

# AS-interface Module Type 6150



Fig. 1 · Type 3372 Electropneumatic Actuator with AS-interface module

## Mounting and Operating Instructions

**EB 6150 EN**

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## 1 Description

### 1.1 Application

The Type 6150 AS-interface Module converts data of an AS-interface into an analog 4 to 20 mA signal.

This facilitates the integration of analog valve positioners into an AS-interface, for example.

Together with the Type 6150 AS-interface Module, an analog device forms the AS-interface slave, which is assigned an address by the AS-interface master. The AS-interface module itself cannot be changed.

According to AS-interface Specification 2.1, certain error messages are indicated on site by LEDs. Refer to section 3.1 for details.

### 1.2 Data transmission

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

Current [mA]	Unit (dec)	Unit (hex)	Range
2	2000	07D0	Overrange
3.999	3999	0F9F	
4 : 12 : 19.99 20	4000 : 12000 : 19999 20000	0FA0 : 2EE0 : 4E1F 4E20	Nominal range
20.001 22	20001 22000	4E21 55F0	Underrange



- ▶ The device is to be assembled, started up or operated only by trained and experienced personnel familiar with the product.
- ▶ According to these mounting and operating instructions, trained personnel is referred to as 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.

### 1.3 Technical data

Input	AS-interface version 2.1
Output	4 to 20 mA, resistant to short circuit
Total power output	2 to 22 mA
Permissible load	300 $\Omega$
Operating voltage	According to AS-interface Specification (26.5 to 31.6 V DC)
Total current consumption	30 mA
Resolution	0.025 mA/step
AS-i profile	S 7.3, AS-i certificate applied for
I/O configuration	7 hex
ID code	3
Temperature range	-10 °C to +60 °C (operation)
Degree of protection	IP 65 (mounted)
Degree of contamination	3
Noise emission	EN 50081 Part 1
Noise immunity	EN 50081 Part 2
Housing material	Polyamide

### 1.4 Voltage supply of AS-i module

The Type 6150 AS-interface Module does not require a separate voltage supply. The voltage for the module as well as for the analog equipment is supplied by AS-i.

## 2 Mounting and electrical connection



For electrical installation, you are required to observe the relevant electrotechnical regulations and the accident prevention regulations that apply in the country of use.

In Germany, these are the VDE regulations and the accident prevention regulations of the employers' liability insurance.

**Note!**

To comply with IP 65 requirements, use a two-wire round cable instead of the standard AS-i cable for electrical connection.

The AS-interface module is delivered together with the cable socket (Fig. 2) and intended for connection according to DIN 43650.

- ▶ If used with a Type 3372 Electropneumatic Actuator, the module can be plugged directly onto the three-pin connector on the actuator's output side.
- ▶ If used with a Type 6111 i/p Converter in special version, an appropriate connector is mounted on the housing.
- ▶ If used with Types 3730, 3760, 3761, 3763 and 3767 Positioners, a connector with M20x1.5 thread (Fig. 2 top) is required.

On the input side, the AS-interface module must be connected to the AS-interface using the included cable socket as follows:

1. Loosen screw (1) from cable socket and remove it.
  2. Remove cable socket from AS-interface module.
  3. Remove rubber gasket (2).
  4. Place screwdriver on opening (5) and lever out insert (3) with slight pressure.
  5. Insert cables for the input signal through the cable gland (6) and gaskets into the housing (4) of the cable socket.
  6. Plug signal lines into terminals of insert labeled 1 (+) and 2 (-) as displayed in Fig. 2 (bottom) and tighten them.
  7. Press insert into the housing, so that the cable gland points in the desired direction after the cable socket has been plugged onto the AS-interface module.
- Note!**  
Insert may be turned 90°-wise. However, cable socket and AS-interface module only fit together in one direction!
8. Tighten cable gland and slide on rubber gasket.
  9. Plug cable socket onto the AS-interface module. Slide both together onto the connector of the device.
  10. Secure connection with screw (1).

