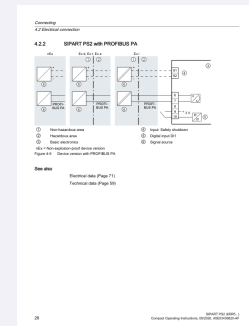


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

6DR5010-0EN01-0AA0

Electropneumatic valve positioner



PRODUCT	6DR5010-0EN01-0AA0
FAMILY	SIPART PS2
FUNCTION	Electropneumatic valve positioner
SOURCE	SIPART PS2 Compact Operating Instructions, 09/2020, A5E03436620-AF

01 OFFICIAL MOUNTING AND WIRING

- Isolate electrical power and depressurize the actuator before mounting.
- Use the matching linear or part-turn actuator mounting kit and travel setting.
- Wire the two-wire 4 to 20 mA interface according to the applicable connection diagram.
- Use clean supply air within 1.4 to 7 bar and perform the manufacturer initialization procedure.

AMIKON PRODUCT SUPPORT

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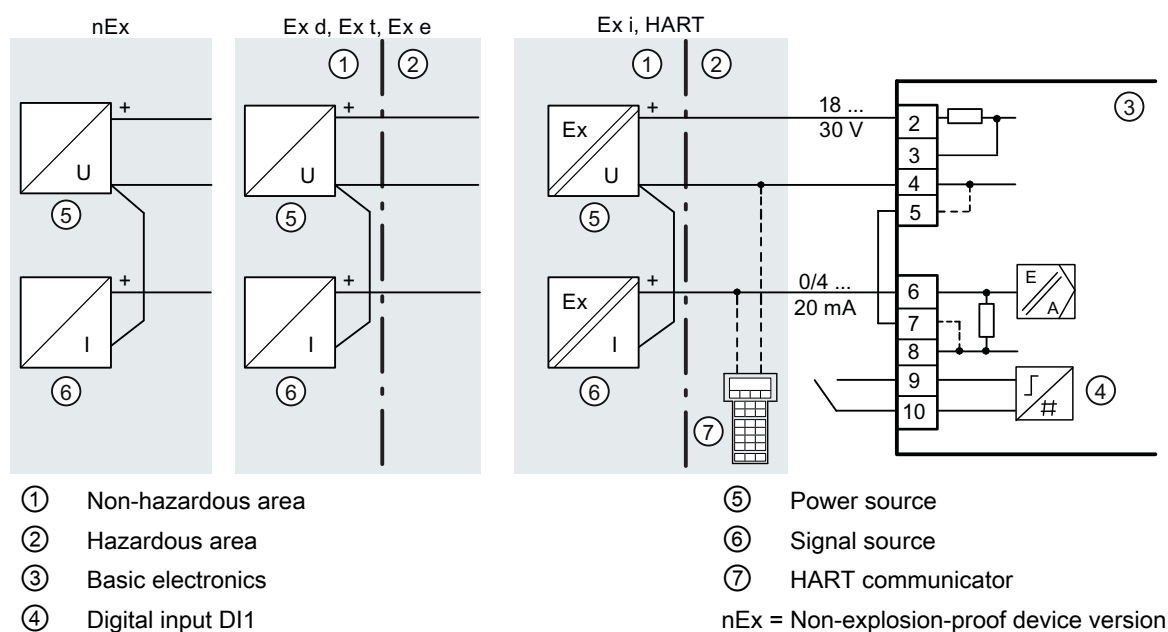


