

Siemens  
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Figure similar

SIMATIC ET 200SP, digital input module, DI 8x 24VDC High Feature, input type 3 (IEC 61131), Sink input (PNP, active high), packaging unit: 10 pieces, suitable for BU type, A0, color code CC01, input delay: 0,05..20ms; channel diagnosis for: short circuit of sensor supply, wire break, power supply, channel failure LED

| General information                                      |                                                |
|----------------------------------------------------------|------------------------------------------------|
| Product type designation                                 | DI 8x24 V DC HF                                |
| HW functional status                                     | From FS07                                      |
| Firmware version                                         |                                                |
| • FW update possible                                     | Yes                                            |
| usable BaseUnits                                         | BU type A0                                     |
| Color code for module-specific color-coded label         | CC01                                           |
| Product function                                         |                                                |
| • I&M data                                               | Yes; I&M0 to I&M3                              |
| • Isochronous mode                                       | Yes                                            |
| Engineering with                                         |                                                |
| • STEP 7 TIA Portal configurable/integrated from version | V13 SP1 / -                                    |
| • STEP 7 configurable/integrated from version            | V5.5 / -                                       |
| • PCS 7 configurable/integrated from version             | V8.1 SP1                                       |
| • PCS neo can be configured/integrated from version      | from V1.0.0                                    |
| • PROFIBUS from GSD version/GSD revision                 | One GSD file each, Revision 3 and 5 and higher |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.3                                     |
| Operating mode                                           |                                                |
| • DI                                                     | Yes                                            |
| • Counter                                                | No                                             |
| • Oversampling                                           | No                                             |
| • MSI                                                    | Yes                                            |
| Supply voltage                                           |                                                |
| 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                                            |
| Input current                                            |                                                |
| Current consumption (rated value)                        | 20 mA                                          |
| Current consumption, max.                                | 39 mA                                          |
| Encoder supply                                           |                                                |
| Number of outputs                                        | 8                                              |
| Output voltage, min.                                     | 19.2 V                                         |
| Short-circuit protection                                 | Yes                                            |
| 24 V encoder supply                                      |                                                |

