

SIMATIC CFU DIQ with aluminum enclosure, bundle consisting of: 1x SIMATIC CFU DIQ (6ES7655-5PX31-1XX0), 1x aluminum enclosure with cable glands, shield busbar, shield terminals, preassembled and checked



| General information | |
|---|--------------------------------------|
| Product type designation | DIQ with aluminum enclosure |
| Firmware version | V2.0 |
| <ul style="list-style-type: none"> FW update possible | Yes |
| Vendor identification (VendorID) | 002AH |
| Device identifier (DeviceID) | 060FH |
| Number of channels | 16 |
| Product function | |
| <ul style="list-style-type: none"> I&M data | Yes; I&M0 to I&M3 |
| <ul style="list-style-type: none"> Isochronous mode | No |
| <ul style="list-style-type: none"> The user can configure digital channels as input/output as required | Yes |
| <ul style="list-style-type: none"> Digital channels can be parameterized | Yes |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version | V19 Update 2 |
| <ul style="list-style-type: none"> STEP 7 configurable/integrated from version | STEP 7 V5.7.1.4 |
| <ul style="list-style-type: none"> PCS 7 configurable/integrated from version | V9.1 SP2 UC7 |
| <ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision | - / - |
| <ul style="list-style-type: none"> PROFINET from GSD version/GSD revision | GSDML V2.43 2024.02.08 |
| Operating mode | |
| <ul style="list-style-type: none"> Counter | Yes |
| Installation type/mounting | |
| Mounting | For horizontal and vertical mounting |
| Mounting position | Horizontal, vertical |
| Supply voltage | |
| Type of supply voltage | 24 V DC |
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 19.2 V |
| permissible range, upper limit (DC) | 28.8 V |
| Reverse polarity protection | Yes |
| Short-circuit protection | Yes |
| Redundant power supply | Yes |
| Mains buffering | |
| <ul style="list-style-type: none"> Mains/voltage failure stored energy time | 5 ms; For communication |
| Input current | |
| Current consumption (rated value) | 5.12 A |
| Current consumption, max. | 5.13 A |
| Inrush current, max. | 4.8 A |
| I^2t | 0.073 A ² ·s |
| Encoder supply | |

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| Number of outputs | 16 |
| Output voltage, min. | 18.2 V |
| Short-circuit protection | Yes; Electronic |
| Output current | |
| • up to 60 °C, max. | 5 A |
| • up to 70 °C, max. | 4 A |
| Power loss | |
| Power loss, typ. | 2.88 W; Depending on the type of BusAdapter used (typ. RJ45) |
| Address area | |
| Address space per station | |
| • Address space per station, max. | 1 440 byte; Dependent on configuration |
| Digital inputs | |
| Number of digital inputs | 16 |
| Source/sink input | Yes; P-reading |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes |
| Input characteristic curve in accordance with IEC 61131, type 2 | No |
| Input characteristic curve in accordance with IEC 61131, type 3 | Yes |
| Pulse extension | No |
| Number of simultaneously controllable inputs | |
| horizontal installation | |
| — up to 60 °C, max. | 16; Total current must be observed, see DQ |
| — up to 70 °C, max. | 16; Total current must be observed, see DQ |
| vertical installation | |
| — up to 60 °C, max. | 16; Total current must be observed, see DQ |
| Digital input functions, parameterizable | |
| • Counter | Yes |
| — Number, max. | 2 |
| — Counting frequency, max. | 1 kHz |
| — Counting width | 32 bit |
| — Counting direction up/down | Yes; Up |
| Input voltage | |
| • Rated value (DC) | 24 V |
| • for signal "0" | -30 to +5 V |
| • for signal "1" | +11 to +30V |
| Input current | |
| • for signal "1", typ. | 2.5 mA; Typical |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — parameterizable | No |
| — at "0" to "1", max. | 3.2 ms; for counter function 0,1 ms |
| — at "1" to "0", max. | 3.2 ms; for counter function 0,1 ms |
| Cable length | |
| • shielded, max. | 1 000 m |
| • unshielded, max. | 600 m |
| Digital outputs | |
| Type of digital output | Transistor |
| Number of digital outputs | 16 |
| Current-sinking | No |
| Current-sourcing | Yes |
| Short-circuit protection | Yes |
| • Response threshold, typ. | 0.7 to 1.3 A |
| Limitation of inductive shutdown voltage to | Typ. L+ (-50 V) |
| Controlling a digital input | Yes |
| Switching capacity of the outputs | |
| • on lamp load, max. | 5 W |
| Load resistance range | |
| • lower limit | 48 Ω |
| • upper limit | 12 kΩ |
| Output voltage | |
| • Type of output voltage | DC |

