MOUNTING AND OPERATING INSTRUCTIONS

EB 6150 EN

Translation of original instructions

Type 6150 AS-Interface Module

Edition July 2013

CE

Note on these mounting and operating instructions

These mounting and operating instructions assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices. The images shown in these instructions are for illustration purposes only. The actual product may vary.

➔ For the safe and proper use of these instructions, read them carefully and keep them for later reference.

➔ If you have any questions about these instructions, contact SAMSON's After-sales Service Department (aftersalesservice@samsongroup.com).

Documents relating to the device, such as the mounting and operating instructions, are available on our website at **www.samsongroup.com > Service & Support > Downloads > Documentation**.

Definition of signal words

⚠ DANGER

Hazardous situations which, if not avoided, will result in death or serious injury

⚠ WARNING

Hazardous situations which, if not avoided, could result in death or serious injury

❶ NOTICE

Property damage message or malfunction

ⓘ Note

Additional information

☼ Tip

Recommended action

1 General safety instructions

- The device must be mounted, started up or serviced by fully trained and qualified personnel only; the accepted industry codes and practices are to be observed. Make sure employees or third persons are not exposed to any danger.

- All the warnings given in these mounting and operating instructions must be strictly observed.

- According to these mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible dangers due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

- The manufacturer does not assume any responsibility for damage caused by external forces or any other external factors.

- Proper transport, storage, installation, operation and maintenance are assumed.

- SAMSON does not assume any liability for damage caused when the device is not used as intended.

2 Application

The Type 6150 AS-interface Module converts AS-Interface data into an analog 4 to 20 mA signal. In this way, analog devices, such as control valves, positioners or i/p converters, can be easily integrated into an AS-interface network. The devices merely need a connecting base that corresponds to DIN EN 175301-803. Devices without such a base may possibly be adapted (see section 4 on page 6).

3 Function

An analog end device connected to the Type 6150 AS-Interface Module forms an AS-interface slave. The AS-interface master assigns an address to this slave. The AS-interface module itself cannot be changed.

Certain errors are indicated on site as specified by AS-Interface Specification 2.1. The Type 6150 AS-Interface Module has a green and a red LED to indicate the certain states (see section 5.1 on page 8).

3.1 Data transmission

The AS-interface module uses Profile 7.3 for data transmission. Data are only transmitted over channel 0. Channels 1, 2 and 3 are not write-enabled.

The transferred data are interpreted by the AS-interface module as follows:

Table 1: *Data transmission*

Current mA	Unit dec	Unit hex	Range
2	2,000	07D0	Overrange
3.999	3999	0F9F	
4	4000	0FA0	Nominal range
:	:	:	
12	12000	2EE0	
:	:	:	
19.99	19999	4E1F	
20	20000	4E20	
20.001	20001	4E21	Overrange
22	22000	55F0	

3.2 Power supply

The Type 6150 AS-Interface Module does not require a separate power supply. The power supply for the module as well as for the analog equipment is supplied by the AS-interface network.
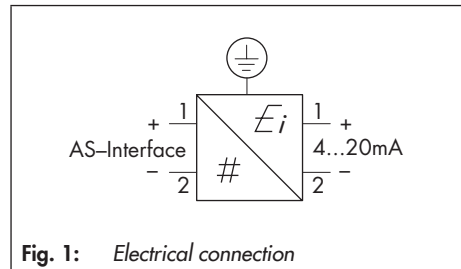
4 Electrical connection and installation

Fig. 1: *Electrical connection*

For attachment to devices with a connector according to DIN EN 175301-803 (Series V2001 Valves with Type 3372 Electropneumatic Actuator, Type 6111 i/p Converter (with male angle connector) and Type 6126 i/p Converter) simply plug on the Type 6150 AS-Interface Module. Connection to the AS-interface module is established using a cable socket according to DIN EN 175301-803.

Configuration of Type 6150-0100/-0200 (see page 10).

For devices without device connector and cable socket according to DIN EN 175301-803 (Types 3725, 3730-0/-1/-2, 3760, 3761, 3767 and 4763 Positioners as well as Type 6116 i/p Converter), the M20x1.5 cable gland must be replaced by a device connector to install the AS-interface module. Connection to the AS-interface module is established using a cable socket according to DIN EN 175301-803.

Configuration of Type 6150-0300 (see page 10).