|                                                                                                                                                                                                 |                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• 24 V</li> <li>• Short-circuit protection</li> <li>• Output current per channel, max.</li> <li>• Output current per module, max.</li> </ul>             | Yes<br>Yes; per channel, electronic<br>700 mA<br>700 mA                                                                                                         |
| <b>Power loss</b>                                                                                                                                                                               |                                                                                                                                                                 |
| Power loss, typ.                                                                                                                                                                                | 1.5 W; 24 V, 8 inputs supplied via encoder supply                                                                                                               |
| <b>Address area</b>                                                                                                                                                                             |                                                                                                                                                                 |
| Address space per module                                                                                                                                                                        |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Inputs</li> </ul>                                                                                                                                      | 1 byte; + 1 byte for QI information                                                                                                                             |
| <b>Hardware configuration</b>                                                                                                                                                                   |                                                                                                                                                                 |
| Automatic encoding                                                                                                                                                                              | Yes                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Mechanical coding element</li> <li>• Type of mechanical coding element</li> </ul>                                                                      | Yes<br>Type A                                                                                                                                                   |
| Submodules                                                                                                                                                                                      |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Number of configurable submodules, max.</li> </ul>                                                                                                     | 4                                                                                                                                                               |
| Selection of BaseUnit for connection variants                                                                                                                                                   |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• 1-wire connection</li> <li>• 2-wire connection</li> <li>• 3-wire connection</li> <li>• 4-wire connection</li> </ul>                                    | BU type A0<br>BU type A0<br>BU type A0 with AUX terminals or potential distributor module<br>BU type A0 + Potential distributor module                          |
| <b>Digital inputs</b>                                                                                                                                                                           |                                                                                                                                                                 |
| Number of digital inputs                                                                                                                                                                        | 8                                                                                                                                                               |
| Digital inputs, parameterizable                                                                                                                                                                 | Yes                                                                                                                                                             |
| Sourcing/sinking input                                                                                                                                                                          | P-reading                                                                                                                                                       |
| Input characteristic curve in accordance with IEC 61131, type 3                                                                                                                                 | Yes                                                                                                                                                             |
| Pulse extension                                                                                                                                                                                 | Yes; Pulse duration from 4 µs                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• Length</li> </ul>                                                                                                                                      | 2 s; 50 ms, 100 ms, 200 ms, 500 ms, 1 s, 2 s                                                                                                                    |
| Edge evaluation                                                                                                                                                                                 | Yes; rising edge, falling edge, edge change                                                                                                                     |
| Input voltage                                                                                                                                                                                   |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Rated value (DC)</li> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>                                                                        | 24 V<br>-30 to +5 V<br>+11 to +30V                                                                                                                              |
| Input current                                                                                                                                                                                   |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>                                                                                                                        | 2.5 mA                                                                                                                                                          |
| Input delay (for rated value of input voltage)                                                                                                                                                  |                                                                                                                                                                 |
| for standard inputs                                                                                                                                                                             |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>— parameterizable</li> <li>— at "0" to "1", min.</li> <li>— at "0" to "1", max.</li> <li>— at "1" to "0", min.</li> <li>— at "1" to "0", max.</li> </ul> | 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)<br>0.05 ms<br>20 ms<br>0.05 ms<br>20 ms |
| Cable length                                                                                                                                                                                    |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>                                                                                                  | 1 000 m<br>600 m                                                                                                                                                |
| <b>Encoder</b>                                                                                                                                                                                  |                                                                                                                                                                 |
| Connectable encoders                                                                                                                                                                            |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• 2-wire sensor</li> <li>— permissible quiescent current (2-wire sensor), max.</li> </ul>                                                                | Yes<br>1.5 mA                                                                                                                                                   |
| <b>Isochronous mode</b>                                                                                                                                                                         |                                                                                                                                                                 |
| Filtering and processing time (TCI), min.                                                                                                                                                       | 420 µs                                                                                                                                                          |
| Bus cycle time (TDP), min.                                                                                                                                                                      | 500 µs                                                                                                                                                          |
| Jitter, max.                                                                                                                                                                                    | 8 µs                                                                                                                                                            |
| <b>Interrupts/diagnostics/status information</b>                                                                                                                                                |                                                                                                                                                                 |
| Diagnostics function                                                                                                                                                                            | Yes                                                                                                                                                             |
| Alarms                                                                                                                                                                                          |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Diagnostic alarm</li> <li>• Hardware interrupt</li> </ul>                                                                                              | Yes; channel by channel<br>Yes; Parameterizable, channels 0 to 7                                                                                                |
| Diagnoses                                                                                                                                                                                       |                                                                                                                                                                 |

