

INDUSTRIAL AUTOMATION PRODUCT

DSTY101 57120001-KY

DSTY 101 Analog Isolation Amplifier

ABB DSTY101 57120001-KY is a single-channel analog isolation amplifier in the S100 I/O family. It isolates and conditions a voltage or current loop before the signal is handled by the connected ABB control system.

| IDENTITY      | VERIFIED VALUE |
|---------------|----------------|
| Manufacturer  | ABB            |
| System family | ABB S100 I/O   |
| Part number   | 57120001-KY    |
| Country       | Sweden         |
| HS code       | 8537101190     |

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## Technical Specifications

Technical values below are limited to the named ABB product record.

| PARAMETER                      | TECHNICAL VALUE    |
|--------------------------------|--------------------|
| Product identifier             | 57120001-KY        |
| Module designation             | DSTY 101           |
| Product type                   | I/O module         |
| Channels                       | 1                  |
| Signal voltage range           | 0 to +/-10 V       |
| Signal current range           | 0 to +/-20 mA      |
| Isolation withstand            | 3 kV               |
| Linearity accuracy, bipolar    | 0.3%               |
| Linearity accuracy, asymmetric | 0.5%               |
| Supply voltage                 | 24 V DC            |
| Exchange number                | 7650 055-210       |
| Product hierarchy              | S100 I/O module    |
| Battery quantity               | 0                  |
| WEEE category                  | 5, small equipment |

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## System Role and Architecture

ABB DSTY101 57120001-KY is a single-channel analog isolation amplifier in the S100 I/O family. It isolates and conditions a voltage or current loop before the signal is handled by the connected ABB control system.

**FUNCTION 1**

Galvanically separates one analog measurement or control channel

**FUNCTION 2**

Accepts the documented voltage or current signal range on one channel

**FUNCTION 3**

Supports S100 I/O signal conditioning in legacy ABB control installations

**FUNCTION 4**

Provides a 24 V DC-powered isolation stage between field and system circuits

Matched system components

- ABB S100 I/O installation
- 24 V DC module supply
- one bipolar voltage or current circuit
- matching field and system-side terminals

SYSTEM INTEGRATION RECORD

| INTEGRATION ITEM           | DOCUMENTED ROLE                                                  |
|----------------------------|------------------------------------------------------------------|
| Installed host / carrier   | ABB S100 I/O installation                                        |
| Companion hardware         | 24 V DC module supply                                            |
| Field connection           | one bipolar voltage or current circuit                           |
| Primary system function    | Galvanically separates one analog measurement or control channel |
| Controlled acceptance duty | Analog-loop galvanic isolation                                   |

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## Applications and Engineering Context

**Analog-loop galvanic isolation**

Galvanically separates one analog measurement or control channel

**Bipolar voltage signal conditioning**

Accepts the documented voltage or current signal range on one channel

**Bipolar current signal conditioning**

Supports S100 I/O signal conditioning in legacy ABB control installations

**Legacy S100 I/O cabinet renewal**

Provides a 24 V DC-powered isolation stage between field and system circuits

**TECHNICAL NOTE**

Identify the field side, system side and 24 V DC supply conductors before removing DSTY101 57120001-KY. Recheck isolation, polarity, zero and span with a controlled source after replacement and before reconnecting the process loop.

**MODEL-SPECIFIC ACCEPTANCE EVIDENCE**

| CHECK              | ACCEPTANCE CONDITION                                             |
|--------------------|------------------------------------------------------------------|
| Identity           | DSTY101 57120001-KY / 57120001-KY recorded                       |
| Physical interface | ABB S100 I/O installation                                        |
| Companion check    | 24 V DC module supply                                            |
| Functional proof   | Galvanically separates one analog measurement or control channel |
| Application test   | Analog-loop galvanic isolation                                   |

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## Engineering Precautions

1

Verify DSTY101 and 57120001-KY on the physical marking before disconnecting conductors.

2

Isolate the 24 V DC supply and both sides of the analog circuit before removal.

3

Label field, system and supply terminals so the isolation boundary is preserved.

4

Use ESD controls and keep conductive contamination away from the amplifier assembly.

5

Do not apply the voltage and current input ranges to the same terminal arrangement simultaneously.

### RELATED PRODUCTS ON APTER POWER

| MODEL               | SYSTEM ROLE                 | APTER POWER PAGE                  |
|---------------------|-----------------------------|-----------------------------------|
| DSAI145 57120001-HA | Analog input module         | <a href="#">Open product page</a> |
| DSAI130 57120001-P  | Analog input board          | <a href="#">Open product page</a> |
| DSAO110 57120001-AT | Analog output board         | <a href="#">Open product page</a> |
| DSTA170 57120001-FC | ABB Master termination unit | <a href="#">Open product page</a> |

### MANUFACTURER SOURCE RECORD

ABB Product Detail 57120001-KY

Exchange No. 7650 055-210

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