



SIMATIC ET 200MP PROFINET IO device Interface module IM 155-5 PN BA for ET 200MP electronic modules; up to 12 IO modules; Integrated 2-port switch; RJ45 Shared Device with 2 IO controllers, MRP; FW update; I&M0...3

| General information                                      |                                  |
|----------------------------------------------------------|----------------------------------|
| Product type designation                                 | IM 155-5 PN BA                   |
| HW functional status                                     | From FS02                        |
| Firmware version                                         | V4.3.0                           |
| • 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                                       | No                               |
| • IRT                                                    | No                               |
| • Tool changer                                           | No                               |
| • Local coupling, IO data                                | No                               |
| Engineering with                                         |                                  |
| • STEP 7 TIA Portal configurable/integrated from version | V15.1                            |
| • STEP 7 configurable/integrated from version            | use GSD file                     |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.3                       |
| Configuration control                                    |                                  |
| via dataset                                              | No                               |
| 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               | 5 ms                             |
| Input current                                            |                                  |
| Current consumption (rated value)                        | 1 A; at 24 V DC and without load |
| Current consumption, max.                                | 1.7 A                            |
| Inrush current, max.                                     | 2.8 A                            |
| I <sup>2</sup> t                                         | 0.04 A <sup>2</sup> ·s           |
| Power                                                    |                                  |
| Infeed power to the backplane bus                        | 14 W                             |
| Power loss                                               |                                  |
| Power loss, typ.                                         | 3 W                              |
| Address area                                             |                                  |
| Address space per module                                 |                                  |

|                                                     |                                                   |
|-----------------------------------------------------|---------------------------------------------------|
| • Address space per module, max.                    | 64 byte; For input and output data respectively   |
| Address space per station                           |                                                   |
| • Address space per station, max.                   | 64 byte; For input and output data respectively   |
| <b>Hardware configuration</b>                       |                                                   |
| Integrated power supply                             | Yes; 14 W                                         |
| System power supply can be plugged in to left of IM | No                                                |
| Number of permissible power segments                | 1; incl. interface module                         |
| Rack                                                |                                                   |
| • Modules per rack, max.                            | 12; I/O modules                                   |
| Submodules                                          |                                                   |
| • Number of submodules per station, max.            | 108; 9 per I/O module                             |
| <b>Interfaces</b>                                   |                                                   |
| Transmission procedure                              | 100BASE-TX                                        |
| 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                                               | No                                                |
| — Dynamic Frame Packing (DFP)                       | No                                                |
| — PROFIenergy                                       | No                                                |
| — Prioritized startup                               | No                                                |
| — 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>                                    |                                                   |
| Supports protocol for PROFINET IO                   | Yes                                               |
| PROFIsafe                                           | Yes; FW V4.3.0 or higher                          |
| PROFIBUS                                            | No                                                |
| EtherNet/IP                                         | No                                                |
| 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>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)                                                   |         |                |
| Standards, approvals, certificates                             |                                                                        |         |                |
| Siemens Eco Profile (SEP)                                      | Siemens EcoTech                                                        |         |                |
| Network loading class                                          | 2                                                                      |         |                |
| Ecological footprint                                           |                                                                        |         |                |
| • environmental product declaration                            | Yes                                                                    |         |                |
| Global warming potential                                       |                                                                        |         |                |
| — global warming potential, (total) [CO2 eq]                   | 64.1 kg                                                                |         |                |
| — global warming potential, (during production) [CO2 eq]       | 11.1 kg                                                                |         |                |
| — global warming potential, (during operation) [CO2 eq]        | 53.6 kg                                                                |         |                |
| — global warming potential, (after end of life cycle) [CO2 eq] | -0.669 kg                                                              |         |                |
| Security                                                       |                                                                        |         |                |
| PROFINET Security Class                                        | 0                                                                      |         |                |
| Ambient conditions                                             |                                                                        |         |                |
| Ambient temperature during operation                           |                                                                        |         |                |
| • horizontal installation, min.                                | -30 °C; From FS03                                                      |         |                |
| • horizontal installation, max.                                | 60 °C                                                                  |         |                |
| • vertical installation, min.                                  | -30 °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 |         |                |
| Absolute humidity                                              |                                                                        |         |                |
| • dew point, min.                                              | -60 °C; suitable for dry room applications                             |         |                |
| Dimensions                                                     |                                                                        |         |                |
| Width                                                          | 35 mm                                                                  |         |                |
| Height                                                         | 147 mm                                                                 |         |                |
| Depth                                                          | 129 mm                                                                 |         |                |
| Weights                                                        |                                                                        |         |                |
| Weight, approx.                                                | 236 g                                                                  |         |                |
| Classifications                                                |                                                                        |         |                |
|                                                                |                                                                        | Version | Classification |
|                                                                | eClass                                                                 | 16      | 27-24-26-08    |
|                                                                | eClass                                                                 | 14      | 27-24-26-08    |
|                                                                | eClass                                                                 | 12      | 27-24-26-08    |
|                                                                | eClass                                                                 | 9.1     | 27-24-26-08    |
|                                                                | eClass                                                                 | 9       | 27-24-26-08    |
|                                                                | eClass                                                                 | 8       | 27-24-26-08    |
|                                                                | eClass                                                                 | 7.1     | 27-24-26-08    |
|                                                                | eClass                                                                 | 6       | 27-24-26-08    |
|                                                                | ETIM                                                                   | 10      | EC001604       |

|        |    |             |
|--------|----|-------------|
| ETIM   | 9  | EC001604    |
| ETIM   | 8  | EC001604    |
| ETIM   | 7  | EC001604    |
| IDEA   | 4  | 3564        |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval



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