SIEMENS

## Data sheet 6ES7158-3MU10-0XA0



SIMATIC PN/MF coupler multi-fieldbus coupler, PN IO, EtherNet/IP, for deterministic data exchange between max. 1 controller per side, redundant current infeed, Ethernet connection via SIMATIC BusAdapter (BA), supplied without BusAdapter

| | |
|---|---|
| **General information** | |
| Product type designation | PN/MF coupler |
| Firmware version | V5.0.1 |
| ● FW update possible | Yes |
| Vendor identification (VendorID) | 002AH |
| Device identifier (DeviceID) | 0604H |
| Manufacturer ID according to ODVA (VendorID) | 04E3H |
| Device ID according to ODVA (Product code) | 0FA0H |
| Product function | |
| ● I&M data | Yes; I&M0 to I&M3 |
| ● Isochronous mode | No |
| ● Tool changer | Yes; Docking station and docking unit |
| ● Local coupling, IO data | No |
| ● Local coupling, data records | No |
| Engineering with | |
| ● STEP 7 TIA Portal configurable/integrated from version | V16 or higher via HSP of PN/PN coupler V4.2 or higher in compatibility mode |
| ● STEP 7 configurable/integrated from version | Configurable via GSD file |
| ● PROFINET from GSD version/GSD revision | V2.3 |
| **Installation type/mounting** | |
| Mounting | Mounting rail 7.5 mm and 15 mm |
| **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 |
| Mains buffering | |
| ● Mains/voltage failure stored energy time | 10 ms |
| **Input current** | |
| Current consumption, max. | 360 mA; for 19.2 V input voltage at the right-hand supply terminal, including 2 plugged BA |
| Inrush current, max. | 1.6 A |
| $I^2t$ | 0.031 $A^2 \cdot s$ |
| from supply voltage 1L+, max. | 320 mA; for 19.2 V input voltage at the left-hand supply terminal, including 2 plugged BA |
| **Power loss** | |
| Power loss, typ. | 4 W; For 24 V input voltage and 2 plugged BA 2x RJ45 If BusAdapters with an optical interface are plugged, there is an additional 750 mW per optical interface (3 W with 2 plugged BA 2x LC) |
| **Address area** | |
| Address space per module | |
| ● Address space per module, max. | 254 byte; max. 254 bytes of input data and 253 bytes of output data |


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| | |
|---|---|
| Address space per station | |
| ● Address space per station, max. | 1 440 byte; per input / output |
| **Hardware configuration** | |
| Submodules | |
| ● Number of submodules per station, max. | 16 |
| **Interfaces** | |
| Number of PROFINET interfaces | 2; One PROFINET interface per line side |
| Optical interface | No |
| **1. Interface** | |
| Interface types | |
| ● Number of ports | 2; via BusAdapter |
| ● integrated switch | Yes |
| ● BusAdapter (PROFINET) | Yes; compatible BusAdapters: BA 2x RJ45, BA 2x FC, BA 2x M12 |
| Protocols | |
| ● PROFINET IO Device | Yes |
| ● Open IE communication | Yes |
| ● Media redundancy | Yes; as MRP client, maximum of 50 nodes in the ring |
| **2. Interface** | |
| Interface types | |
| ● Number of ports | 2; via BusAdapter |
| ● integrated switch | Yes |
| Protocols | |
| ● PROFINET IO Device | Yes |
| ● Open IE communication | Yes |
| ● Media redundancy | Yes; as MRP client, maximum of 50 nodes in the ring |
| **Interface types** | |
| RJ 45 (Ethernet) | |
| ● Transmission procedure | PROFINET with 100 Mbit/s full duplex (100BASE-TX) |
| ● 10 Mbps | No |
| ● 100 Mbps | Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX) |
| ● Autonegotiation | Yes |
| ● Autocrossing | Yes |
| **Protocols** | |
| Supports protocol for PROFINET IO | Yes |
| Modbus TCP | No |
| Protocols (Ethernet) | |
| ● TCP/IP | Yes |
| ● SNMP | Yes |
| ● LLDP | Yes |
| ● ping | Yes |
| ● ARP | Yes |
| PROFINET IO Device | |
| Services | |
| — IRT | No |
| — PROFIenergy | No |
| — Prioritized startup | Yes |
| — Shared device | No |
| Redundancy mode | |
| ● PROFINET system redundancy (S2) | Yes; NAP S2 acc. to IEC |
| Media redundancy | |
| — MRP | Yes |
| — MRPD | No |
| EtherNet/IP | |
| Services | |
| — CIP Implicit Messaging | Yes |
| — CIP Explicit Messaging | Yes |
| — CIP Safety | No |
| Updating times | |
| — Requested Packet Interval (RPI) | 2 ms |
| Address area | |


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| | |
|---|---|
| — Address space per module, max. | 244 byte; (244 byte outputs / 244 byte inputs) |
| — ForwardOpen (Class1 & 32 bit Header) | 500 byte; (496 byte outputs / 500 byte inputs) |
| — LargeForwardOpen (Class3) | 4 002 byte |
| Open IE communication | |
| ● TCP/IP | Yes |
| ● SNMP | Yes |
| ● LLDP | Yes |
| **Interrupts/diagnostics/status information** | |
| Status indicator | Yes |
| Alarms | Yes |
| Diagnostics function | Yes; Parameterizable |
| Diagnostics indication LED | |
| ● RUN LED | Yes; green LED |
| ● ERROR LED | Yes; red LED |
| ● MAINT LED | Yes; Yellow LED |
| ● LINK LED | Yes; 2x green link LEDs on BusAdapter |
| ● Monitoring of the supply voltage (PWR-LED) | Yes; green PWR LED |
| ● NS LED | Yes; green/red LED |
| ● MS LED | Yes; green/red LED |
| ● IO LED | Yes; red-green-yellow LED |
| **Potential separation** | |
| between supply voltage and electronics | Yes; to power input 2 |
| between Ethernet and electronics | Yes |
| **Isolation** | |
| Isolation tested with | 707 V DC (type test) |
| **Standards, approvals, certificates** | |
| network separator in accordance with IEC 61784-3-3 | Yes |
| Network loading class | 3 |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● min. | -30 °C; No condensation |
| ● max. | 60 °C; = Tmax for horizontal installation; for vertical installation Tmax = 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 section "Climatic and mechanical environmental conditions" |
| **Mechanics/material** | |
| Strain relief | Yes; Optional, for RJ45 and FC BusAdapter only |
| **Dimensions** | |
| Width | 100 mm |
| Height | 117 mm |
| Depth | 74 mm; with mounting rail |
| **Weights** | |
| Weight, approx. | 200 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 |


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## Approvals / Certificates

### General Product Approval

Miscellaneous | Manufacturer Declaration

### EMV

KC

### For use in hazardous locations

CCC-Ex | FM

### For use in hazardous locations

Miscellaneous | Type Examination Certificate

### Maritime application

### Maritime application

NK / Nippon Kaiji Kyokai

CCS (China Classification Society)

### Industrial Communication

PROFINET

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