

Siemens  
EcoTech



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                        |
| • 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                                                                                 |
| Ecological footprint                                           |                                                                                    |
| • environmental product declaration                            | 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                                                                            |
| — global warming potential, (after end of life cycle) [CO2 eq] | -1.02 kg                                                                           |
| Security                                                       |                                                                                    |
| signed firmware update                                         | No                                                                                 |
| safely removing data                                           | No                                                                                 |

|                                                 |                                                               |
|-------------------------------------------------|---------------------------------------------------------------|
| data integrity                                  | No                                                            |
| <b>Ambient conditions</b>                       |                                                               |
| Ambient temperature during operation            |                                                               |
| • horizontal installation, min.                 | -30 °C; From FS05                                             |
| • horizontal installation, max.                 | 60 °C                                                         |
| • vertical installation, min.                   | -30 °C; From FS05                                             |
| • vertical installation, max.                   | 40 °C                                                         |
| Altitude during operation relating to sea level |                                                               |
| • Installation altitude above sea level, max.   | Restrictions for installation altitudes > 2 000 m, see manual |
| Absolute humidity                               |                                                               |
| • 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>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> |  |
| General Product Approval        |  |

[Miscellaneous](#)

[Manufacturer Declaration](#)



|                          |                                |
|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |
|--------------------------|--------------------------------|



[China RoHS](#)

[Manufacturer Declaration](#)

[FM](#)



|                                |                      |
|--------------------------------|----------------------|
| For use in hazardous locations | Maritime application |
|--------------------------------|----------------------|

[FM](#)



[NK / Nippon Kaiji Kyokai](#)

|                      |             |
|----------------------|-------------|
| Maritime application | Environment |
|----------------------|-------------|



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

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



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last modified:

5/7/2026