

Siemens  
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Figure similar

SIMATIC S7-1500, digital input module DI 16x230 V AC BA, 16 channels in groups of 4; Input delay 20 ms; Input type 1 (IEC 61131): Front connector (screw terminals or push-in) to be ordered separately

| General information                                             |                                                           |
|-----------------------------------------------------------------|-----------------------------------------------------------|
| Product type designation                                        | DI 16x230VAC BA                                           |
| HW functional status                                            | FS01                                                      |
| Firmware version                                                | V2.0.0                                                    |
| • FW update possible                                            | Yes                                                       |
| Product function                                                |                                                           |
| • I&M data                                                      | Yes; I&M0 to I&M3                                         |
| • Isochronous mode                                              | No                                                        |
| • Prioritized startup                                           | Yes                                                       |
| Engineering with                                                |                                                           |
| • STEP 7 TIA Portal configurable/integrated from version        | V12 / V12                                                 |
| • STEP 7 configurable/integrated from version                   | V5.5 SP3 / -                                              |
| • PROFIBUS from GSD version/GSD revision                        | V1.0 / V5.1                                               |
| • PROFINET from GSD version/GSD revision                        | V2.3 / -                                                  |
| Operating mode                                                  |                                                           |
| • DI                                                            | Yes                                                       |
| • Counter                                                       | No                                                        |
| • MSI                                                           | Yes                                                       |
| Supply voltage                                                  |                                                           |
| Reverse polarity protection                                     | Yes                                                       |
| Power                                                           |                                                           |
| Power consumption from the backplane bus                        | 1 W                                                       |
| Power loss                                                      |                                                           |
| Power loss, typ.                                                | 4.9 W                                                     |
| Address area                                                    |                                                           |
| Address space per module                                        |                                                           |
| • Inputs                                                        | 2 byte; typical, maximum 16 bytes, see manual for details |
| • Outputs                                                       | 0 byte                                                    |
| Digital inputs                                                  |                                                           |
| Number of digital inputs                                        | 16                                                        |
| Digital inputs, parameterizable                                 | No                                                        |
| Sourcing/sinking input                                          | P-reading                                                 |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes                                                       |
| Pulse extension                                                 | No                                                        |
| Edge evaluation                                                 | No                                                        |

|                                                       |                                                                                    |
|-------------------------------------------------------|------------------------------------------------------------------------------------|
| Signal change flutter                                 | No                                                                                 |
| Flutter observation window                            | No                                                                                 |
| Number of simultaneously controllable inputs          |                                                                                    |
| • Number of simultaneously controllable inputs        | 16                                                                                 |
| Digital input functions, parameterizable              |                                                                                    |
| • Freely usable digital input                         | Yes                                                                                |
| • Counter                                             | No                                                                                 |
| • Digital input with oversampling                     | No                                                                                 |
| Input voltage                                         |                                                                                    |
| • Rated value (AC)                                    | 230 V; 120/230 V AC, 50/60 Hz                                                      |
| • for signal "0"                                      | 0V AC to 40V AC                                                                    |
| • for signal "1"                                      | 79V AC to 264V AC                                                                  |
| Input current                                         |                                                                                    |
| • for signal "1", typ.                                | 11 mA; At 230 V AC and 5.5 mA at 120 V AC                                          |
| Input delay (for rated value of input voltage)        |                                                                                    |
| for standard inputs                                   |                                                                                    |
| — parameterizable                                     | No                                                                                 |
| — at "0" to "1", max.                                 | 25 ms                                                                              |
| — at "1" to "0", max.                                 | 25 ms                                                                              |
| for interrupt inputs                                  |                                                                                    |
| — Parameterizable                                     | No                                                                                 |
| for technological functions                           |                                                                                    |
| — Parameterizable                                     | No                                                                                 |
| Cable length                                          |                                                                                    |
| • shielded, max.                                      | 1 000 m                                                                            |
| • unshielded, max.                                    | 600 m                                                                              |
| Encoder                                               |                                                                                    |
| Connectable encoders                                  |                                                                                    |
| • 2-wire sensor                                       | Yes                                                                                |
| — permissible quiescent current (2-wire sensor), max. | 2 mA                                                                               |
| Interrupts/diagnostics/status information             |                                                                                    |
| Diagnostics function                                  | No                                                                                 |
| Alarms                                                |                                                                                    |
| • Diagnostic alarm                                    | No                                                                                 |
| • Hardware interrupt                                  | No                                                                                 |
| Diagnoses                                             |                                                                                    |
| • Monitoring the supply voltage                       | No                                                                                 |
| • Wire break                                          | No                                                                                 |
| • short-circuit                                       | No                                                                                 |
| Diagnostics indication LED                            |                                                                                    |
| • 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                              | Yes; red LED                                                                       |
| Potential separation                                  |                                                                                    |
| Potential separation channels                         |                                                                                    |
| • between the channels                                | No                                                                                 |
| • between the channels, in groups of                  | 4                                                                                  |
| • between the channels and backplane bus              | Yes                                                                                |
| Permissible potential difference                      |                                                                                    |
| between different circuits                            | 250 V AC between the channels and the backplane bus; 500 V AC between the channels |
| Isolation                                             |                                                                                    |
| Isolation tested with                                 | 3 100 V DC                                                                         |
| Standards, approvals, certificates                    |                                                                                    |
| Siemens Eco Profile (SEP)                             | Siemens EcoTech                                                                    |
| Suitable for safety functions                         | No                                                                                 |

