

SIMATIC CFU PA with aluminum enclosure, bundle consisting of: 1x SIMATIC CFU PA (6ES7655-5PX11-1XX0), 1x aluminum enclosure with cable glands, shield busbar shield terminals, preassembled and checked



Figure similar

| General information                                                   |                                                    |
|-----------------------------------------------------------------------|----------------------------------------------------|
| Product type designation                                              | PA Bundle                                          |
| Firmware version                                                      | V2.0                                               |
| • FW update possible                                                  | Yes                                                |
| Vendor identification (VendorID)                                      | 002AH                                              |
| Device identifier (DeviceID)                                          | 060DH                                              |
| Number of channels                                                    | 16                                                 |
| Product function                                                      |                                                    |
| • I&M data                                                            | Yes; I&M0 to I&M4                                  |
| • Isochronous mode                                                    | No                                                 |
| • The user can configure digital channels as input/output as required | Yes                                                |
| • Digital channels can be parameterized                               | Yes                                                |
| Engineering with                                                      |                                                    |
| • STEP 7 TIA Portal configurable/integrated from version              | V19 Update 2                                       |
| • STEP 7 configurable/integrated from version                         | STEP 7 V5.7.1.4                                    |
| • PCS 7 configurable/integrated from version                          | V9.1 SP2 UC7                                       |
| • PROFIBUS from GSD version/GSD revision                              | - / -                                              |
| • PROFINET from GSD version/GSD revision                              | GSDML V2.43 2024.03.08                             |
| Operating mode                                                        |                                                    |
| • Counter                                                             | Yes                                                |
| Installation type/mounting                                            |                                                    |
| Mounting position                                                     | Horizontal, vertical                               |
| Recommended mounting position                                         | horizontal set up                                  |
| 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                                                       |                                                    |
| • Mains/voltage failure stored energy time                            | 5 ms; Bridging for field devices and communication |
| Input current                                                         |                                                    |
| Current consumption (rated value)                                     | 2.5 A                                              |
| Current consumption, max.                                             | 2.55 A                                             |
| Inrush current, max.                                                  | 8 A                                                |

|                                                                 |                                                             |
|-----------------------------------------------------------------|-------------------------------------------------------------|
| I <sub>st</sub>                                                 | 0.3 A <sup>2</sup> ·s                                       |
| <b>Encoder supply</b>                                           |                                                             |
| Number of outputs                                               | 8                                                           |
| Output voltage, min.                                            | 18.2 V                                                      |
| Short-circuit protection                                        | Yes; Electronic                                             |
| <b>Output current</b>                                           |                                                             |
| • up to 60 °C, max.                                             | 2 A                                                         |
| • up to 70 °C, max.                                             | 1 A                                                         |
| <b>Power loss</b>                                               |                                                             |
| Power loss, typ.                                                | 8.2 W; Depending on the type of BusAdapter used (typ. RJ45) |
| <b>Address area</b>                                             |                                                             |
| Address space per station                                       |                                                             |
| • Address space per station, max.                               | 1 440 byte; Dependent on configuration                      |
| <b>Digital inputs</b>                                           |                                                             |
| Number of digital inputs                                        | 8                                                           |
| 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                                                          |
| <b>Number of simultaneously controllable inputs</b>             |                                                             |
| <b>horizontal installation</b>                                  |                                                             |
| — up to 60 °C, max.                                             | 8; Total current must be observed, see DQ                   |
| — up to 70 °C, max.                                             | 8; Total current must be observed, see DQ                   |
| <b>vertical installation</b>                                    |                                                             |
| — up to 60 °C, max.                                             | 8; Total current must be observed, see DQ                   |
| <b>Digital input functions, parameterizable</b>                 |                                                             |
| • Counter                                                       | Yes                                                         |
| — Number, max.                                                  | 1                                                           |
| — Counting frequency, max.                                      | 1 kHz                                                       |
| — Counting width                                                | 32 bit                                                      |
| — Counting direction up/down                                    | Yes; Up                                                     |
| <b>Input voltage</b>                                            |                                                             |
| • Rated value (DC)                                              | 24 V                                                        |
| • for signal "0"                                                | -30 to +5 V                                                 |
| • for signal "1"                                                | +11 to +30V                                                 |
| <b>Input current</b>                                            |                                                             |
| • for signal "1", typ.                                          | 2.5 mA; Typical                                             |
| <b>Input delay (for rated value of input voltage)</b>           |                                                             |
| <b>for standard inputs</b>                                      |                                                             |
| — 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                         |
| <b>Cable length</b>                                             |                                                             |
| • shielded, max.                                                | 1 000 m                                                     |
| • unshielded, max.                                              | 600 m                                                       |
| <b>Digital outputs</b>                                          |                                                             |
| Type of digital output                                          | Transistor                                                  |
| Number of digital outputs                                       | 8                                                           |
| 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                                                         |
| <b>Switching capacity of the outputs</b>                        |                                                             |
| • on lamp load, max.                                            | 5 W                                                         |
| <b>Load resistance range</b>                                    |                                                             |
| • lower limit                                                   | 48 Ω                                                        |

