



SIMATIC DP, Electronics module for ET 200SP, F-DI 8x 24 V DC HF, 15 mm width, up to PL E (ISO 13849-1)/ SIL3 (IEC 61508)

| General information | |
|--|---|
| Product type designation | F-DI 8x24VDC HF |
| usable BaseUnits | BU type A0 |
| Product function | |
| <ul style="list-style-type: none"> I&M data | Yes; I&M0 to I&M3 |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version | V12 |
| <ul style="list-style-type: none"> STEP 7 configurable/integrated from version | V5.5 SP3 / - |
| <ul style="list-style-type: none"> PROFINET from GSD version/GSD revision | V2.31 |
| Supply voltage | |
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 20.4 V |
| permissible range, upper limit (DC) | 28.8 V |
| Reverse polarity protection | Yes |
| power supply according to NEC Class 2 required | No |
| Input current | |
| Current consumption (rated value) | 75 mA; without load |
| Current consumption, max. | 21 mA; From the backplane bus |
| Encoder supply | |
| Number of outputs | 8 |
| Short-circuit protection | Yes; Electronic (response threshold 0.7 A to 1.8 A) |
| Output current | |
| <ul style="list-style-type: none"> up to 60 °C, max. | 0.3 A |
| 24 V encoder supply | |
| <ul style="list-style-type: none"> 24 V | Yes; min. L+ (-1.5 V) |
| <ul style="list-style-type: none"> Short-circuit protection | Yes |
| <ul style="list-style-type: none"> Output current, max. | 800 mA; Total current of all encoders |
| Power | |
| Power available from the backplane bus | 70 mW |
| Power loss | |
| Power loss, typ. | 4 W |
| Address area | |
| Address space per module | |
| <ul style="list-style-type: none"> Inputs | 6 byte |
| <ul style="list-style-type: none"> Outputs | 4 byte |
| Hardware configuration | |
| Automatic encoding | Yes |
| <ul style="list-style-type: none"> Electronic coding element type F | Yes |
| Digital inputs | |
| Number of digital inputs | 8 |

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|---|---|
| Source/sink input | Yes; P-reading |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes |
| Input voltage | |
| <ul style="list-style-type: none"> • Rated value (DC) • for signal "0" • for signal "1" | 24 V -30 to +5 V +15 to +30 V |
| Input current | |
| <ul style="list-style-type: none"> • for signal "1", typ. | 3.7 mA |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| <ul style="list-style-type: none"> — parameterizable — at "0" to "1", min. — at "0" to "1", max. — at "1" to "0", min. — at "1" to "0", max. | Yes 0.4 ms 20 ms 0.4 ms 20 ms |
| for technological functions | |
| <ul style="list-style-type: none"> — parameterizable | No |
| Cable length | |
| <ul style="list-style-type: none"> • shielded, max. • unshielded, max. | 1 000 m 500 m |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Alarms | |
| <ul style="list-style-type: none"> • Diagnostic alarm • Hardware interrupt | Yes No |
| Diagnostics indication LED | |
| <ul style="list-style-type: none"> • RUN LED • ERROR LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics | Yes; green LED Yes; red LED 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"> • between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics | No Yes No |
| Isolation | |
| Isolation tested with | 707 V DC (type test) |
| Standards, approvals, certificates | |
| Suitable for safety functions | Yes |
| Highest safety class achievable in safety mode | |
| <ul style="list-style-type: none"> • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 | PLe SIL 3 |
| Probability of failure (for service life of 20 years and repair time of 100 hours) | |
| <ul style="list-style-type: none"> — Low demand mode: PFDavg in accordance with SIL3 — High demand/continuous mode: PFH in accordance with SIL3 | < 2.00E-05 < 1.00E-09 1/h |
| Ambient conditions | |
| Ambient temperature during operation | |
| <ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. | 0 °C 60 °C 0 °C 50 °C |
| Altitude during operation relating to sea level | |
| <ul style="list-style-type: none"> • Installation altitude above sea level, max. | 4 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
| Dimensions | |
| Width | 15 mm |
| Height | 73 mm |

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|-----------------------|---|
| Depth | 58 mm |
| Weights | |
| Weight, approx. | 49 g |
| last modified: | 3/12/2024  |