Configuration of the cable socket

The cable socket can be configured to allow the cable gland to point in the corresponding direction after it is plugged on.

How to proceed:

See Fig. 2.

1. Undo screw (1) on the cable socket and remove it.

2. Remove cable socket from AS-interface module.

3. Remove seal (2).

4. Place screwdriver on opening (5) and apply a slight pressure to lever out insert (3).

5. Insert wires for the input signal through the cable gland (6) and seals into the housing (4) of the cable socket.

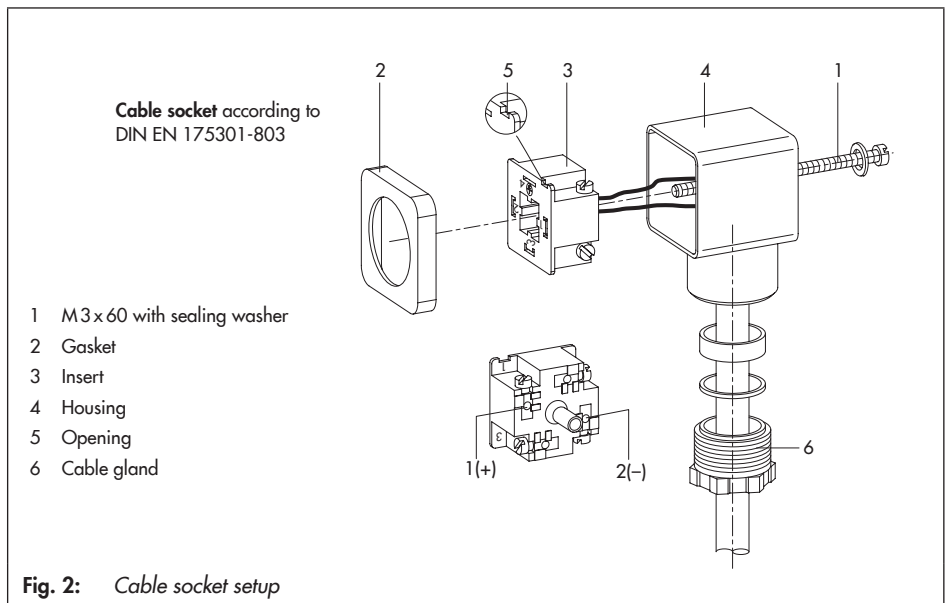6. Insert signal lines into terminals of insert labeled 1 (+) and 2 (–) and fasten them tight.

Cable socket according to DIN EN 175301-803

1   M 3 x 60 with sealing washer
2   Gasket
3   Insert
4   Housing
5   Opening
6   Cable gland

1(+)   2(–)

Fig. 2:   *Cable socket setup*

7. Press insert into the housing, ensuring that the cable gland points in the desired direction after the cable socket is plugged onto the AS-interface module.

8. Tighten cable gland and push on seal.

9. Plug cable socket onto the AS-interface module and push them both together onto the device connector.

10. Secure connection with screw (1).

5 Start-up

After the AS-interface module has been connected, it can be put into operation by the AS-interface master. First, an initializing routine is run during which the EEPROM of the AS-interface module is tested and an address is assigned to it. The default address set by the manufacturer is 0.

If no errors are detected during initialization, the device is run in standard mode. During which, the following routines are constantly run:

➜ Monitoring of connection to the analog device.
  If the connection is interrupted, the output is set to 4 mA and the red LED starts to blink.

➜ Checking the EEPROM's content
  If an error occurs, the output is set to 4 mA and the red LED starts to blink.

➜ Monitoring of communication between AS-interface master and slave
  When there is no communication, the output is set to 2 mA and the red LED is constantly on.

➜ Calculation of output signal
  In the AS-interface module, the data from the master are converted into a current signal and issued at the output.

5.1 Indicators

The AS-interface module is equipped with one green and one red LED to indicate the following operating states:

Green LED on: Power supply connected

Red LED blinking: Device not connected or the data in the EEPROM are not available or incorrect

➔ The output is set to 4 mA.

Red LED on: No communication with the AS-interface master (faulty wiring)

➔ The output is set to 2 mA.

5.2 Setup and operation

Operation

An AS-interface master, which supports profile 7.3, is required to operate the module. The AS-interface master transmits a 16-bit value per module over the AS-interface.

Addressing

Addresses are assigned by an AS-interface master.

