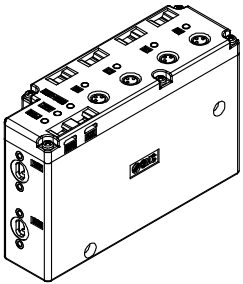




Instruction Manual
Fieldbus device - SI unit for AS-Interface
IN508-36-A series



The intended use of this product is to control pneumatic valves and I/O while connected to the AS-Interface (AS-i) protocol.

1 Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)^{*)}, and other safety regulations.
^{*)} ISO 4414: Pneumatic fluid power - General rules relating to systems.
ISO 4413: Hydraulic fluid power - General rules relating to systems.
IEC 60204-1: Safety of machinery - Electrical equipment of machines. (Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots –Safety, etc.

- Refer to product catalogue, Operation Manual and Handling Precautions for SMC Products for additional information.
- Keep this manual in a safe place for future reference.

	Caution	Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
	Warning	Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
	Danger	Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

Warning

- **Always ensure compliance with relevant safety laws and standards.**
- All work must be carried out in a safe manner by a qualified person in compliance with applicable national regulations.

2 Specifications

2.1 General specifications

Item	Specifications
Ambient temperature	-10 to +50 °C
Ambient humidity	35 to 85%RH (No condensation)
Ambient storage temperature	-20 to +60 °C
Withstand voltage	1000 VAC applied for 1 minute
Insulation resistance	500 VDC, 10 MΩ or more
Enclosure rating	IP65 (manifold assembled)
Weight	205 g

2 Specifications (continued)

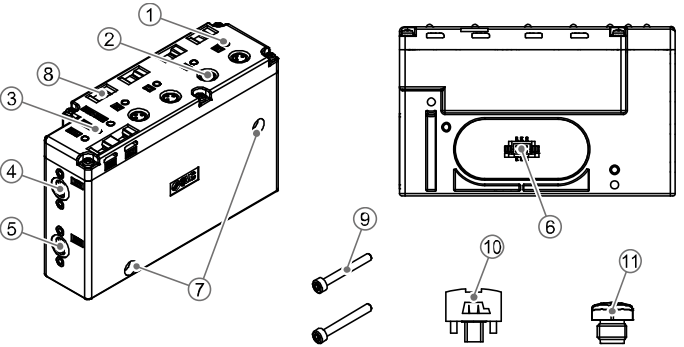
2.2 Electrical specifications

Item		Specifications
Power supply voltage	For communication	Supplied by AS-Interface circuit. 26.5 to 31.6 VDC
	For output	24 VDC +10%/-5%, PELV
Internal current consumption (Unit)		65 mA max.(SI unit internal)
Input	No. of inputs	4
	Applicable sensors	Current source type (PNP output)
	Supply voltage	24 VDC+10%-20% (supplied via AS-i cable)
	Inputs current consumption	200 mA max. total
Output	No. of outputs	4
	Output type	Source/PNP (negative common)
	Load	Solenoid valve (24 VDC and 1.5 W or less, with surge protection circuit) (manufactured by SMC)
	Supply voltage	24 VDC±10%
Residual voltage		0.3 V or less

2.3 Communication specifications

Item	Specifications
Applicable system	AS-Interface (AS-i)
AS-i Version	Version 3.0
Address Mode	Extended Address Mode (ver. 3.0)
Number of occupied slave	1
Max. number of connected slaves	62
Address assignment range	1A to 31A, 1B to 31B
IO Code (HEX)	7
ID Code (HEX)	A
ID Code1 (HEX)	7
ID Code2 (HEX)	7