Figure 4-3 Device version 2-/3-/4-wire, with connection type 3-wire

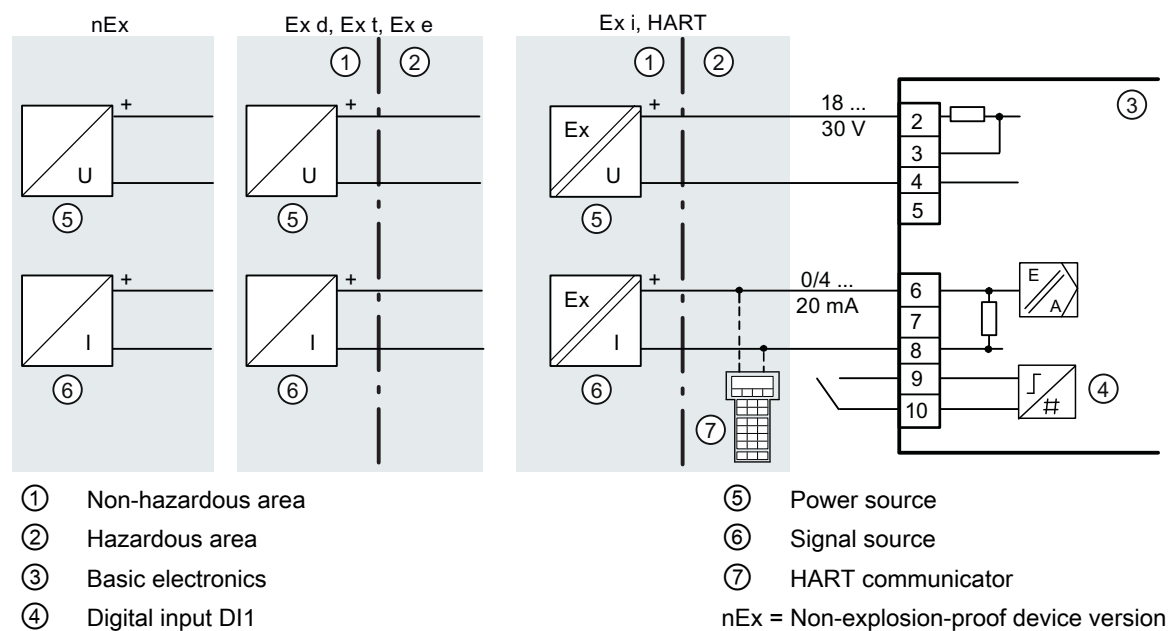


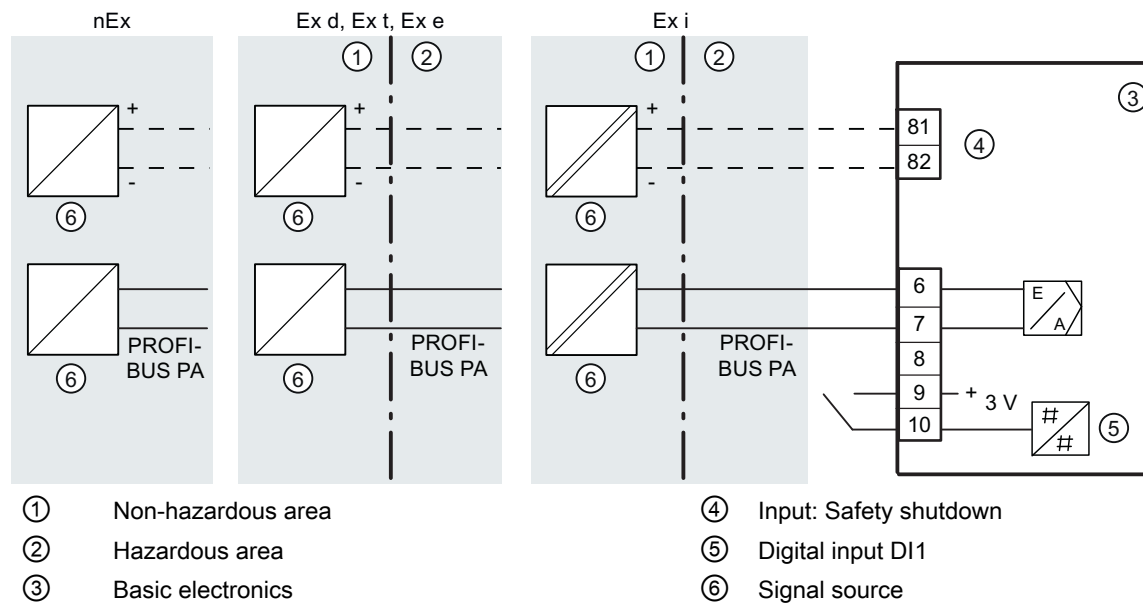
Figure 4-4 Device version 2-/3-/4-wire, with connection type 4-wire