|                                                                                                                                                                                                                                                              |                                                                                                                                                       |         |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|
| <ul style="list-style-type: none"><li>• Diagnostic information readable</li><li>• Monitoring the supply voltage<ul style="list-style-type: none"><li>— parameterizable</li></ul></li><li>• Monitoring of encoder power supply</li><li>• Wire break</li></ul> | Yes                                                                                                                                                   |         |                |
|                                                                                                                                                                                                                                                              | Yes                                                                                                                                                   |         |                |
|                                                                                                                                                                                                                                                              | Yes                                                                                                                                                   |         |                |
|                                                                                                                                                                                                                                                              | Yes; channel by channel                                                                                                                               |         |                |
| <ul style="list-style-type: none"><li>• Short-circuit</li></ul>                                                                                                                                                                                              | Yes; Channel by channel, optional protective circuit for preventing wire-break diagnostics in the case of simple encoder contacts: 25 kOhm to 45 kOhm |         |                |
|                                                                                                                                                                                                                                                              | Yes; channel by channel                                                                                                                               |         |                |
| Diagnostics indication LED                                                                                                                                                                                                                                   |                                                                                                                                                       |         |                |
| <ul style="list-style-type: none"><li>• Monitoring of the supply voltage (PWR-LED)</li><li>• Channel status display</li><li>• for channel diagnostics</li><li>• for module diagnostics</li></ul>                                                             | Yes; green PWR LED                                                                                                                                    |         |                |
|                                                                                                                                                                                                                                                              | Yes; green LED                                                                                                                                        |         |                |
|                                                                                                                                                                                                                                                              | Yes; red LED                                                                                                                                          |         |                |
|                                                                                                                                                                                                                                                              | Yes; green/red DIAG LED                                                                                                                               |         |                |
| Potential separation                                                                                                                                                                                                                                         |                                                                                                                                                       |         |                |
| Potential separation channels                                                                                                                                                                                                                                |                                                                                                                                                       |         |                |
| <ul style="list-style-type: none"><li>• between the channels</li></ul>                                                                                                                                                                                       | No                                                                                                                                                    |         |                |
| <ul style="list-style-type: none"><li>• between the channels and backplane bus</li></ul>                                                                                                                                                                     | Yes                                                                                                                                                   |         |                |
| <ul style="list-style-type: none"><li>• between the channels and the power supply of the electronics</li></ul>                                                                                                                                               | No                                                                                                                                                    |         |                |
| Isolation                                                                                                                                                                                                                                                    |                                                                                                                                                       |         |                |
| Isolation tested with                                                                                                                                                                                                                                        | 707 V DC (type test)                                                                                                                                  |         |                |
| Standards, approvals, certificates                                                                                                                                                                                                                           |                                                                                                                                                       |         |                |
| Suitable for safety functions                                                                                                                                                                                                                                | No                                                                                                                                                    |         |                |
| Ecological footprint                                                                                                                                                                                                                                         |                                                                                                                                                       |         |                |
| <ul style="list-style-type: none"><li>• environmental product declaration</li></ul>                                                                                                                                                                          | Yes                                                                                                                                                   |         |                |
| Global warming potential                                                                                                                                                                                                                                     |                                                                                                                                                       |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (total) [CO2 eq]</li></ul>                                                                                                                                                                 | 15.9 kg                                                                                                                                               |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during production) [CO2 eq]</li></ul>                                                                                                                                                     | 3.69 kg                                                                                                                                               |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during operation) [CO2 eq]</li></ul>                                                                                                                                                      | 12.7 kg                                                                                                                                               |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (after end of life cycle) [CO2 eq]</li></ul>                                                                                                                                               | -0.495 kg                                                                                                                                             |         |                |
| Ambient conditions                                                                                                                                                                                                                                           |                                                                                                                                                       |         |                |
| Ambient temperature during operation                                                                                                                                                                                                                         |                                                                                                                                                       |         |                |
| <ul style="list-style-type: none"><li>• horizontal installation, min.</li></ul>                                                                                                                                                                              | -30 °C; < 0 °C as of FS07                                                                                                                             |         |                |
| <ul style="list-style-type: none"><li>• horizontal installation, max.</li></ul>                                                                                                                                                                              | 60 °C                                                                                                                                                 |         |                |
| <ul style="list-style-type: none"><li>• vertical installation, min.</li></ul>                                                                                                                                                                                | -30 °C; < 0 °C as of FS07                                                                                                                             |         |                |
| <ul style="list-style-type: none"><li>• vertical installation, max.</li></ul>                                                                                                                                                                                | 50 °C                                                                                                                                                 |         |                |
| Altitude during operation relating to sea level                                                                                                                                                                                                              |                                                                                                                                                       |         |                |
| <ul style="list-style-type: none"><li>• Installation altitude above sea level, max.</li></ul>                                                                                                                                                                | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual                                                                                |         |                |
| Dimensions                                                                                                                                                                                                                                                   |                                                                                                                                                       |         |                |
| Width                                                                                                                                                                                                                                                        | 15 mm                                                                                                                                                 |         |                |
| Height                                                                                                                                                                                                                                                       | 73 mm                                                                                                                                                 |         |                |
| Depth                                                                                                                                                                                                                                                        | 58 mm                                                                                                                                                 |         |                |
| Weights                                                                                                                                                                                                                                                      |                                                                                                                                                       |         |                |
| Weight, approx.                                                                                                                                                                                                                                              | 28 g                                                                                                                                                  |         |                |
| Classifications                                                                                                                                                                                                                                              |                                                                                                                                                       |         |                |
|                                                                                                                                                                                                                                                              |                                                                                                                                                       | Version | Classification |
|                                                                                                                                                                                                                                                              | eClass                                                                                                                                                | 16      | 27-24-26-04    |
|                                                                                                                                                                                                                                                              | 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    |
| IDEA   | 4  | 3566        |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

|                          |     |                   |       |
|--------------------------|-----|-------------------|-------|
| General Product Approval | EMV | Test Certificates | other |
|--------------------------|-----|-------------------|-------|



[Type Test Certificates/Test Report](#)

[Confirmation](#)

|       |             |
|-------|-------------|
| other | Environment |
|-------|-------------|

[Confirmation](#)



[Environmental Confirmations](#)



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