3 Name and function of parts

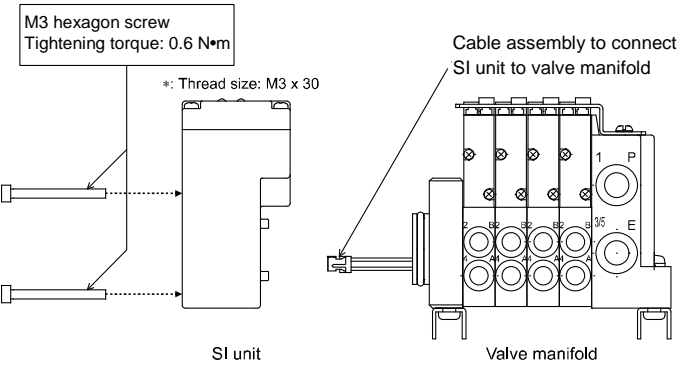


No	Part	Description
1	LED	Displays the sensor signal status.
2	Sensor connector	Connector for sensor (M8 3-pin socket)
3	Display LED	LED display to indicate SI unit status.
4	Power supply connector (AUX)	Power supply with load voltage for valves.
5	Fieldbus interface connector (BUS)	AS-Interface (AS-i) connection.
6	Output connector	Output interface for valve manifold.
7	Mounting hole	Mounting hole for connection to the valve manifold.
8	Marker groove	Groove to mount a marker. (KPX 6/10 (Murrplastik Systemtechnik GmbH))
9	Hexagon socket head cap screw	M3 x 30 screw for connection to the valve manifold (2 pcs.).
10	AS-i connector	Fieldbus interface connector and Power supply connector (2 pcs.).
11	M8 waterproof cap	Blanking cap for connectors (4 pcs.).

4 Assembly

4.1 Assembling the unit

- Assemble the SI unit to the valve manifold using the M3 x 30 mm hexagon screws (2 pcs.).
 - Connect the cable assembly from the manifold to the SI unit and tighten the screws with the specified tightening torque (0.6 N•m).
- If the SI unit is not assembled correctly the internal PCBs may be damaged or liquid and/or dust may enter into the unit.



5 Installation

- Do not expose to direct sunlight. Use a suitable protective cover.
- Do not install in a location subject to vibration or impact in excess of the product's specifications.
- Do not mount in a location exposed to radiant heat that would result in temperatures in excess of the product's specifications.

5.1 Wiring

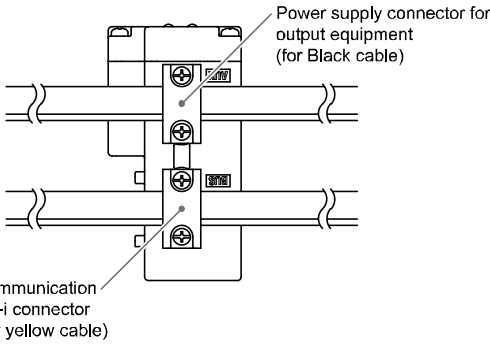
- **Fieldbus Interface connector and Power Supply connector**
- BUS: Communication AS-i connector (yellow cable)
- 99-6442-00-02 (Franz Binder GmbH)

	No.	Description	Function
	1	AS-i -	Negative AS–Interface Line
	2	AS-i +	Positive AS–Interface Line

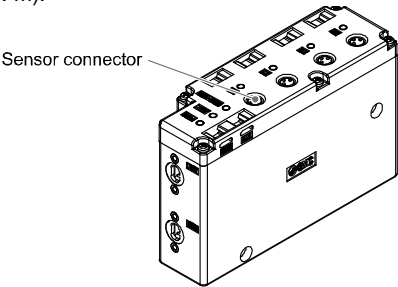
- AUX: Power supply connector for output equipment (black cable)
- 99-6442-00-02 (Franz Binder GmbH)

	No.	Description	Function
	1	0 V	Negative output equipment Power Line
	2	24 V	Positive output equipment Power Line

- The tightening torque is 0.4 N•m. (M2.5 screw)



- **Sensor connector**
- Connect sensors to the connectors (Recommendation tightening torque: 0.2 N•m).