See also

Electrical data (Page 68)

Technical data (Page 59)

4.2.2 SIPART PS2 with PROFIBUS PA



nEx = Non-explosion-proof device version

Figure 4-5 Device version with PROFIBUS PA

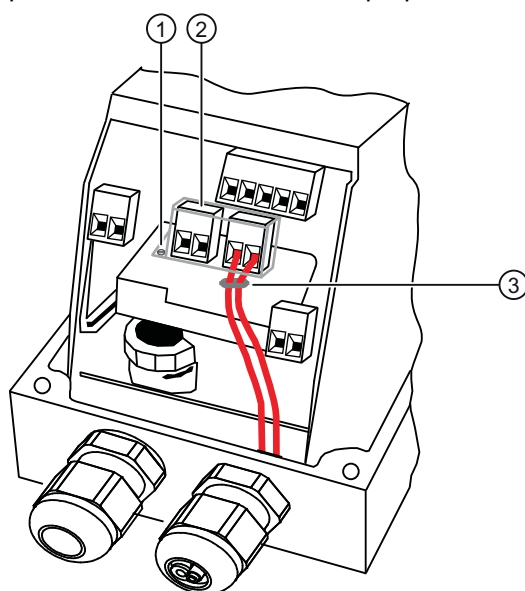
See also

Electrical data (Page 71)

Technical data (Page 59)

Procedure

1. Loosen the screw ① on the transparent cover ②.
2. Pull the transparent cover ② up to the front end stop.
3. Tighten every cable in the corresponding terminal.
4. Slide the transparent cover ② up to the end stop of the basic electronics.
5. Tighten the screw ① of the transparent cover ②.
6. Connect the cables of each switch to the lug of the printed circuit board in pairs. Use the provided cable ties ③ for this purpose.



- ① Screw
- ② Cover
- ③ Cable tie

Figure 4-11 Connecting the cables

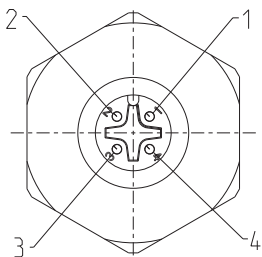
4.2.6 Option device version M12 connector

This section describes which terminal of the devices and option modules listed below is connected with the respective pole of the M12 connector.

Note

Technical specifications

Observe the specifications for the electrical data in the certificate and/or in section "Technical data (Page 59)".

View of the mating side pole pattern

Pole designation	Wire color of M12 basic connector socket
1	Brown
4	Black
3	Blue
2	White

4.2.6.1 In the basic unit with 4 to 20 mA/HART

You have a positioner 6DR50/1..-0.R.. or 6DR50/1..-0.S. In this version of the positioner, the current input I_W 4 to 20 mA of the basic electronics is connected via the M12 connector.

Table 4-1 Assignment diagram

Current input terminal	Pole designation
6 (+)	1 - Brown
Shield support of enclosure	4 - Black
7 and 8 (-)	3 - Blue

4.2.6.2 In the basic unit with PROFIBUS PA

You have a positioner 6DR55..-0.R.. or 6DR55..-0.S. In this case the M12 connector is connected to the bus circuit of the basic electronics.

Table 4-2 Assignment diagram

Bus circuit terminal	Pole designation
7	1 - Brown
Shield support of enclosure	4 - Black
6	3 - Blue

4.2.6.3 In the basic unit with FOUNDATION Fieldbus

You have a positioner 6DR56..-0.R.. or 6DR56..-0.S.. In this case the M12 connector is connected to the bus circuit of the basic electronics.

Table 4-3 Assignment diagram

Bus circuit terminal	Pole designation
7	1 - Brown
Shield support of enclosure	4 - Black
6	3 - Blue

4.2.6.4 In the basic unit with Analog Output Module (AOM) 6DR4004-6J / -8J (-Z D53)

You have a positioner with order suffix -Z order code D53. In this version of the positioner, the current output of Analog Output Module (AOM) is electrically connected to the M12 connector.

