



SIMATIC ET 200SP, PROFINET interface module IM 155-6 PN ST, max. 32 I/O modules, and 16 ET 200AL modules, multi hot swap, optional PN strain relief, PN security class 1 incl. server module (6ES7193-6PA00-0AA0)

| General information                                      |                                                  |
|----------------------------------------------------------|--------------------------------------------------|
| Product type designation                                 | IM 155-5 PN ST                                   |
| Firmware version                                         | V6.3                                             |
| • FW update possible                                     | Yes                                              |
| Vendor identification (VendorID)                         | 002AH                                            |
| Device identifier (DeviceID)                             | 0313H                                            |
| Manufacturer ID according to ODVA (VendorID)             | 04E3H                                            |
| Device ID according to ODVA (Product code)               | 0FA2H                                            |
| Product function                                         |                                                  |
| • I&M data                                               | Yes; I&M0 to I&M4                                |
| • Module swapping during operation (hot swapping)        | Yes; Multi-hot swapping                          |
| • Isochronous mode                                       | No                                               |
| • Local coupling, IO data                                |                                                  |
| — Number of coupling modules                             | 6; 1x output + max. 5x input                     |
| Engineering with                                         |                                                  |
| • STEP 7 TIA Portal configurable/integrated from version | V20                                              |
| • STEP 7 configurable/integrated from version            | V5.7 SP3                                         |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.45                                      |
| 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)                        | 350 mA                                           |
| Current consumption, max.                                | 450 mA                                           |
| Inrush current, max.                                     | 1 A                                              |
| I <sup>2</sup> t                                         | 0.05 A <sup>2</sup> ·s                           |
| Power loss                                               |                                                  |
| Power loss, typ.                                         | 1.8 W                                            |
| Address area                                             |                                                  |
| Address space per module                                 |                                                  |
| • Address space per module, max.                         | 288 byte; For input and output data respectively |
| Address space per station                                |                                                  |
| • Address space per station, max.                        | 1 440 byte                                       |

| Hardware configuration                              |                                                   |
|-----------------------------------------------------|---------------------------------------------------|
| Rack                                                |                                                   |
| • Quantity of operable ET 200SP modules, max.       | 32                                                |
| • Quantity of operable ET 200AL modules, max.       | 16                                                |
| Submodules                                          |                                                   |
| • Number of submodules per station, max.            | 256                                               |
| Interfaces                                          |                                                   |
| Number of PROFINET interfaces                       | 1; 2 ports (switch)                               |
| 1. Interface                                        |                                                   |
| Interface types                                     |                                                   |
| • RJ 45 (Ethernet)                                  | Yes; with BusAdapter                              |
| • Number of ports                                   | 2; with BusAdapter                                |
| • integrated switch                                 | Yes                                               |
| • BusAdapter (PROFINET)                             | Yes; BA 2x RJ45, BA 2x FC, BA 2x M12              |
| Protocols                                           |                                                   |
| • PROFINET IO Device                                | Yes                                               |
| • Open IE communication                             | Yes                                               |
| • Media redundancy                                  | Yes; PROFINET MRP client                          |
| PROFINET IO Device                                  |                                                   |
| Services                                            |                                                   |
| — IRT                                               | Yes; 1 ms to 4 ms at an interval of 125 µs        |
| — Dynamic Frame Packing (DFP)                       | Yes                                               |
| — Fast Forwarding                                   | Yes                                               |
| — Fragmentation                                     | Yes                                               |
| — PROFIenergy                                       | Yes                                               |
| — Prioritized startup                               | Yes                                               |
| — Shared device                                     | Yes                                               |
| — Number of IO Controllers with shared device, max. | 4                                                 |
| Interface types                                     |                                                   |
| RJ 45 (Ethernet)                                    |                                                   |
| • Transmission procedure                            | PROFINET with 100 Mbit/s full duplex (100BASE-TX) |
| • 100 Mbps                                          | Yes                                               |
| • Autonegotiation                                   | Yes                                               |
| • Autocrossing                                      | Yes                                               |
| Protocols                                           |                                                   |
| Supports protocol for PROFINET IO                   | Yes                                               |
| PROFIsafe                                           | Yes                                               |
| PROFIBUS                                            | No                                                |
| EtherNet/IP                                         | No                                                |
| Modbus TCP                                          | No                                                |
| Redundancy mode                                     |                                                   |
| • PROFINET system redundancy (S2)                   | No                                                |
| Media redundancy                                    |                                                   |
| — MRP                                               | Yes                                               |
| — MRPD                                              | Yes                                               |
| Open IE communication                               |                                                   |
| • TCP/IP                                            | Yes                                               |
| • UDP                                               | Yes                                               |
| • SNMP                                              | Yes                                               |
| • LLDP                                              | Yes                                               |
| • ARP                                               | Yes                                               |
| • IGMP                                              | Yes                                               |
| • Multicast                                         | Yes                                               |
| • Broadcast                                         | Yes                                               |
| • IPv4                                              | Yes                                               |
| • IPv6                                              | No                                                |
| Interrupts/diagnostics/status information           |                                                   |
| Status indicator                                    | Yes                                               |
| Alarms                                              | Yes                                               |
| Diagnostics function                                | Yes                                               |