|                                                                 |                                                                                |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------|
| • upper limit                                                   | 12 kΩ                                                                          |
| Output voltage                                                  |                                                                                |
| • Type of output voltage                                        | DC                                                                             |
| • for signal "1", min.                                          | U <sub>e</sub> 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                                                                          |
| 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                                                                              |
| PROFIBUS PA                                                     |                                                                                |
| • Transmission rate, max.                                       | 31.25 kbit/s                                                                   |
| • Number of connectable PA field devices                        | 8; electrically isolated from other interfaces, isolation tested at 2 500 V DC |
| • Current output to PA field devices, max.                      | 320 mA                                                                         |
| • permissible current per spur line                             | 40 mA                                                                          |
| • Automatic addressing                                          | Yes                                                                            |
| • System-supported integration of field devices via PA profiles | Yes                                                                            |
| • Extended fieldbus diagnostics                                 | Yes                                                                            |
| 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                                                          |
| <b>Interrupts/diagnostics/status information</b>               |                                                              |
| Status indicator                                               | Yes                                                          |
| Alarms                                                         | Yes                                                          |
| Diagnostics function                                           | Yes                                                          |
| <b>Diagnoses</b>                                               |                                                              |
| • Monitoring of encoder power supply                           | Yes                                                          |
| • Wire-break                                                   | Yes                                                          |
| • Short-circuit                                                | Yes                                                          |
| <b>Diagnostics indication LED</b>                              |                                                              |
| • 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                                                          |
| • Spur line status/fault                                       | Yes                                                          |
| <b>Potential separation</b>                                    |                                                              |
| between the channels and PROFINET                              | Yes                                                          |
| <b>Potential separation digital inputs</b>                     |                                                              |
| • between the channels                                         | No                                                           |
| • between the channels and the power supply of the electronics | No                                                           |
| <b>Potential separation digital outputs</b>                    |                                                              |
| • between the channels                                         | No                                                           |
| • between the channels and the power supply of the electronics | No                                                           |
| <b>Isolation</b>                                               |                                                              |
| Isolation tested with                                          | 1 500 V AC between PROFINET and electronics                  |
| <b>Degree and class of protection</b>                          |                                                              |
| IP degree of protection                                        | IP66                                                         |
| <b>Ambient conditions</b>                                      |                                                              |
| <b>Ambient temperature during operation</b>                    |                                                              |
| • horizontal installation, min.                                | -40 °C                                                       |
| • horizontal installation, max.                                | 60 °C; max. 1 A load current; 50 °C to max. 2 A load current |
| • vertical installation, min.                                  | -40 °C                                                       |
| • vertical installation, max.                                  | 50 °C                                                        |
| <b>Ambient temperature during storage/transportation</b>       |                                                              |
| • min.                                                         | -40 °C                                                       |
| • max.                                                         | 70 °C                                                        |
| <b>Relative humidity</b>                                       |                                                              |
| • Operation, max.                                              | 95 %                                                         |
| <b>Connection method</b>                                       |                                                              |
| Design of electrical connection                                | Connection plug                                              |
| <b>Spur line</b>                                               |                                                              |
| • Number of spur lines                                         | 8                                                            |
| • Type of cable                                                | Type A                                                       |
| • Cable diameter, min.                                         | 6 mm                                                         |
| • Cable diameter, max.                                         | 12 mm                                                        |
| • Conductor cross-section, min.                                | 0.2 mm <sup>2</sup>                                          |
| • Conductor cross-section, max.                                | 2.5 mm <sup>2</sup>                                          |
| • Cable length, max.                                           | 120 m                                                        |
| • total current output to field devices, max.                  | 320 mA                                                       |
| • Number of connectable field devices                          | 8                                                            |
| • Current limitation per field device, max.                    | 40 mA                                                        |
| • No-load voltage, max.                                        | 15.3 V                                                       |
| • short-circuit proof                                          | Yes                                                          |
| • Short-circuit current (test current); max.                   | 8 mA                                                         |

- intrinsically safe according to FISCO model
- Debounce logic

Yes  
Yes

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



Miscellaneous



KC



For use in hazardous locations

Type Examination Certificate



CCC-Ex



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