Table 4-4 Assignment diagram

Current output terminal	Pole designation
61 (+)	1 - Brown
Shield support of enclosure	4 - Black
62 (-)	3 - Blue

4.2.6.5 In the basic unit with Position Transmitter (-Z D54)

You have a positioner with order suffix -Z order code D54. In this version of the positioner, the installed Analog Input Module (AIM) 6DR4004-6F/-8F is electrically connected to the M12 connector. You connect the Position Transmitter 6DR4004-1ES/-2ES using the M12 connector.

Table 4-5 Assignment diagram

Terminal	Pole designation
REF	2 - White
POS	3 - Blue
GND	4 - Black
VCC	1 - Brown

4.2.6.6 In the basic unit with Digital I/O Module (DIO) 6DR4004-6A / -8A (-Z D55)

You have a positioner with order suffix -Z order code D55. In this version of the positioner, the current output of Digital I/O Module (DIO) is electrically connected to the M12 connector.

Table 4-6 Assignment diagram

Terminal of digital outputs A1 and A2	Pole designation
41 (+)	1 - Brown
52 (-)	4 - Black
42 (-)	3 - Blue
51 (+)	2 - White

4.2.6.7 In the basic unit with Inductive Limit Switches (ILS) 6DR4004-6G /-8G (-Z D56)

You have a positioner with order suffix -Z order code D56. In this version of the positioner, the digital outputs A1 and A2 of the Inductive Limit Switches (ILS) are electrically connected to the M12 device plug.

Table 4-7 Assignment diagram

Terminal of digital outputs A1 and A2	Pole designation
41 (+)	1 - Brown
52 (-)	4 - Black
42 (-)	3 - Blue
51 (+)	2 - White

4.2.6.8 In the basic unit with Mechanic Limit Switches (MLS) 6DR4004-6K (-Z D57)

You have a positioner with order suffix -Z order code D57. In this version of the positioner, the digital outputs A1 and A2 of the Mechanic Limit Switches (MLS) are electrically connected to the M12 connector.

Table 4-8 Assignment diagram

Terminal of digital outputs A1 and A2	Pole designation
41 (+)	1 - Brown
52 (-)	4 - Black
42 (-)	3 - Blue
51 (+)	2 - White

4.3 Pneumatic connection** WARNING****Supply pressure PZ**

For safety reasons, the supply pressure PZ can be fed after installation only if the positioner is switched to "P-Manual mode" when an electrical signal is present. This operating mode is preset in the delivery state.

Note**Specifications regarding air quality**

Observe the specifications regarding the air quality in section "Technical specifications > Pneumatic data (Page 60)".

Note**Leakage**

Besides continuous air consumption, a leakage can cause the positioner to try to compensate the position deviation. This will result in premature wear in the entire control device.

- Check offline for leakage using the "11.LEAK" diagnostic parameter.
- If there is leakage, check the pneumatic connections for leaks.

4.3.1 Pneumatic connection for 6DR5..0/1/2/3

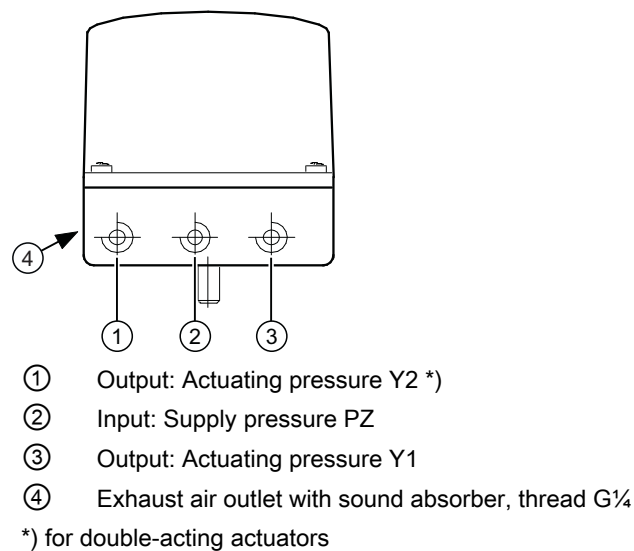


Figure 4-12 Pneumatic connection, example