

SIMATIC ET 200SP, Digital input module, DI 8x 24V DC Basic, type 2 (IEC 61131), sink input, (PNP, P-reading), Packing unit: 1 piece, fits to BU-type A0, Colour Code CC01, input delay time 0,05..20ms, module diagnostics for: supply voltage



| General information                                       |                                                |
|-----------------------------------------------------------|------------------------------------------------|
| Product type designation                                  | DI 8x24 VDC BA                                 |
| Firmware version                                          | V0.0                                           |
| • FW update possible                                      | No                                             |
| usable BaseUnits                                          | BU type A0                                     |
| Color code for module-specific color identification plate | CC01                                           |
| Product function                                          |                                                |
| • I&M data                                                | Yes; I&M0 to I&M3                              |
| Engineering with                                          |                                                |
| • STEP 7 TIA Portal configurable/integrated as of version | V14                                            |
| • STEP 7 configurable/integrated as of version            | V5.5 SP3 / -                                   |
| • PROFIBUS as of GSD version/GSD revision                 | One GSD file each, Revision 3 and 5 and higher |
| • PROFINET as of GSD version/GSD revision                 | GSDML V2.3                                     |
| Operating mode                                            |                                                |
| • DI                                                      | Yes                                            |
| • Counter                                                 | No                                             |
| • Oversampling                                            | No                                             |

|                                                                 |                                                          |
|-----------------------------------------------------------------|----------------------------------------------------------|
| • MSI                                                           | No                                                       |
| <b>Supply voltage</b>                                           |                                                          |
| Rated value (DC)                                                | 24 V                                                     |
| permissible range, lower limit (DC)                             | 19.2 V                                                   |
| permissible range, upper limit (DC)                             | 28.8 V                                                   |
| Reverse polarity protection                                     | Yes                                                      |
| <b>Input current</b>                                            |                                                          |
| Current consumption, max.                                       | 70 mA; All channels are supplied from the encoder supply |
| <b>Encoder supply</b>                                           |                                                          |
| Number of outputs                                               | 8                                                        |
| Output voltage encoder supply, min.                             | 19.2 V                                                   |
| Short-circuit protection                                        | Yes; per module                                          |
| <b>24 V encoder supply</b>                                      |                                                          |
| • 24 V                                                          | Yes                                                      |
| • Short-circuit protection                                      | Yes                                                      |
| • Output current per channel, max.                              | 700 mA                                                   |
| • Output current per module, max.                               | 700 mA                                                   |
| <b>Power loss</b>                                               |                                                          |
| Power loss, typ.                                                | 1.6 W; 24 V, 8 inputs supplied via encoder supply        |
| <b>Address area</b>                                             |                                                          |
| <b>Address space per module</b>                                 |                                                          |
| • Inputs                                                        | 1 byte                                                   |
| <b>Hardware configuration</b>                                   |                                                          |
| Automatic encoding                                              | Yes                                                      |
| • Mechanical coding element                                     | Yes                                                      |
| <b>Selection of BaseUnit for connection variants</b>            |                                                          |
| • 1-wire connection                                             | BU type A0                                               |
| • 2-wire connection                                             | BU type A0                                               |
| • 3-wire connection                                             | BU type A0 with AUX terminals                            |
| • 4-wire connection                                             | BU type A0 + Potential isolation module                  |
| <b>Digital inputs</b>                                           |                                                          |
| Number of digital inputs                                        | 8                                                        |
| Digital inputs, parameterizable                                 | Yes                                                      |
| Source/sink input                                               | P-reading                                                |
| Input characteristic curve in accordance with IEC 61131, type 2 | Yes                                                      |
| <b>Input voltage</b>                                            |                                                          |
| • Type of input voltage                                         | DC                                                       |
| • Rated value (DC)                                              | 24 V                                                     |
| • for signal "0"                                                | -30 to +5V                                               |

|                                                                 |                                                                                                                         |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| • for signal "1"                                                | +11 to +30V                                                                                                             |
| Input current                                                   |                                                                                                                         |
| • for signal "1", typ.                                          | 6.8 mA                                                                                                                  |
| Input delay (for rated value of input voltage)                  |                                                                                                                         |
| for standard inputs                                             |                                                                                                                         |
| — parameterizable                                               | Yes; 0.05 / 0.1 / 0.4 / 0.8 / 1.6 / 3.2 / 12.8 / 20 ms (in each case + delay of 30 to 500 µs, depending on line length) |
| — at "0" to "1", min.                                           | 0.05 ms                                                                                                                 |
| — at "0" to "1", max.                                           | 20 ms                                                                                                                   |
| — at "1" to "0", min.                                           | 0.05 ms                                                                                                                 |
| — at "1" to "0", max.                                           | 20 ms                                                                                                                   |
| Cable length                                                    |                                                                                                                         |
| • shielded, max.                                                | 1 000 m                                                                                                                 |
| • unshielded, max.                                              | 600 m                                                                                                                   |
| Encoder                                                         |                                                                                                                         |
| Connectable encoders                                            |                                                                                                                         |
| • 2-wire sensor                                                 | Yes                                                                                                                     |
| — permissible quiescent current (2-wire sensor), max.           | 2 mA                                                                                                                    |
| Isochronous mode                                                |                                                                                                                         |
| Isochronous operation (application synchronized up to terminal) | No                                                                                                                      |
| Interrupts/diagnostics/status information                       |                                                                                                                         |
| Diagnostics function                                            | Yes                                                                                                                     |
| Alarms                                                          |                                                                                                                         |
| • Diagnostic alarm                                              | Yes                                                                                                                     |
| Diagnostic messages                                             |                                                                                                                         |
| • Diagnostic information readable                               | Yes                                                                                                                     |
| • Monitoring the supply voltage                                 | Yes                                                                                                                     |
| — parameterizable                                               | Yes                                                                                                                     |
| • Monitoring of encoder power supply                            | No                                                                                                                      |
| • Wire-break                                                    | No                                                                                                                      |
| • Short-circuit                                                 | No                                                                                                                      |
| Diagnostics indication LED                                      |                                                                                                                         |
| • Monitoring of the supply voltage (PWR-LED)                    | Yes; green PWR LED                                                                                                      |
| • Channel status display                                        | Yes; Green LED                                                                                                          |
| • for channel diagnostics                                       | No                                                                                                                      |
| • for module diagnostics                                        | Yes; green/red DIAG LED                                                                                                 |
| Potential separation                                            |                                                                                                                         |
| Potential separation channels                                   |                                                                                                                         |
| • between the channels                                          | No                                                                                                                      |

- between the channels and backplane bus
- between the channels and the power supply of the electronics

Yes

No

## Isolation

Isolation tested with

707 V DC (type test)

## Ambient conditions

Ambient temperature during operation

- horizontal installation, min. 0 °C
- horizontal installation, max. 60 °C
- vertical installation, min. 0 °C
- vertical installation, max. 50 °C

Altitude during operation relating to sea level

- Ambient air temperature-barometric pressure-altitude

On request: Ambient temperatures lower than 0 °C (without condensation) and/or installation altitudes greater than 2 000 m

## Dimensions

|        |       |
|--------|-------|
| Width  | 15 mm |
| Height | 73 mm |
| Depth  | 58 mm |

## Weights

|                 |      |
|-----------------|------|
| Weight, approx. | 28 g |
|-----------------|------|

**last modified:** 08/28/2018