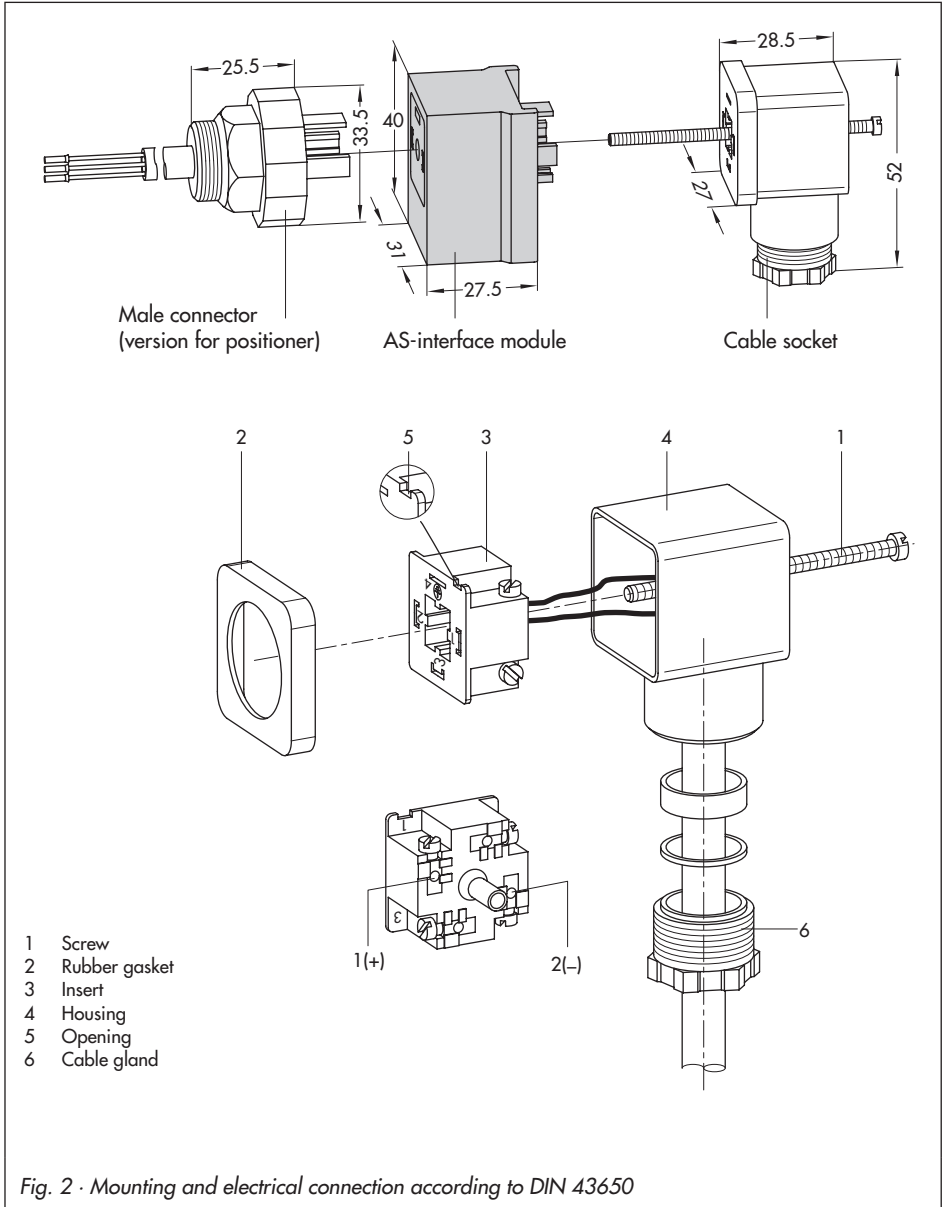


Fig. 2 · Mounting and electrical connection according to DIN 43650

### 3 Start-up

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

The default address set by the manufacturer is 0. If no errors are detected during initialization, the device is run in standard mode. This means that the following routines are run permanently:

- ▶ Monitoring of connection to the analog device  
When the connection is interrupted, the output is set to 4 mA and the red LED starts to blink.
- ▶ Checking the EEPROM's content  
When an error occurs, the output is set to 4 mA and the red LED starts to blink.
- ▶ Monitoring of communication between AS-i master and slave  
When there is no communication, the output is set to 2 mA and the red LED illuminates.
- ▶ 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.

### 3.1 Displays

The AS-interface module is equipped with a green and a red LED to indicate the following states of operation:

#### Green LED

- ▶ **On:**  
Voltage is supplied.

#### Red LED

- ▶ **Blinking:**  
No device connected, no data in EEPROM or data in EEPROM incorrect.  
Output is set to 4 mA.
- ▶ **On:**  
No connection to AS-interface master (line interrupted).  
Output is set to 2 mA.

## 3.2 Setup and operation of the AS-interface module

### Operation

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

### Addressing

Addresses are assigned by the AS-i master.

### Slave profile

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

### Parameter settings

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.



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