



Figure similar

SIMATIC ET 200SP, PROFINET, 2-port interface module IM 155-6 PN R1, 1 slot for BusAdapter, max. 64 I/O modules R1 redundancy, multi hot swap, 1 ms, PN security class 1

| General information                                      |                                                  |
|----------------------------------------------------------|--------------------------------------------------|
| Product type designation                                 | IM 155-6 PN R1                                   |
| HW functional status                                     | From FS03                                        |
| Firmware version                                         | V6.1                                             |
| • FW update possible                                     | Yes                                              |
| 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                                                    | No                                               |
| Engineering with                                         |                                                  |
| • STEP 7 TIA Portal configurable/integrated from version | V19                                              |
| • STEP 7 configurable/integrated from version            | use GSD file                                     |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.45                                      |
| Configuration control                                    |                                                  |
| via dataset                                              | No                                               |
| CiR - Configuration in RUN                               |                                                  |
| Reparameterization possible in RUN                       | Yes                                              |
| reconfiguration possible in RUN                          | 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, max.                                | 700 mA                                           |
| Inrush current, max.                                     | 5 A                                              |
| I <sup>2</sup> t                                         | 0.36 A <sup>2</sup> ·s                           |
| Power loss                                               |                                                  |
| Power loss, typ.                                         | 2.4 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                                       |

|                                                  |                                                                                                                                                      |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hardware configuration</b>                    |                                                                                                                                                      |
| <b>Rack</b>                                      |                                                                                                                                                      |
| • Quantity of operable ET 200SP modules, max.    | 64                                                                                                                                                   |
| • Quantity of operable ET 200AL modules, max.    | 0                                                                                                                                                    |
| <b>Submodules</b>                                |                                                                                                                                                      |
| • Number of submodules per station, max.         | 256                                                                                                                                                  |
| <b>Interfaces</b>                                |                                                                                                                                                      |
| Transmission procedure                           | 100BASE-TX                                                                                                                                           |
| Number of PROFINET interfaces                    | 1; 2 ports (switch)                                                                                                                                  |
| <b>1. Interface</b>                              |                                                                                                                                                      |
| <b>Interface types</b>                           |                                                                                                                                                      |
| • RJ 45 (Ethernet)                               | Yes; with BusAdapter                                                                                                                                 |
| • Number of ports                                | 2; with BusAdapter                                                                                                                                   |
| • integrated switch                              | Yes                                                                                                                                                  |
| • BusAdapter (PROFINET)                          | Yes; BA 2x RJ45, BA 2x M12, BA 2x FC, BA 2x SCRJ, BA SCRJ/RJ45, BA SCRJ/FC, BA 2x LC, BA LC/RJ45, BA LC/FC, BA 2x LC-LD, BA LC-LD/RJ45, BA LC-LD/M12 |
| <b>Protocols</b>                                 |                                                                                                                                                      |
| • PROFINET IO device                             | Yes                                                                                                                                                  |
| • Open IE communication                          | Yes                                                                                                                                                  |
| • Media redundancy                               | Yes; PROFINET MRP client                                                                                                                             |
| <b>PROFINET IO Device</b>                        |                                                                                                                                                      |
| <b>Services</b>                                  |                                                                                                                                                      |
| — IRT                                            | No                                                                                                                                                   |
| — Dynamic Frame Packing (DFP)                    | No                                                                                                                                                   |
| — PROFIenergy                                    | No                                                                                                                                                   |
| — Prioritized startup                            | No                                                                                                                                                   |
| — Shared device                                  | No                                                                                                                                                   |
| <b>Interface types</b>                           |                                                                                                                                                      |
| <b>RJ 45 (Ethernet)</b>                          |                                                                                                                                                      |
| • 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                                                                                                                                                  |
| PROFIBUS                                         | No                                                                                                                                                   |
| EtherNet/IP                                      | No                                                                                                                                                   |
| Modbus TCP                                       | No                                                                                                                                                   |
| <b>Redundancy mode</b>                           |                                                                                                                                                      |
| • PROFINET system redundancy (S2)                | No                                                                                                                                                   |
| • PROFINET system redundancy (R1)                | Yes                                                                                                                                                  |
| • H-Sync forwarding                              | Yes                                                                                                                                                  |
| <b>Media redundancy</b>                          |                                                                                                                                                      |
| — MRP                                            | Yes                                                                                                                                                  |
| — MRPD                                           | No                                                                                                                                                   |
| <b>Open IE communication</b>                     |                                                                                                                                                      |
| • TCP/IP                                         | Yes                                                                                                                                                  |
| • SNMP                                           | Yes                                                                                                                                                  |
| • LLDP                                           | Yes                                                                                                                                                  |
| <b>Interrupts/diagnostics/status information</b> |                                                                                                                                                      |
| Status indicator                                 | Yes                                                                                                                                                  |
| Alarms                                           | Yes                                                                                                                                                  |
| Diagnostics function                             | Yes                                                                                                                                                  |
| <b>Diagnostics indication LED</b>                |                                                                                                                                                      |
| • RUN LED                                        | Yes; green LED                                                                                                                                       |
| • ERROR LED                                      | Yes; red LED                                                                                                                                         |
| • MAINT LED                                      | Yes; Yellow LED                                                                                                                                      |