Slave profile

I/O code:	7 hex
ID code:	3 hex
ID1 code	F hex
ID2 code:	4 hex

Setting parameters

Parameters need to be set to adjust the different operating ranges of the module. Parameters are set by selecting the "Write ASi parameter" command. The parameter bits are not used in the Type 6150 AS-Interface Module.
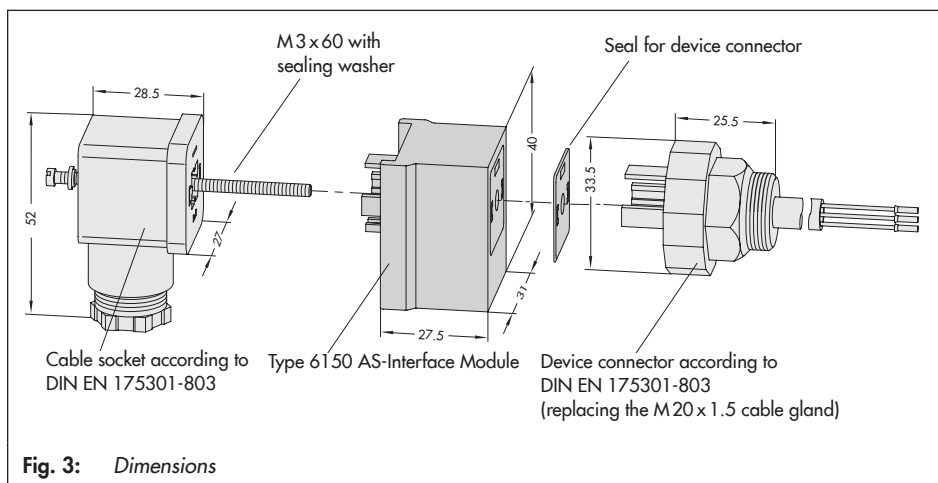
6 Technical data

Table 2: *Technical data*

Input	AS-interface according to specification 2.1
Output	4 to 20 mA
Resolution	0.025 mA/step
Total current output	2 to 22 mA
Permissible load	300 Ω
Output	Short-circuit protection
Power supply	According to AS-Interface Specification (26.5 to 31.6 V DC)
Total current consumption from AS-interface network	Max. 30 mA
Indicators	
Green LED on	Power supply connected
Red LED blinking	Device not connected or the data in the EEPROM are not available or incorrect
Red LED on	No communication with the AS-interface master (faulty wiring)
AS-i profile	S 7.3
I/O configuration	7 hex
ID code	3
Temperature range (operation)	− 10 to + 60 °C
Degree of protection (when mounted)	IP 65
Noise emission	EN 50081 Part 1
Noise immunity	EN 50081 Part 2
Electrical connection	According to DIN EN 175301-803
Housing material	Polyamide

Configuration – Type 6150 AS-Interface Module –

Complete order number as required

Order no.	Type 6150 – ...	...	...	...
Explosion protection	Without	**0**		
Version	Module with seal and M3 x 60 screw	1		
	Module with cable socket, seal and M3 x 60 screw	**2**		
	Module with cable socket, M20x1.5 device connector, seal and M3 x 60 screw	3		
	Module with cable socket, device connector according to DIN EN 175301-803, seal and M3 x 60 screw	**4**		
Signal	Input: AS-interface data · Output: 4 to 20 mA		0	
Profile	AS-i S7.3			0

7 Dimensions

M 3 x 60 with
sealing washer

Seal for device connector

28.5

52

27

25.5

33.5

40

31

27.5

Cable socket according to
DIN EN 175301-803

Type 6150 AS-Interface Module

Device connector according to
DIN EN 175301-803
(replacing the M 20 x 1.5 cable gland)

Fig. 3:   *Dimensions*

8 Disposal

SAMSON is a producer registered at the following European institution ► https://www.ewrn.org/national-registers/national-registers. WEEE reg. no.: DE 62194439/FR 025665

→ Observe local, national and international refuse regulations.

→ Do not dispose of components and hazard substances together with your other household waste.

ℹ️ Note

We can provide you with a recycling passport according to PAS 1049 on request. Simply e-mail us at aftersalesservice@samsongroup.com giving details of your company address.

☼ Tip

On request, we can appoint a service provider to dismantle and recycle the product as part of a distributor take-back scheme.

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