



SIMATIC ET 200SP, PROFINET interface module IM 155-6 PN Basic, max. 16 I/O modules, 2x integrated RJ45 sockets PN security class 1 including server module (6ES7193-6PA00-0AA0)

| General information                                      |                                                  |
|----------------------------------------------------------|--------------------------------------------------|
| Product type designation                                 | IM 155-6 PN BA                                   |
| Firmware version                                         | V6.4.0                                           |
| • FW update possible                                     | Yes                                              |
| Vendor identification (VendorID)                         | 0x002A                                           |
| Device identifier (DeviceID)                             | 0x0313                                           |
| Product function                                         |                                                  |
| • I&M data                                               | Yes; I&M0 to I&M4                                |
| • Module swapping during operation (hot swapping)        | Yes; Multi-hot swapping                          |
| • Isochronous mode                                       | No                                               |
| • IRT                                                    | Yes                                              |
| • Local coupling, IO data                                | Yes                                              |
| — 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               | 5 ms                                             |
| Input current                                            |                                                  |
| Current consumption (rated value)                        | 200 mA                                           |
| Current consumption, max.                                | 300 mA                                           |
| Inrush current, max.                                     | 1 A                                              |
| $I^2t$                                                   | 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.                         | 128 byte; For input and output data respectively |
| Address space per station                                |                                                  |
| • Address space per station, max.                        | 128 byte                                         |

| Hardware configuration                        |                                                   |
|-----------------------------------------------|---------------------------------------------------|
| Rack                                          |                                                   |
| • Quantity of operable ET 200SP modules, max. | 16                                                |
| • Quantity of operable ET 200AL modules, max. | 0                                                 |
| Submodules                                    |                                                   |
| • Number of submodules per station, max.      | 256                                               |
| Interfaces                                    |                                                   |
| Transmission procedure                        | 100BASE-TX                                        |
| Number of PROFINET interfaces                 | 1; 2 ports (switch)                               |
| 1. Interface                                  |                                                   |
| Interface types                               |                                                   |
| • RJ 45 (Ethernet)                            | Yes; 2 integrated RJ45 ports                      |
| • Number of ports                             | 2; integrated RJ45 ports                          |
| • 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; 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                               | No                                                |
| 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                                     | No                                                |
| PROFIBUS                                      | No                                                |
| EtherNet/IP                                   | No                                                |
| Modbus TCP                                    | No                                                |
| Redundancy mode                               |                                                   |
| • PROFINET system redundancy (S2)             | No                                                |
| • PROFINET system redundancy (R1)             | 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                      |                                                                        |         |                |
| • RUN LED                                       | Yes; green LED                                                         |         |                |
| • ERROR LED                                     | Yes; red LED                                                           |         |                |
| • MAINT LED                                     | Yes; Yellow LED                                                        |         |                |
| • Monitoring of the supply voltage (PWR-LED)    | Yes; green PWR LED                                                     |         |                |
| • Connection display LINK TX/RX                 | Yes; 2x green LED                                                      |         |                |
| 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                                                                      |         |                |
| Security                                        |                                                                        |         |                |
| PROFINET Security Class                         | 1                                                                      |         |                |
| signed firmware update                          | Yes                                                                    |         |                |
| Secure Boot                                     | No                                                                     |         |                |
| safely removing data                            | Yes                                                                    |         |                |
| data integrity                                  | Yes                                                                    |         |                |
| Ambient conditions                              |                                                                        |         |                |
| Ambient temperature during operation            |                                                                        |         |                |
| • horizontal installation, min.                 | -30 °C; No condensation                                                |         |                |
| • horizontal installation, max.                 | 60 °C                                                                  |         |                |
| • vertical installation, min.                   | -30 °C; No condensation                                                |         |                |
| • vertical installation, max.                   | 50 °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                                                                     |         |                |
| Mechanics/material                              |                                                                        |         |                |
| Strain relief                                   | No                                                                     |         |                |
| Dimensions                                      |                                                                        |         |                |
| Width                                           | 35 mm                                                                  |         |                |
| Height                                          | 117 mm                                                                 |         |                |
| Depth                                           | 74 mm                                                                  |         |                |
| Weights                                         |                                                                        |         |                |
| Weight, approx.                                 | 125 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       |

## Approvals / Certificates

## General Product Approval


[Manufacturer Declaration](#)
[Miscellaneous](#)

[PROFINET](#)

## General Product Approval

EMV


[China RoHS](#)


## For use in hazardous locations


[CCC-Ex](#)
[FM](#)

[Miscellaneous](#)

## For use in hazardous locations

## Maritime application

[Type Examination Certificate](#)
[CCC-Ex](#)


## Maritime application

[NK / Nippon Kaiji Kyokai](#)

[CCS \(China Classification Society\)](#)
[KR \(Korean Register of Shipping\)](#)

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