

SIMATIC S7-1500 Digital input module, DI 16x24 V DC BA, 16 channels in groups of 16, input delay typ. 3.2 ms, input type 3 (IEC 61131); Delivery incl. front connector Push-in



| General information   |                    |
|---|--------------------|
| Product type designation  | DI 16 x 24 V DC BA |
| HW functional status  | FS01               |
| Firmware version  | 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 as of version</li> </ul> | V13 / V13          |
| <ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>            | V5.5 SP3 / -       |
| <ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>                 | V1.0 / V5.1        |
| <ul style="list-style-type: none"> <li>PROFINET as of 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>   | No                 |
| <ul style="list-style-type: none"> <li>MSI</li> </ul>   | Yes                |

| Supply voltage   |                                    |
|--|------------------------------------|
| Rated value (DC)   | 24 V                               |
| permissible range, lower limit (DC)  | 20.4 V                             |
| permissible range, upper limit (DC)  | 28.8 V                             |
| Power  |                                    |
| Power available from the backplane bus   | 1.05 W                             |
| Power loss   |                                    |
| Power loss, typ.   | 1.8 W                              |
| Digital inputs   |                                    |
| Number of digital inputs   | 16                                 |
| Digital inputs, parameterizable  | No                                 |
| Source/sink input  | P-reading                          |
| Input characteristic curve in accordance with IEC 61131, type 3  | Yes                                |
| 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>   | 2.7 mA                             |
| Input delay (for rated value of input voltage)   |                                    |
| for standard inputs  |                                    |
| — parameterizable  | No                                 |
| — at "0" to "1", min.  | 3 ms                               |
| — at "0" to "1", max.  | 4 ms                               |
| — at "1" to "0", min.  | 3 ms                               |
| — at "1" to "0", max.  | 4 ms                               |
| for interrupt inputs   |                                    |
| — parameterizable  | No                                 |
| 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                                   | No   |
| <b>Alarms</b>  |  |
| • Diagnostic alarm                                     | No   |
| • Hardware interrupt                                   | No   |
| <b>Diagnostic messages</b>                             |  |
| • Monitoring the supply voltage                        | No   |
| • Wire-break   | No   |
| • Short-circuit  | No   |
| <b>Diagnostics indication LED</b>                      |  |
| • RUN LED  | Yes; green LED   |
| • ERROR LED  | Yes; red LED   |
| • Monitoring of the supply voltage (PWR-LED)           | No   |
| • Channel status display                               | Yes; green LED   |
| • for channel diagnostics                              | No   |
| • for module diagnostics                               | No   |
| <b>Potential separation</b>                            |  |
| <b>Potential separation channels</b>                   |  |
| • between the channels                                 | No   |
| • between the channels, in groups of                   | 16   |
| • between the channels and backplane bus               | Yes  |
| <b>Isolation</b>                                       |  |
| Isolation tested with                                  | 707 V DC (type test)   |
| <b>Standards, approvals, certificates</b>              |  |
| Suitable for safety functions                          | No   |
| <b>Ambient conditions</b>                              |  |
| <b>Ambient temperature during operation</b>            |  |
| • horizontal installation, min.                        | 0 °C   |
| • horizontal installation, max.                        | 60 °C  |
| • vertical installation, min.                          | 0 °C   |
| • vertical installation, max.                          | 40 °C  |
| <b>Altitude during operation relating to sea level</b> |  |
| • Installation altitude above sea level, max.          | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
| <b>Dimensions</b>                                      |  |
| Width  | 25 mm  |
| Height   | 147 mm   |
| Depth  | 129 mm   |
| <b>Weights</b>   |  |
| Weight, approx.  | 230 g  |

Other

Note:

Supplied incl. 40-pole push-in front connectors

**last modified:**

04/10/2020