SIEMENS

## Data sheet 6ES7155-5AA01-0AB0

Siemens EcoTech

SIMATIC ET 200MP. PROFINET IO-DEVICE INTERFACEMODULE IM 155-5 PN ST FOR ET 200MP ELEKTRONIKMODULES; UP TO 12 IO-MODULES WITHOUT ADDITIONAL PS; UP TO 30 IO- MODULES WITH ADDITIONONAL PS SHARED DEVICE; MRP; IRT >=0.25MS; ISOCHRONICITY FW-UPDATE; I&M0...3; FSU WITH 500MS

Figure similar

| | |
|---|---|
| **General information** | |
| Product type designation | IM 155-5 PN ST |
| HW functional status | from FS01 |
| Firmware version | V4.1.0 |
| ● 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 | Yes |
| ● IRT | Yes |
| ● Tool changer | No |
| ● Local coupling, IO data | No |
| Engineering with | |
| ● STEP 7 TIA Portal configurable/integrated from version | V15 |
| ● STEP 7 configurable/integrated from version | use GSD file |
| ● PROFINET from GSD version/GSD revision | GSDML V2.3 |
| **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) | 0.2 A; at 24 V DC and without load |
| Current consumption, max. | 1.2 A |
| Inrush current, max. | 9 A |
| $I^2t$ | 0.09 $A^2 \cdot s$ |
| **Power** | |
| Infeed power to the backplane bus | 14 W |
| Power consumption from the backplane bus | 2.3 W; in case of operation with separate system power supply to the left of IM |

| | |
|---|---|
| **Power loss** | |
| Power loss, typ. | 4.5 W |
| **Address area** | |
| Address space per module | |
| ● Address space per module, max. | 256 byte; For input and output data respectively |
| Address space per station | |
| ● Address space per station, max. | 512 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 | Yes |
| Number of permissible power segments | 3; incl. interface module |
| Rack | |
| ● Modules per rack, max. | 30; I/O modules |
| Submodules | |
| ● Number of submodules per station, max. | 256; 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 | Yes; 250 µs to 4 ms in 125 µs frame |
| — PROFIenergy | No |
| — Prioritized startup | Yes |
| — 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 |
| 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 |
| **Isochronous mode** | |

| | |
|---|---|
| Equidistance | Yes |
| shortest clock pulse | 250 µs |
| max. cycle | 4 ms |
| Bus cycle time (TDP), min. | 250 µs |
| Jitter, max. | 1 µs |
| **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 |
| ● 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 |
| 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. | -25 °C; From FS03 |
| ● horizontal installation, max. | 60 °C |
| ● vertical installation, min. | -25 °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 |
| **connection method** | |
| ET-Connection | |
| ● via BU/BA Send | No |
| **Dimensions** | |
| Width | 35 mm |
| Height | 147 mm |
| Depth | 129 mm |
| **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

EG-Konf. | UKCA | Miscellaneous | Manufacturer Declaration | UL | RCM

### For use in hazardous locations

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

### For use in hazardous locations | Maritime application

Miscellaneous | CCC-Ex | ABS | BUREAU VERITAS | DNV | LRS

### Maritime application | Environment

NK / Nippon Kaiji Kyokai | RINA | RMRS | CCS (China Classification Society) | KR | EPD

### Environment | Industrial Communication

Siemens EcoTech | PROFINET

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