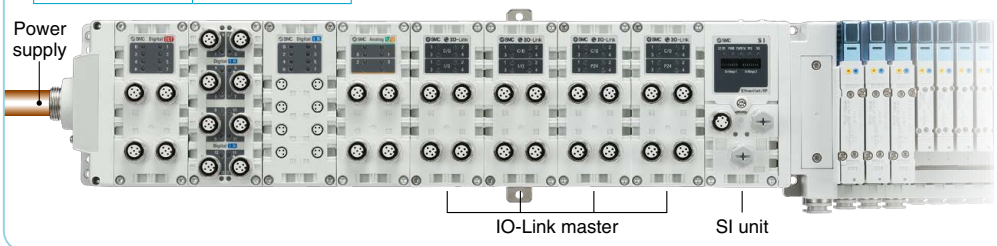
EtherNet/IP™ compatible

SI unit	IO-Link master
EX600-SEN3-X80	EX600-L□B1

CC-Link IE Field compatible

SI unit	IO-Link master
EX600-SCF□-X60	EX600-GILB-X60

IO-Link Master (Commercially available)



Product	3-Screen Display High-Precision Digital Pressure Switch	3-Screen Display High-Precision Digital Pressure Switch for Air	3-Screen Display High-Precision Digital Pressure Switch for General Fluids	3-Screen Display Multi-Channel Digital Sensor Monitor	3-Screen Display Digital Gap Checker
Series	Click here  ZSE20B(F)-L/ ISE20B-L	Click here 1.0 MPa 1.6 MPa  ISE70/ISE71-L2	Click here 1.0 MPa 2.0 MPa 5.0 MPa 10 MPa  ISE70G/ISE75G-L2 ISE76G/ISE77G-L2	Click here  PSE200A	Click here  ISA3-L
Process data size	2-byte input	2-byte input	2-byte input	10-byte input	8-byte input
Diagnostic/Status monitoring function — Event data — Internal failure	●	●	●	●	●
Event data — Abnormal internal temperature	●	●	●		●
Event data — Outside of rated range	●	●	●	●	● Below lower limit of pressure range
Event data — Short-circuit detection		● OUT2	● OUT2		● OUT2
Event data — Open-circuit detection					
Event data — External power supply failure					
Event data — Other				● Over current	● Pressure sensor failure
Process data — Diagnostic bit	●	●	●	● Applied pressure error/ Differential pressure measurement error	● Pressure diagnosis/Error diagnosis

Product			2-Color Display Digital Flow Switch	3-Color Display Digital Flow Switch	3-Color Display Digital Flow Switch for Large Flow	3-Color Display Digital Flow Switch for Water
Series			Click here  PF2M7-L	Click here  PFMC7-L	Click here  PF3A7□H-L	Click here  PF3W-L  Manifold PF3WB/C/R
Process data size			4-byte input	4-byte input	4-byte input	6-byte input
Diagnostic/Status monitoring function	Event data	Internal failure	●	●	●	●
		Abnormal internal temperature			●	●
		Outside of rated range	●	●	●	●
		Short-circuit detection				
		Open-circuit detection				
		External power supply failure				
		Other	● Overflow error/Accumulated flow error	● Overflow error/Accumulated flow error	● Overflow error/Accumulated flow error/ Over current error	
	Process data	Diagnostic bit	● Flow diagnosis/Error diagnosis	● Flow diagnosis/Error diagnosis	● Flow diagnosis	●

