

Siemens  
EcoTech



SIMATIC S7-1500, digital input module DI 16x 24...125 V UC HF, 16 channels in groups of 1; input delay 0.05..20 ms; Input type 3 (IEC 61131); Diagnostics, hardware interrupts: Front connector (screw terminals or push-in) to be ordered separately



| General information                                                                                                              |                                        |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Product type designation                                                                                                         | DI 16x24 ... 125 V UC HF               |
| HW functional status                                                                                                             | from FS01                              |
| Firmware version                                                                                                                 | from V1.0.0                            |
| <ul style="list-style-type: none"> <li>FW update possible</li> </ul>                                                             | Yes                                    |
| Product function                                                                                                                 |                                        |
| <ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>                                                                   | Yes; I&M0 to I&M3                      |
| <ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>                                                               | No                                     |
| <ul style="list-style-type: none"> <li>Prioritized startup</li> </ul>                                                            | Yes                                    |
| Engineering with                                                                                                                 |                                        |
| <ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>                         | V14 / -                                |
| <ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>                                    | V5.5 SP3 / -                           |
| <ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>                                         | V1.0 / V5.1                            |
| <ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>                                         | V2.3 / -                               |
| Operating mode                                                                                                                   |                                        |
| <ul style="list-style-type: none"> <li>DI</li> </ul>                                                                             | Yes                                    |
| <ul style="list-style-type: none"> <li>Counter</li> </ul>                                                                        | Yes; from V1.1.0; only in DC operation |
| <ul style="list-style-type: none"> <li>Oversampling</li> </ul>                                                                   | No                                     |
| <ul style="list-style-type: none"> <li>MSI</li> </ul>                                                                            | Yes                                    |
| Power                                                                                                                            |                                        |
| Power consumption from the backplane bus                                                                                         | 1.2 W                                  |
| Power loss                                                                                                                       |                                        |
| Power loss, typ.                                                                                                                 | 2.2 W; At 24 V DC; 6.0 W at 125 V AC   |
| Digital inputs                                                                                                                   |                                        |
| Number of digital inputs                                                                                                         | 16                                     |
| Digital inputs, parameterizable                                                                                                  | Yes                                    |
| Source/sink input                                                                                                                | Yes                                    |
| Input characteristic curve in accordance with IEC 61131, type 3                                                                  | Yes; At 24 V DC                        |
| Digital input functions, parameterizable                                                                                         |                                        |
| <ul style="list-style-type: none"> <li>Counter</li> </ul>                                                                        | Yes; from FS04                         |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Number, max.</li> </ul> </li> </ul>               | 2; Channel 0 and 1                     |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Counting frequency, max.</li> </ul> </li> </ul>   | 6 kHz                                  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Counting width</li> </ul> </li> </ul>             | 32 bit                                 |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Counting direction up/down</li> </ul> </li> </ul> | Yes; Up                                |
| Input voltage                                                                                                                    |                                        |
| <ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>                                                               | 24 V; 48 V, 125 V                      |

