MANUFACTURER DOCUMENT PACKAGE

# Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

## 6ES7155-5AA00-0AA0

**PROFINET DISTRIBUTED IO INTERFACE**

Used with the applicable SIMATIC ET 200MP IM 155-5 PN BA configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens 6ES7155-5AA00-0AA0 official product data sheet

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## Data sheet 6ES7155-5AA00-0AA0

Siemens EcoTech

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 |
| $I^2t$ | 0.04 $A^2 \cdot s$ |
| **Power** | |
| Infeed power to the backplane bus | 14 W |
| **Power loss** | |
| Power loss, typ. | 3 W |


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| | |
|---|---|
| **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 |
| **Hardware configuration** | |
| 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 |
| **Interfaces** | |
| Number of PROFINET interfaces | 1; 2 ports (switch) |
| **1. Interface** | |
| 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 |
| — PROFIenergy | No |
| — Prioritized startup | No |
| — Shared device | Yes |
| — Number of IO Controllers with shared device, max. | 2 |
| **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; 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 |
| **Interrupts/diagnostics/status information** | |
| Status indicator | Yes |
| Alarms | Yes |


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| | |
|---|---|
| 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 |
| **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 |
| **Dimensions** | |
| Width | 35 mm |
| Height | 147 mm |
| Depth | 129 mm |
| **Weights** | |
| Weight, approx. | 236 g |

**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 |
| IDEA | 4 | 3564 |
| UNSPSC | 15 | 32-15-17-05 |

**Approvals / Certificates**

| General Product Approval | For use in hazard-ous locations |
|---|---|


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Miscellaneous

## For use in hazardous locations

FM | IECEx | ATEX | Type Examination Certificate | Miscellaneous | CCC-Ex

## Marine / Shipping

ABS | BUREAU VERITAS | DNV | LRS | NK / Nippon Kaiji Kyokai | RINA

## Marine / Shipping | Environment | Industrial Communication

RMRS | CCS (China Classification Society) | KR | EPD | Siemens EcoTech | PROFINET

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