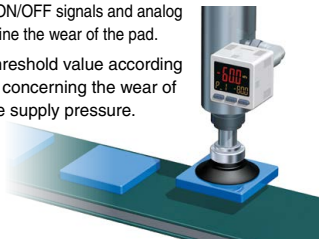
Product			Actuator Position Sensor	Valve SI Unit	Electro-Pneumatic Regulator Electronic Vacuum Regulator	Step Motor Controller
Series			Click here  D-MP025/D-MP050 D-MP100/D-MP200	Click here  EX260-SIL1	Click here  ITV10□0/20□0/30□0-IL ITV2090-IL	Click here  JXCL1
Process data size			2-byte input	4-byte output	4-byte input 2-byte output	14-byte input 22-byte output
Diagnostic/Status monitoring function	Event data	Internal failure	●	●	●	
		Abnormal internal temperature	●	●		
		Outside of rated range			●	
		Short-circuit detection		● Valve output wiring		
		Open-circuit detection		● Valve output wiring		
		External power supply failure		● Valve power supply		● Control power supply
		Other	● Reduced magnetic field strength	● Number of valve operations exceeded		● Motor control related alarm
	Process data	Diagnostic bit		● (Switch setting) Device information	● Set pressure reached	● Motor control related alarm

IO-Link Compatible Products

Applications

Pressure Sensor (Employs predictive maintenance for the early detection of declining adsorption capacity)

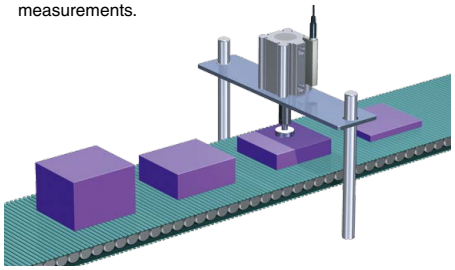
- Monitors switch ON/OFF signals and analog values to determine the wear of the pad.
- Changes the threshold value according to the situation concerning the wear of the pad and the supply pressure.



Actuator Position Sensor

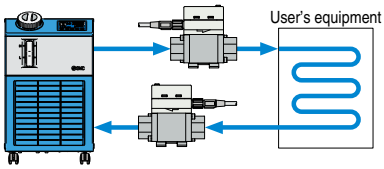
(For the manufacturing of various machined products)

- Confirms the machining status and workpiece measurements.



For the predictive maintenance of cooling water problems

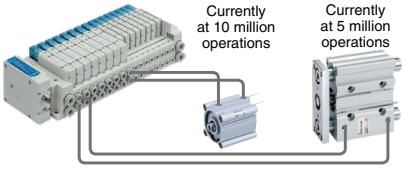
- Monitors flow rate and temperature “switch ON/OFF signals” and “analog values” to determine the cooling status. The process and cooling status can be compared.



Valve SI Unit (Employs preventive maintenance to prevent actuator malfunctions)

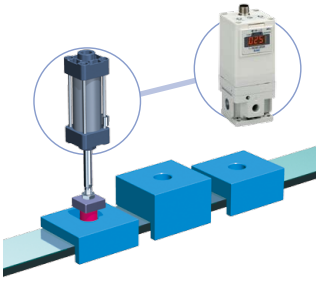
<Application Example>

- **Scheduled cylinder maintenance**
  The replacement time of the cylinder connected to the valve can be scheduled based on the valve cycle count. This enables scheduled maintenance to be performed before any unexpected cylinder failure occurs.



Electro-Pneumatic Regulator (For the manufacturing of various products)

- The set pressure analog value can be changed to control the indentation pressure applied to each workpiece. This allows for a variety of products to be manufactured on the same line.



IO-Link Compatible Products

Pressure Switches

High-Precision Digital Pressure Switch

ZSE20B(F)-L/ISE20B-L

IP65

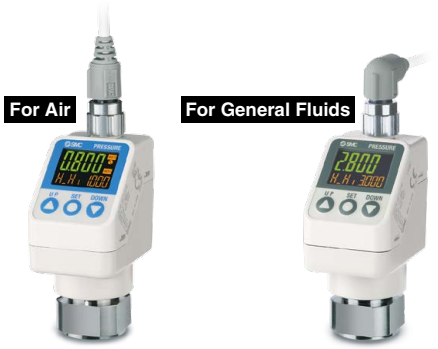
- IO-Link version V1.1
- Process data length 2-byte input
- Transmission speed COM2 (38.4 kbps)
- Minimum cycle time 2.3 ms
- IO-Link port type Class A

