



SIMATIC ET 200BL, digital input module, DI 16x24 V DC, input type 1 (IEC 61131) sink input, (PNP, sinking input), packing unit: 1 unit, color code CC00, input delay 0.05..20 ms

| General information                                      |                                                                                      |
|----------------------------------------------------------|--------------------------------------------------------------------------------------|
| Product type designation                                 | DI 16x24VDC                                                                          |
| HW functional status                                     | from FS01                                                                            |
| Firmware version                                         |                                                                                      |
| • FW update possible                                     | No                                                                                   |
| Color code for module-specific color-coded label         | CC00                                                                                 |
| Product function                                         |                                                                                      |
| • I&M data                                               | Yes; I&M0 to I&M3                                                                    |
| • Isochronous mode                                       | No                                                                                   |
| Engineering with                                         |                                                                                      |
| • STEP 7 TIA Portal configurable/integrated from version | STEP 7 V18 or higher; MicroWin V3.0 or higher; Configuration in ES via GSDML;        |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.45                                                                          |
| Operating mode                                           |                                                                                      |
| • DI                                                     | Yes                                                                                  |
| • Counter                                                | No                                                                                   |
| • Oversampling                                           | No                                                                                   |
| • MSI                                                    | No                                                                                   |
| Redundancy                                               |                                                                                      |
| • Redundancy capability                                  | No                                                                                   |
| Supply voltage                                           |                                                                                      |
| Rated value (DC)                                         | 24 V                                                                                 |
| permissible range, lower limit (DC)                      | 20.4 V                                                                               |
| permissible range, upper limit (DC)                      | 28.8 V                                                                               |
| external protection for power supply lines               | Yes; 24 V DC/10 A miniature circuit breaker with type B or C tripping characteristic |
| Input current                                            |                                                                                      |
| Current consumption (rated value)                        | 54 mA                                                                                |
| Current carrying capacity                                |                                                                                      |
| For P1 and P2 bus, max.                                  | 10 A                                                                                 |
| Power loss                                               |                                                                                      |
| Power loss, typ.                                         | 1.3 W; 24 V, 25 °C, 16 inputs supplied via L+                                        |
| Address area                                             |                                                                                      |
| Address space per module                                 |                                                                                      |
| • Address space per module, max.                         | 2 byte                                                                               |
| • Inputs                                                 | 2 byte                                                                               |
| Hardware configuration                                   |                                                                                      |
| Automatic encoding                                       | No                                                                                   |
| • Mechanical coding element                              | No                                                                                   |

|                                                                 |                                                                                                                         |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Formation of potential groups                                   |                                                                                                                         |
| • support of potential groups                                   | Yes                                                                                                                     |
| <b>Digital inputs</b>                                           |                                                                                                                         |
| Number of digital inputs                                        | 16                                                                                                                      |
| Digital inputs, parameterizable                                 | Yes                                                                                                                     |
| Sourcing/sinking input                                          | Yes; P-reading                                                                                                          |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes; Type 1                                                                                                             |
| Input voltage                                                   |                                                                                                                         |
| • Rated value (DC)                                              | 24 V                                                                                                                    |
| • for signal "0"                                                | -30 V DC to +5 V DC                                                                                                     |
| • for signal "1"                                                | 15 V DC to 30 V DC                                                                                                      |
| Input current                                                   |                                                                                                                         |
| • for signal "1", typ.                                          | 3.2 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                                                                                                                   |
| <b>Interrupts/diagnostics/status information</b>                |                                                                                                                         |
| Diagnostics function                                            | Yes                                                                                                                     |
| Alarms                                                          |                                                                                                                         |
| • Diagnostic alarm                                              | Yes                                                                                                                     |
| Diagnoses                                                       |                                                                                                                         |
| • Diagnostic information readable                               | Yes                                                                                                                     |
| • Monitoring the supply voltage                                 | No                                                                                                                      |
| • Wire break                                                    | No                                                                                                                      |
| • Short-circuit                                                 | No                                                                                                                      |
| • Group error                                                   | No                                                                                                                      |
| Diagnostics indication LED                                      |                                                                                                                         |
| • Monitoring of the supply voltage (PWR-LED)                    | No                                                                                                                      |
| • Channel status display                                        | Yes; green LED                                                                                                          |
| • for channel diagnostics                                       | No                                                                                                                      |
| • for module diagnostics                                        | Yes; green/red DIAG LED                                                                                                 |
| <b>Potential separation</b>                                     |                                                                                                                         |
| between backplane bus and supply voltage                        | Yes                                                                                                                     |
| Potential separation digital inputs                             |                                                                                                                         |
| • between the channels                                          | No                                                                                                                      |
| • between the channels and backplane bus                        | Yes                                                                                                                     |
| • between the channels and the power supply of the electronics  | No                                                                                                                      |
| <b>Isolation</b>                                                |                                                                                                                         |
| Isolation tested with                                           | 500 V AC/707 V DC, type test                                                                                            |
| <b>Standards, approvals, certificates</b>                       |                                                                                                                         |
| Suitable for safety functions                                   | No                                                                                                                      |
| Ecological footprint                                            |                                                                                                                         |
| • environmental product declaration                             | Yes                                                                                                                     |
| Global warming potential                                        |                                                                                                                         |
| — global warming potential, (total) [CO2 eq]                    | 5.07 kg                                                                                                                 |
| — global warming potential, (during production) [CO2 eq]        | 5.07 kg                                                                                                                 |
| — global warming potential, (during operation) [CO2 eq]         | 1.06 kg                                                                                                                 |
| — global warming potential, (after end of life cycle) [CO2 eq]  | -1.09 kg                                                                                                                |

