


Instruction Manual

1. Marking

S1SD-1AI-1C.H	SMART transmitter power supply
S1SD-1AI-1U	Transmitter power supply
S1SD-1AI-1U.1	Isolated amplifier
S1SD-1AI-1U.2	Isolated amplifier
S1SD-1AI-1U.3	Millivolt converter
S1SD-1AI-2C	Transmitter power supply/signal splitter
S1SD-1AI-2U	Isolated amplifier/splitter
S1SD-1TI-1U	Temperature converter
S1SD-2PF	Power feed module
S1SL-1AI-1C	Passive isolator
S1SL-2AI-2C	Passive isolator
S-ADP-USB	Adapter with USB interface

Certificate: DEMKO 16 ATEX 1750X
Marking:  II 3G Ex nA IIC T4 Gc
IECEX certificate: IECEX UL 16.0116X
IECEX marking: Ex nA IIC T4 Gc
North America Certificates
Class I, Division 2, Groups A, B, C, D; T4 or non-hazardous area

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2. Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation, maintenance, and dismantling lies with the plant operator.

The personnel must be appropriately trained and qualified in order to carry out mounting, installation, commissioning, operation, maintenance, and dismantling of the device. The trained and qualified personnel must have read and understood the instruction manual.

Prior to using the product make yourself familiar with it. Read the instruction manual carefully.

3. Reference to Further Documentation

Observe laws, standards, and directives applicable to the intended use and the operating location.

The corresponding datasheets, manuals, declarations of conformity, EU-type examination certificates, certificates, and control drawings if applicable supplement this document. You can find this information under www.pepperl-fuchs.com.

4. Intended Use

The device is only approved for appropriate and intended use. Ignoring these instructions will void any warranty and absolve the manufacturer from any liability.

The device is used in control and instrumentation technology (C&I technology) for the galvanic isolation of signals such as 20 mA and 10 V standard signals or alternatively for adapting or standardizing signals. Use the device only within the specified ambient and operating conditions. The device is designed for mounting on a 35 mm DIN mounting rail according to EN 60715.

Only use the device stationary.

The device is an electrical apparatus for hazardous areas of Zone 2.

The device may be installed in the non-hazardous area.

5. Improper Use

Protection of the personnel and the plant is not ensured if the device is not used according to its intended use.

The device is not suitable for isolating signals in power installations unless this is noted separately in the corresponding datasheet.

6. Mounting and Installation

Do not mount a damaged or polluted device.

Mount the device in a surrounding enclosure.

Ensure that the surrounding enclosure can only be opened with a tool.

Do not mount the device in the dust hazardous area.

The device fulfills a degree of protection IP20 according to IEC/EN 60529.

The device must be installed and operated only in an environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1.

If used in areas with higher pollution degree, the device needs to be protected accordingly.

All circuits connected to the device must comply with the overvoltage category II (or better) according to IEC/EN 60664-1.

Only connect supplies that provide protection against electric shock (e. g. SELV or PELV).

Protect the supply with a suitable fuse protection.

In order to ensure protection against electric shock, observe the following instructions:

- Keep sufficient distance between connection lines, terminals, housing, and environment.
- Insulate connection lines, terminals, and housing from the environment.

Requirements for Cables and Connection Lines

Observe the permissible core cross-section of the conductor.

When using stranded conductors, crimp wire end ferrules on the conductor ends.

Use only one conductor per terminal.

When installing the conductors the insulation must reach up to the terminal.

Observe the tightening torque of the terminal screws.

Requirements for Equipment Protection Level Gc

Observe the installation instructions according to IEC/EN 60079-14.

Provide a transient protection. Ensure that the peak value of the transient protection does not exceed 140 % of the rated voltage.

The device must be installed and operated only in surrounding enclosures that

- comply with the requirements for surrounding enclosures according to IEC/EN 60079-0,
- are rated with the degree of protection IP54 according to IEC/EN 60529.

Connection or disconnection of energized circuits is only permitted in the absence of a potentially explosive atmosphere.

Requirements for Division 2

Connection or disconnection of energized circuits is only permitted in the absence of a potentially explosive atmosphere.

7. Operation, Maintenance, Repair

The devices must not be repaired, changed or manipulated. If there is a defect, the product must always be replaced with an original device.

If the voltage is greater than 50 V AC or 120 V DC, switch off the voltage before connecting or disconnecting the device.

Only use accessories specified by the manufacturer.

In order to connect the computer with the device, only use the approved adapter.

Before plugging in or pulling out the adapter, if voltages exceed 50 V, de-energize the device first.

In order to adjust operating elements, only use tools that are properly insulated against the voltages applied.

Ensure that the surrounding enclosure can only be opened with a tool.

Requirements for Equipment Protection Level Gc

Only use operating elements in the absence of a potentially explosive atmosphere.

Connection or disconnection of energized circuits is only permitted in the absence of a potentially explosive atmosphere.

Requirements for Division 2

Only use operating elements in the absence of a potentially explosive atmosphere.

Connection or disconnection of energized circuits is only permitted in the absence of a potentially explosive atmosphere.

8. Delivery, Transport, Disposal

Check the packaging and contents for damage.

Check if you have received every item and if the items received are the ones you ordered.

Store the device in a clean and dry environment. The permitted ambient conditions must be considered, see datasheet.

Disposing of device, packaging, and possibly contained batteries must be in compliance with the applicable laws and guidelines of the respective country.