Input connector M8 3-pin socket

	No.	Description
	1	Supply power source for sensor + (SW_24 V)
	3	Supply power source for sensor - (SW_0 V)
	4	Input for sensor

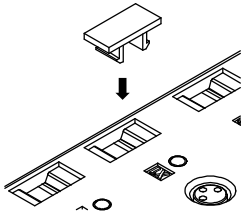
Warning

- Be sure to fit an M8 waterproof cap on any unused connectors. Proper use of the seal cap enables the enclosure to maintain IP65 specification.

5 Installation (continued)

5.2 Identification marker

- Mount the marker (KPX6/10) into the marker groove as required.
- KPX6/10 is manufactured by Murrplastik Systemtechnik GmbH.



5.3 Environment



Warning

- Do not use in an environment where corrosive gases, chemicals, salt water or steam are present.
- Do not install in a location subject to vibration or impact in excess of the product's specifications.
- Do not mount in a location exposed to radiant heat that would result in temperatures in excess of the product's specifications.

6 Settings

• Address setting

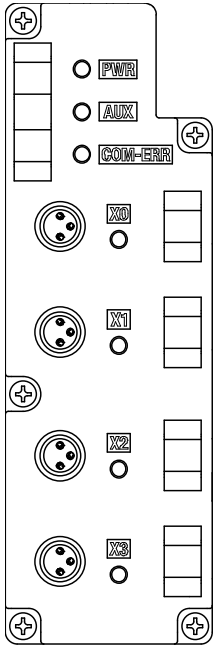
Set the address using an AS-Interface address programming device etc. (SIEMENS: 3RK1901-3HA00 etc.).
The Address assignment range is 1A to 31A, 1B to 31B.
The address can be set regardless of the connection order, but it is not possible to set address overlap.
The address at shipment from the factory is 0.

Refer to the operation manual on the SMC website (URL: <https://www.smcworld.com>) for further information on settings.

6.1 Configuration

Technical documentation giving detailed configuration information can be found on the SMC website (URL: <https://www.smcworld.com>).

7 LED Display



LED	LED condition	Description
PWR	Green ON	When AS-i power is supplied.
AUX	Green ON	When power supply for Output is supplied.
	Green OFF	When power supply for Output is not supplied.
COM-ERR	Red ON	When a signal failure occurs.
	Red flashing	When a device error occurs (Input over-current).
X0 to 3	Orange ON	When each sensor input is ON.

8 How to Order

Refer to the operation manual on the SMC website (URL: <https://www.smcworld.com>) for How to order information.

9 Outline Dimensions (mm)

Refer to the operation manual on the SMC website (URL: <https://www.smcworld.com>) for outline dimensions.

10 Maintenance

10.1 General Maintenance



Caution

- Not following proper maintenance procedures could cause the product to malfunction and lead to equipment damage.
- If handled improperly, compressed air can be dangerous.
- Maintenance of pneumatic systems should be performed only by qualified personnel.
- Before performing maintenance, turn off the power supply and be sure to cut off the supply pressure. Confirm that the air is released to atmosphere.
- After installation and maintenance, apply operating pressure and power to the equipment and perform appropriate functional and leakage tests to make sure the equipment is installed correctly.
- If any electrical connections are disturbed during maintenance, ensure they are reconnected correctly and safety checks are carried out as required to ensure continued compliance with applicable national regulations.
- Do not make any modification to the product.
- Do not disassemble the product, unless required by installation or maintenance instructions
- Stop operation if the product does not function correctly.

11 Limitations of Use

11.1 Limited warranty and Disclaimer/Compliance Requirements

Refer to Handling Precautions for SMC Products.

12 Product disposal

This product should not be disposed of as municipal waste. Check your local regulations and guidelines to dispose of this product correctly, in order to reduce the impact on human health and the environment.

13 Contacts

Refer to www.smcworld.com or www.smc.eu for your local distributor / importer.

SMC Corporation

URL : <https://www.smcworld.com> (Global) <https://www.smc.eu> (Europe)
SMC Corporation, 4-14-1, Sotokanda, Chiyoda-ku, Tokyo 101-0021, Japan
Specifications are subject to change without prior notice from the manufacturer.
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