|                                                        |                                                                                        |         |                |
|--------------------------------------------------------|----------------------------------------------------------------------------------------|---------|----------------|
| Use in hazardous areas                                 |                                                                                        |         |                |
| • EAC Ex                                               | No                                                                                     |         |                |
| Ambient conditions                                     |                                                                                        |         |                |
| Ambient temperature during operation                   |                                                                                        |         |                |
| • horizontal installation, min.                        | -30 °C                                                                                 |         |                |
| • horizontal installation, max.                        | 60 °C                                                                                  |         |                |
| • vertical installation, min.                          | -30 °C                                                                                 |         |                |
| • vertical installation, max.                          | 50 °C                                                                                  |         |                |
| Altitude during operation relating to sea level        |                                                                                        |         |                |
| • Installation altitude above sea level, max.          | 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200BL system manual |         |                |
| Connection method                                      |                                                                                        |         |                |
| Terminals                                              |                                                                                        |         |                |
| • Conductor cross-section, min.                        | 0.14 mm²; follow detailed information in System manual of ET 200BL                     |         |                |
| • Conductor cross-section, max.                        | 2.5 mm²; follow detailed information in System manual of ET 200BL                      |         |                |
| • Number of process terminals to I/O module            | 16                                                                                     |         |                |
| • Number of terminals with connection to P1 and P2 bus | 2                                                                                      |         |                |
| Dimensions                                             |                                                                                        |         |                |
| Width                                                  | 15 mm                                                                                  |         |                |
| Height                                                 | 117 mm                                                                                 |         |                |
| Depth                                                  | 74 mm                                                                                  |         |                |
| Weights                                                |                                                                                        |         |                |
| Weight, approx.                                        | 81 g                                                                                   |         |                |
| Classifications                                        |                                                                                        |         |                |
|                                                        |                                                                                        | Version | Classification |
|                                                        | eClass                                                                                 | 14      | 27-24-26-04    |
|                                                        | eClass                                                                                 | 12      | 27-24-26-04    |
|                                                        | eClass                                                                                 | 9.1     | 27-24-26-04    |
|                                                        | eClass                                                                                 | 9       | 27-24-26-04    |
|                                                        | eClass                                                                                 | 8       | 27-24-26-04    |
|                                                        | eClass                                                                                 | 7.1     | 27-24-26-04    |
|                                                        | eClass                                                                                 | 6       | 27-24-26-04    |
|                                                        | ETIM                                                                                   | 10      | EC001599       |
|                                                        | ETIM                                                                                   | 9       | EC001599       |
|                                                        | ETIM                                                                                   | 8       | EC001599       |
|                                                        | ETIM                                                                                   | 7       | EC001599       |

Approvals / Certificates

General Product Approval



last modified:

11/17/2025