|                                                                |                                                               |
|----------------------------------------------------------------|---------------------------------------------------------------|
| <b>Ecological footprint</b>                                    |                                                               |
| • environmental product declaration                            | Yes                                                           |
| <b>Global warming potential</b>                                |                                                               |
| — 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                                                       |
| — global warming potential, (after end of life cycle) [CO2 eq] | -1.02 kg                                                      |
| <b>Security</b>                                                |                                                               |
| signed firmware update                                         | Yes; Firmware V3.0.0 or higher                                |
| safely removing data                                           | No                                                            |
| data integrity                                                 | Yes; Firmware V3.0.0 or higher                                |
| <b>Ambient conditions</b>                                      |                                                               |
| <b>Ambient temperature during operation</b>                    |                                                               |
| • horizontal installation, min.                                | -30 °C; From FS05                                             |
| • horizontal installation, max.                                | 60 °C                                                         |
| • vertical installation, min.                                  | -30 °C; From FS05                                             |
| • vertical installation, max.                                  | 40 °C                                                         |
| <b>Altitude during operation relating to sea level</b>         |                                                               |
| • Installation altitude above sea level, max.                  | Restrictions for installation altitudes > 2 000 m, see manual |
| <b>Absolute humidity</b>                                       |                                                               |
| • dew point, min.                                              | -60 °C; suitable for dry room applications                    |
| <b>Dimensions</b>                                              |                                                               |
| Width                                                          | 35 mm                                                         |
| Height                                                         | 147 mm                                                        |
| Depth                                                          | 129 mm                                                        |
| <b>Weights</b>                                                 |                                                               |
| Weight, approx.                                                | 300 g                                                         |
| <b>Other</b>                                                   |                                                               |
| Note:                                                          | please order front connectors (screw-in/push-in) separately   |
| <b>Classifications</b>                                         |                                                               |

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 16      | 27-24-22-04    |
| 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    |

|                                 |  |
|---------------------------------|--|
| <b>Approvals / Certificates</b> |  |
| <b>General Product Approval</b> |  |

[Miscellaneous](#)



|                                 |                                       |
|---------------------------------|---------------------------------------|
| <b>General Product Approval</b> | <b>For use in hazardous locations</b> |
|---------------------------------|---------------------------------------|



[China RoHS](#)

[Manufacturer Declaration](#)

[FM](#)



[FM](#)

#### Maritime application



[NK / Nippon Kaiji Kyokai](#)



#### Maritime application

#### Environment



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



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