|                                                                                                                                                                                                                                               |                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Rated value (AC)</li> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>                                                                                                                      | 24 V; 48 V, 125 V (50 - 60 Hz)<br>-5 ... +5 V<br>+11 ... +146 V                               |
| Input current                                                                                                                                                                                                                                 |                                                                                               |
| <ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>                                                                                                                                                                      | 3 mA; At 24 V DC                                                                              |
| Input delay (for rated value of input voltage)                                                                                                                                                                                                |                                                                                               |
| for standard inputs                                                                                                                                                                                                                           |                                                                                               |
| — parameterizable                                                                                                                                                                                                                             | Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms parameterizable with DC, 20 ms fixed with AC |
| — 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                                                                                         |
| for interrupt inputs                                                                                                                                                                                                                          |                                                                                               |
| — parameterizable                                                                                                                                                                                                                             | Yes                                                                                           |
| for technological functions                                                                                                                                                                                                                   |                                                                                               |
| — parameterizable                                                                                                                                                                                                                             | No                                                                                            |
| Cable length                                                                                                                                                                                                                                  |                                                                                               |
| <ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>                                                                                                                                                | 1 000 m<br>600 m                                                                              |
| Encoder                                                                                                                                                                                                                                       |                                                                                               |
| 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                                                                                 |
| Interrupts/diagnostics/status information                                                                                                                                                                                                     |                                                                                               |
| Diagnostics function                                                                                                                                                                                                                          | Yes                                                                                           |
| Alarms                                                                                                                                                                                                                                        |                                                                                               |
| <ul style="list-style-type: none"> <li>• Diagnostic alarm</li> <li>• Hardware interrupt</li> </ul>                                                                                                                                            | Yes<br>Yes                                                                                    |
| Diagnoses                                                                                                                                                                                                                                     |                                                                                               |
| <ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> <li>• Wire-break</li> <li>• Short-circuit</li> </ul>                                                                                                              | No<br>Yes; To I < 550 µA<br>No                                                                |
| Diagnostics indication LED                                                                                                                                                                                                                    |                                                                                               |
| <ul style="list-style-type: none"> <li>• RUN LED</li> <li>• ERROR LED</li> <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 LED<br>Yes; red LED<br>No<br>Yes; green LED<br>Yes; red LED<br>Yes; red LED        |
| Potential separation                                                                                                                                                                                                                          |                                                                                               |
| Potential separation channels                                                                                                                                                                                                                 |                                                                                               |
| <ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels, in groups of</li> <li>• between the channels and backplane bus</li> </ul>                                                                      | Yes<br>1<br>Yes                                                                               |
| Permissible potential difference                                                                                                                                                                                                              |                                                                                               |
| between different circuits                                                                                                                                                                                                                    | 146 V DC/132 V AC                                                                             |
| Isolation                                                                                                                                                                                                                                     |                                                                                               |
| Isolation tested with                                                                                                                                                                                                                         | 2 000 V DC                                                                                    |
| Standards, approvals, certificates                                                                                                                                                                                                            |                                                                                               |
| Siemens Eco Profile (SEP)                                                                                                                                                                                                                     | Siemens EcoTech                                                                               |
| Suitable for safety functions                                                                                                                                                                                                                 | No                                                                                            |
| Ecological footprint                                                                                                                                                                                                                          |                                                                                               |
| <ul style="list-style-type: none"> <li>• environmental product declaration</li> </ul>                                                                                                                                                         | Yes                                                                                           |
| Global warming potential                                                                                                                                                                                                                      |                                                                                               |
| — global warming potential, (total) [CO2 eq]                                                                                                                                                                                                  | 18.9 kg                                                                                       |
| — global warming potential, (during production) [CO2 eq]                                                                                                                                                                                      | 12.1 kg                                                                                       |
| — global warming potential, (during operation) [CO2 eq]                                                                                                                                                                                       | 7.66 kg                                                                                       |

|                                                                   |                   |
|-------------------------------------------------------------------|-------------------|
| eq]                                                               |                   |
| — global warming potential, (after end of life cycle)<br>[CO2 eq] | -1.02 kg          |
| Security                                                          |                   |
| signed firmware update                                            | Yes               |
| data integrity                                                    | No                |
| Ambient conditions                                                |                   |
| Ambient temperature during operation                              |                   |
| • horizontal installation, min.                                   | -30 °C; from FS04 |
| • horizontal installation, max.                                   | 60 °C             |
| • vertical installation, min.                                     | -30 °C; from FS04 |
| • vertical installation, max.                                     | 40 °C             |
| Dimensions                                                        |                   |
| Width                                                             | 35 mm             |
| Height                                                            | 147 mm            |
| Depth                                                             | 129 mm            |
| Weights                                                           |                   |
| Weight, approx.                                                   | 240 g             |
| Classifications                                                   |                   |

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 14      | 27-24-22-04    |
| eClass | 12      | 27-24-22-04    |
| eClass | 9.1     | 27-24-22-04    |
| eClass | 9       | 27-24-22-04    |
| eClass | 8       | 27-24-22-04    |
| eClass | 7.1     | 27-24-22-04    |
| eClass | 6       | 27-24-22-04    |
| ETIM   | 10      | EC001419       |
| ETIM   | 9       | EC001419       |
| ETIM   | 8       | EC001419       |
| ETIM   | 7       | EC001419       |
| IDEA   | 4       | 3566           |
| UNSPSC | 15      | 32-15-17-05    |

|                          |       |
|--------------------------|-------|
| Approvals / Certificates |       |
| General Product Approval | other |



[Confirmation](#)



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