



Figure similar

SIMATIC ET 200MP. PROFINET IO-DEVICE INTERFACEMODULE IM 155-5 PN ST FOR ET 200MP ELEKTRONIKMODULES; UP TO 12 IO-MODULES WITHOUT ADDITIONAL PS; UP TO 30 IO- MODULES WITH ADDITIONONAL PS SHARED DEVICE; MRP; IRT >=0.25MS; ISOCHRONICITY FW-UPDATE; I&M0...3; FSU WITH 500MS

| General information                                      |                                    |
|----------------------------------------------------------|------------------------------------|
| Product type designation                                 | IM 155-5 PN ST                     |
| HW functional status                                     | From FS01                          |
| Firmware version                                         | V4.1.0                             |
| • FW update possible                                     | Yes                                |
| Vendor identification (VendorID)                         | 0x002A                             |
| Device identifier (DeviceID)                             | 0X0312                             |
| Product function                                         |                                    |
| • I&M data                                               | Yes; I&M0 to I&M3                  |
| • Module swapping during operation (hot swapping)        | No                                 |
| • Isochronous mode                                       | Yes                                |
| • Tool changer                                           | No                                 |
| • Local coupling, IO data                                | No                                 |
| Engineering with                                         |                                    |
| • STEP 7 TIA Portal configurable/integrated from version | V15                                |
| • STEP 7 configurable/integrated from version            | use GSD file                       |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.3                         |
| Configuration control                                    |                                    |
| via dataset                                              | Yes                                |
| Supply voltage                                           |                                    |
| 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                                |
| Mains buffering                                          |                                    |
| • Mains/voltage failure stored energy time               | 10 ms                              |
| Input current                                            |                                    |
| Current consumption (rated value)                        | 0.2 A; at 24 V DC and without load |
| Current consumption, max.                                | 1.2 A                              |
| Inrush current, max.                                     | 9 A                                |
| I <sup>2</sup> t                                         | 0.09 A <sup>2</sup> ·s             |
| Power                                                    |                                    |
| Infeed power to the backplane bus                        | 14 W                               |
| Power available from the backplane bus                   | 2.3 W                              |
| Power loss                                               |                                    |
| Power loss, typ.                                         | 4.5 W                              |
| Address area                                             |                                    |
| Address space per module                                 |                                    |

|                                                     |                                                   |
|-----------------------------------------------------|---------------------------------------------------|
| • Address space per module, max.                    | 256 byte; For input and output data respectively  |
| Address space per station                           |                                                   |
| • Address space per station, max.                   | 512 byte; For input and output data respectively  |
| <b>Hardware configuration</b>                       |                                                   |
| Integrated power supply                             | Yes                                               |
| System power supply can be plugged in to left of IM | Yes                                               |
| Number of permissible power segments                | 3; incl. interface module                         |
| Rack                                                |                                                   |
| • Modules per rack, max.                            | 30; I/O modules                                   |
| Submodules                                          |                                                   |
| • Number of submodules per station, max.            | 256                                               |
| <b>Interfaces</b>                                   |                                                   |
| Number of PROFINET interfaces                       | 1; 2 ports (switch)                               |
| <b>1. Interface</b>                                 |                                                   |
| Interface types                                     |                                                   |
| • RJ 45 (Ethernet)                                  | Yes                                               |
| • Number of ports                                   | 2                                                 |
| • integrated switch                                 | Yes                                               |
| • BusAdapter (PROFINET)                             | No                                                |
| Protocols                                           |                                                   |
| • PROFINET IO Device                                | Yes                                               |
| • Open IE communication                             | Yes                                               |
| • Media redundancy                                  | Yes; PROFINET MRP client                          |
| PROFINET IO Device                                  |                                                   |
| Services                                            |                                                   |
| — IRT                                               | Yes; 250 µs to 4 ms in 125 µs frame               |
| — PROFIenergy                                       | No                                                |
| — Prioritized startup                               | Yes                                               |
| — Shared device                                     | Yes                                               |
| — Number of IO Controllers with shared device, max. | 2                                                 |
| <b>Interface types</b>                              |                                                   |
| RJ 45 (Ethernet)                                    |                                                   |
| • Transmission procedure                            | PROFINET with 100 Mbit/s full duplex (100BASE-TX) |
| • 100 Mbps                                          | Yes                                               |
| • Autonegotiation                                   | Yes                                               |
| • Autocrossing                                      | Yes                                               |
| <b>Protocols</b>                                    |                                                   |
| Modbus TCP                                          | No                                                |
| Redundancy mode                                     |                                                   |
| • PROFINET system redundancy (S2)                   | No                                                |
| — on S7-1500R/H                                     | No                                                |
| — on S7-400H                                        | No                                                |
| • PROFINET system redundancy (R1)                   | No                                                |
| • H-Sync forwarding                                 | No                                                |
| Media redundancy                                    |                                                   |
| — MRP                                               | Yes                                               |
| — MRPD                                              | No                                                |
| Open IE communication                               |                                                   |
| • TCP/IP                                            | Yes                                               |
| • SNMP                                              | Yes                                               |
| • LLDP                                              | Yes                                               |
| <b>Isochronous mode</b>                             |                                                   |
| Equidistance                                        | Yes                                               |
| shortest clock pulse                                | 250 µs                                            |
| max. cycle                                          | 4 ms                                              |
| Bus cycle time (TDP), min.                          | 250 µs                                            |
| Jitter, max.                                        | 1 µs                                              |
| <b>Interrupts/diagnostics/status information</b>    |                                                   |
| Status indicator                                    | Yes                                               |
| Alarms                                              | Yes                                               |

|                                                 |                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------|
| Diagnostics function                            | Yes                                                                                            |
| Diagnostics indication LED                      |                                                                                                |
| • RUN LED                                       | Yes; green LED                                                                                 |
| • ERROR LED                                     | Yes; red LED                                                                                   |
| • MAINT LED                                     | Yes; Yellow LED                                                                                |
| • Connection display LINK TX/RX                 | Yes; 2x green-yellow LEDs                                                                      |
| Potential separation                            |                                                                                                |
| between backplane bus and electronics           | No                                                                                             |
| between PROFINET and all other circuits         | Yes; 1500 V AC (type test)                                                                     |
| between supply and all other circuits           | No                                                                                             |
| Permissible potential difference                |                                                                                                |
| between different circuits                      | Safety extra low voltage SELV                                                                  |
| Isolation                                       |                                                                                                |
| Isolation tested with                           | 707 V DC (type test)                                                                           |
| Ambient conditions                              |                                                                                                |
| Ambient temperature during operation            |                                                                                                |
| • horizontal installation, min.                 | -25 °C; From FS03                                                                              |
| • horizontal installation, max.                 | 60 °C                                                                                          |
| • vertical installation, min.                   | -25 °C; From FS03                                                                              |
| • vertical installation, max.                   | 40 °C                                                                                          |
| Altitude during operation relating to sea level |                                                                                                |
| • Installation altitude above sea level, max.   | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual                         |
| connection method                               |                                                                                                |
| ET-Connection                                   |                                                                                                |
| • via BU/BA Send                                | No                                                                                             |
| Dimensions                                      |                                                                                                |
| Width                                           | 35 mm                                                                                          |
| Height                                          | 147 mm                                                                                         |
| Depth                                           | 129 mm                                                                                         |
| last modified:                                  | 10/12/2023  |