|                                                                                                                                                        |                                                                               |         |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------|----------------|
| <ul style="list-style-type: none"><li>• ACT LED</li><li>• Monitoring of the supply voltage (PWR-LED)</li><li>• Connection display LINK TX/RX</li></ul> | Yes; green LED<br>Yes; green PWR LED<br>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                                                                                                                  | Yes                                                                           |         |                |
| 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                                                                             |         |                |
| Ecological footprint                                                                                                                                   |                                                                               |         |                |
| <ul style="list-style-type: none"><li>• environmental product declaration</li></ul>                                                                    | Yes                                                                           |         |                |
| Global warming potential                                                                                                                               |                                                                               |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (total) [CO2 eq]</li></ul>                                                           | 105 kg                                                                        |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during production) [CO2 eq]</li></ul>                                               | 13.7 kg                                                                       |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during operation) [CO2 eq]</li></ul>                                                | 91.9 kg                                                                       |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (after end of life cycle) [CO2 eq]</li></ul>                                         | -0.617 kg                                                                     |         |                |
| Security                                                                                                                                               |                                                                               |         |                |
| PROFINET Security Class                                                                                                                                | 1                                                                             |         |                |
| signed firmware update                                                                                                                                 | Yes                                                                           |         |                |
| Secure Boot                                                                                                                                            | No                                                                            |         |                |
| safely removing data                                                                                                                                   | No                                                                            |         |                |
| 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>                                                          | 2 000 m                                                                       |         |                |
| Connection method                                                                                                                                      |                                                                               |         |                |
| ET-Connection                                                                                                                                          |                                                                               |         |                |
| <ul style="list-style-type: none"><li>• via BU/BA Send</li></ul>                                                                                       | No                                                                            |         |                |
| Dimensions                                                                                                                                             |                                                                               |         |                |
| Width                                                                                                                                                  | 50 mm                                                                         |         |                |
| Height                                                                                                                                                 | 138 mm                                                                        |         |                |
| Depth                                                                                                                                                  | 89 mm                                                                         |         |                |
| Weights                                                                                                                                                |                                                                               |         |                |
| Weight, approx.                                                                                                                                        | 192 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                                                                          | 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



[Miscellaneous](#)

[Manufacturer Declaration](#)



#### General Product Approval



[China RoHS](#)

#### For use in hazardous locations



[CCC-Ex](#)

[FM](#)



[Type Examination Certificate](#)



#### For use in hazardous locations

#### Maritime application

[Miscellaneous](#)

[CCC-Ex](#)



#### Maritime application

#### Environment

[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



last modified:

5/20/2026