|                                                                                                                                                                                                |        |                                                                                        |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------|----------------|
| Diagnostics indication LED                                                                                                                                                                     |        |                                                                                        |                |
| <ul style="list-style-type: none"><li>• RUN LED</li><li>• ERROR LED</li><li>• MAINT LED</li><li>• Monitoring of the supply voltage (PWR-LED)</li><li>• Connection display LINK TX/RX</li></ul> |        | Yes; green LED                                                                         |                |
|                                                                                                                                                                                                |        | Yes; red LED                                                                           |                |
|                                                                                                                                                                                                |        | Yes; Yellow LED                                                                        |                |
|                                                                                                                                                                                                |        | Yes; green PWR LED                                                                     |                |
|                                                                                                                                                                                                |        | Yes; 2x green link LEDs on BusAdapter                                                  |                |
| 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                                                                                                                                                             |        |                                                                                        |                |
| Network loading class                                                                                                                                                                          |        | 3                                                                                      |                |
| product functions / security / header                                                                                                                                                          |        |                                                                                        |                |
| PROFINET Security Class                                                                                                                                                                        |        | 1                                                                                      |                |
| signed firmware update                                                                                                                                                                         |        | Yes                                                                                    |                |
| Secure Boot                                                                                                                                                                                    |        | No                                                                                     |                |
| safely removing data                                                                                                                                                                           |        | Yes                                                                                    |                |
| data integrity                                                                                                                                                                                 |        | Yes                                                                                    |                |
| Ambient conditions                                                                                                                                                                             |        |                                                                                        |                |
| Ambient temperature during operation                                                                                                                                                           |        |                                                                                        |                |
| <ul style="list-style-type: none"><li>• horizontal installation, min.</li></ul>                                                                                                                |        | -30 °C; No condensation                                                                |                |
| <ul style="list-style-type: none"><li>• horizontal installation, max.</li></ul>                                                                                                                |        | 60 °C                                                                                  |                |
| <ul style="list-style-type: none"><li>• vertical installation, min.</li></ul>                                                                                                                  |        | -30 °C; No condensation                                                                |                |
| <ul style="list-style-type: none"><li>• vertical installation, max.</li></ul>                                                                                                                  |        | 50 °C                                                                                  |                |
| Altitude during operation relating to sea level                                                                                                                                                |        |                                                                                        |                |
| <ul style="list-style-type: none"><li>• Installation altitude above sea level, max.</li></ul>                                                                                                  |        | 5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200SP system manual |                |
| connection method                                                                                                                                                                              |        |                                                                                        |                |
| ET-Connection                                                                                                                                                                                  |        |                                                                                        |                |
| <ul style="list-style-type: none"><li>• via BU/BA Send</li></ul>                                                                                                                               |        | Yes; + 16 ET 200AL modules                                                             |                |
| Mechanics/material                                                                                                                                                                             |        |                                                                                        |                |
| Strain relief                                                                                                                                                                                  |        | Yes; Optional                                                                          |                |
| Dimensions                                                                                                                                                                                     |        |                                                                                        |                |
| Width                                                                                                                                                                                          |        | 50 mm                                                                                  |                |
| Height                                                                                                                                                                                         |        | 117 mm                                                                                 |                |
| Depth                                                                                                                                                                                          |        | 74 mm                                                                                  |                |
| Weights                                                                                                                                                                                        |        |                                                                                        |                |
| Weight, approx.                                                                                                                                                                                |        | 120 g; without BusAdapter                                                              |                |
| Classifications                                                                                                                                                                                |        |                                                                                        |                |
|                                                                                                                                                                                                |        | Version                                                                                | Classification |
|                                                                                                                                                                                                | 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   | 9                                                                                      | EC001604       |
|                                                                                                                                                                                                | ETIM   | 8                                                                                      | EC001604       |
|                                                                                                                                                                                                | ETIM   | 7                                                                                      | EC001604       |
| Approvals / Certificates                                                                                                                                                                       |        |                                                                                        |                |
| General Product Approval                                                                                                                                                                       |        |                                                                                        |                |



[Manufacturer Declaration](#)



[KC](#)



General Product Approval

For use in hazardous locations

[KC](#)



[CCC-Ex](#)

[EM](#)



[Miscellaneous](#)

For use in hazardous locations

Marine / Shipping



other

Industrial Communication

[PROFINET](#)

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