Series	Applicable fluid	Type	Rated pressure range
ZSE20BF-L	Air	Compound pressure	−100 to 100 kPa
ZSE20B-L		Vacuum pressure	0 to −100 kPa
ISE20B-L		Positive pressure	0 to 1 MPa

High-Precision Digital Pressure Switch

ISE7□/7□G

IP67



- IO-Link version V1.1
- Process data length 2-byte input
- Transmission speed COM2 (38.4 kbps)
- Minimum cycle time 2.3 ms
- IO-Link port type Class A

Series	Applicable fluid	Type	Rated pressure range
ISE70	Air	Positive pressure	0 to 1 MPa
ISE71			0 to 1.6 MPa
ISE70G	Air General fluids		0 to 1 MPa
ISE75G			0 to 2 MPa
ISE76G			0 to 5 MPa
ISE77G			0 to 10 MPa

Digital Flow Switch

Digital Flow Switch for Water

PF3W7□-X445

IP65

- IO-Link version V1.1
- Process data length 6-byte input
- Transmission speed COM2 (38.4 kbps)
- Minimum cycle time 3.5 ms
- IO-Link port type Class A

Series	Applicable fluid	Rated flow range
PF3W704-X445	Water	0.5 to 4 L/min
PF3W720-X445		2 to 16 L/min
PF3W740-X445		5 to 40 L/min

Position Sensor

Actuator Position Sensor

Actuator stroke position is output with an analog signal.

D-MP025
D-MP050
D-MP100
D-MP200

IP67

- IO-Link version V1.1
- Process data length 2-byte input
- Transmission speed COM3 (230.4 kbps)
- Minimum cycle time 1.0 ms
- IO-Link port type Class A

Series	Measurement range
D-MP025	25 mm
D-MP050	50 mm
D-MP100	100 mm
D-MP200	200 mm

SI Unit

SI Unit

EX260-SIL1-X207
EX260-SIL1-X210

IP67

- IO-Link version V1.1
- Process data length 4-byte output
- Transmission speed COM3 (230.4 kbps)
- Minimum cycle time 0.8 ms

Series	Number of outputs	IO-Link port type
EX260-SIL1-X207	32 outputs	Class A
EX260-SIL1-X210	32 outputs	Class B

Electro-Pneumatic Regulator

Electro-Pneumatic Regulator

ITV10□0-X395
ITV20□0-X395
ITV30□0-X395

IP65

- IO-Link version V1.1
- Process data length 2-byte input/2-byte output
- Transmission speed COM3 (230.4 kbps)
- Minimum cycle time 0.7 ms
- IO-Link port type Class A

Series	Set pressure range
ITV1010/ITV2010/ITV3010-X395	0.005 to 0.1 MPa
ITV1030/ITV2030/ITV3030-X395	0.005 to 0.5 MPa
ITV1050/ITV2050/ITV3050-X395	0.005 to 0.9 MPa

Step Motor Controller

Step Motor Controller

JXCL1

IP40

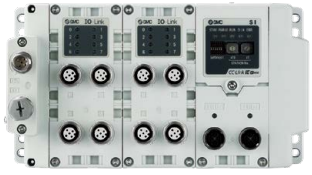
- IO-Link version V1.1
- Process data length 14-byte input/22-byte output
- Transmission speed COM3 (230.4 kbps)
- Minimum cycle time 2.4 ms
- IO-Link port type Class A

Series	Number of axes	Compatible motor
JXCL1	1 axis	Step motor (Servo/24 VDC)

IO-Link Master

IO-Link Master

EX600-GILB-X60



IP67

- IO-Link version V1.1
- Process data length 32-byte input/32-byte output (per port)
- IO-Link port type Class A

Series	Number of ports	PLC communication protocol
EX600-GILB-X60	4 ports	CC-Link IE Field

Accessories

Please contact SMC for the communication cable with connector.

IO-Link Compatible Products

IO-Link