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| • for signal "1", min. | Ue minus 1 V |
| Output current | |
| • for signal "1" rated value | 0.5 A |
| • for signal "0" residual current, max. | 0.1 mA |
| Output delay with resistive load | |
| • "0" to "1", max. | 50 µs |
| • "1" to "0", max. | 100 µs |
| Parallel switching of two outputs | |
| • for uprating | No |
| • for redundant control of a load | No |
| Switching frequency | |
| • with resistive load, max. | 100 Hz |
| • with inductive load, max. | 2 Hz |
| • on lamp load, max. | 10 Hz |
| Total current of the outputs | |
| • Current per channel, max. | 0.5 A |
| horizontal installation | |
| — up to 60 °C, max. | 5 A |
| — up to 70 °C, max. | 4 A |
| vertical installation | |
| — up to 60 °C, max. | 5 A |
| 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. | 1.5 mA |
| Interfaces | |
| Number of PROFINET interfaces | 1 |
| Number of PROFIBUS interfaces | 0 |
| 1. Interface | |
| Interface type | PROFINET |
| Isolated | Yes |
| Interface types | |
| • Number of ports | 2 |
| • integrated switch | Yes |
| • BusAdapter (PROFINET) | Yes |
| Protocols | |
| • PROFINET IO Device | Yes |
| • PROFIBUS DP device | No |
| Interface types | |
| RJ 45 (Ethernet) | |
| • 100 Mbps | Yes |
| • Autonegotiation | Yes |
| • Autocrossing | Yes |
| Protocols | |
| Supports protocol for PROFINET IO | Yes |
| Redundancy mode | |
| • PROFINET system redundancy (S2) | Yes; Type S2 |
| Media redundancy | |
| — MRP | Yes |
| Open IE communication | |
| • LLDP | Yes |
| Interrupts/diagnostics/status information | |
| Status indicator | Yes |
| Alarms | Yes |
| Diagnostics function | Yes |
| Diagnoses | |
| • Monitoring of encoder power supply | Yes |

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| • Wire-break | Yes | |
| • Short-circuit | Yes | |
| Diagnostics indication LED | | |
| • RUN LED | Yes; green LED | |
| • ERROR LED | Yes; red LED | |
| • MAINT LED | Yes; Yellow LED | |
| • Monitoring of the supply voltage (PWR-LED) | Yes | |
| • Status indicator digital input (green) | Yes | |
| • Status indicator digital output (green) | Yes | |
| Potential separation | | |
| between the channels and PROFINET | Yes | |
| Potential separation digital inputs | | |
| • between the channels | No | |
| • between the channels and the power supply of the electronics | No | |
| Potential separation digital outputs | | |
| • between the channels | No | |
| • between the channels and the power supply of the electronics | No | |
| Isolation | | |
| Isolation tested with | 1 500 V AC between PROFINET and electronics | |
| Degree and class of protection | | |
| IP degree of protection | IP66 | |
| Ambient conditions | | |
| Ambient temperature during operation | | |
| • min. | -40 °C | |
| • max. | 60 °C | |
| • horizontal installation, min. | -40 °C | |
| • horizontal installation, max. | 60 °C; Max. 4 A load current; up to 50 °C max. 5 A load current | |
| • vertical installation, min. | -40 °C | |
| • vertical installation, max. | 50 °C | |
| Ambient temperature during storage/transportation | | |
| • min. | -40 °C | |
| • max. | 70 °C | |
| Relative humidity | | |
| • Operation, max. | 95 % | |
| connection method | | |
| Design of electrical connection | Connection plug | |
| Dimensions | | |
| Width | 414 mm | |
| Height | 266 mm | |
| Depth | 111 mm | |
| Weights | | |
| Weight, approx. | 5.5 kg | |
| Classifications | | |
| | Version | Classification |
| eClass | 14 | 27-24-26-90 |
| eClass | 12 | 27-24-26-90 |
| eClass | 9.1 | 27-24-26-90 |
| eClass | 9 | 27-24-26-90 |
| eClass | 8 | 27-24-92-90 |
| eClass | 7.1 | 27-24-92-90 |
| eClass | 6 | 27-24-92-90 |
| ETIM | 10 | EC002584 |
| ETIM | 9 | EC002584 |
| ETIM | 8 | EC002584 |
| ETIM | 7 | EC002584 |
| Approvals / Certificates | | |

General Product Approval

EMV

For use in hazardous locations



[Miscellaneous](#)



For use in hazardous locations

[Type Examination Certificate](#)



last modified:

3/12/2025