SIEMENS

## Data sheet 6ES7142-6BH00-0AB0



*** spare part *** SIMATIC DP, ET 200eco PN, 16 DO 24 V DC/1.3 A; 8xM12, duplicate assignment; degree of protection IP67

| | |
|---|---|
| **General information** | |
| Vendor identification (VendorID) | 002AH |
| Device identifier (DeviceID) | 0306H |
| **Supply voltage** | |
| Rated value (DC) | 24 V |
| Reverse polarity protection | Yes |
| power supply according to NEC Class 2 required | Yes |
| Load voltage 1L+ | |
| ● Rated value (DC) | 24 V |
| ● permissible range, lower limit (DC) | 20.4 V |
| ● permissible range, upper limit (DC) | 28.8 V |
| ● Reverse polarity protection | Yes |
| Load voltage 2L+ | |
| ● Rated value (DC) | 24 V |
| ● permissible range, lower limit (DC) | 20.4 V |
| ● permissible range, upper limit (DC) | 28.8 V |
| ● Reverse polarity protection | Yes |
| **Input current** | |
| Current consumption, typ. | 100 mA |
| from supply voltage 1L+, max. | 4 A |
| from load voltage 1L+ (unswitched voltage) | 4 A |
| from load voltage 2L+, max. | 4 A |
| **Power loss** | |
| Power loss, typ. | 5.5 W |
| **Digital outputs** | |
| Number of digital outputs | 16 |
| ● in groups of | 8 |
| Short-circuit protection | Yes |
| ● Response threshold, typ. | 1.8 A |
| Limitation of inductive shutdown voltage to | Typ. (L1+, L2+) -47 V |
| Controlling a digital input | Yes |
| Switching capacity of the outputs | |
| ● on lamp load, max. | 5 W |
| Output current | |
| ● for signal "1" rated value | 1.3 A; Maximum |
| ● for signal "0" residual current, max. | 1.5 mA |
| Parallel switching of two outputs | |
| ● for uprating | No |
| ● for redundant control of a load | Yes |


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|---|---|
| Switching frequency | |
| ● with resistive load, max. | 100 Hz |
| ● with inductive load, max. | 0.5 Hz |
| ● on lamp load, max. | 1 Hz |
| Total current of the outputs (per group) | |
| all mounting positions | |
| — up to 60 °C, max. | 3.9 A |
| Cable length | |
| ● unshielded, max. | 30 m |
| **Interfaces** | |
| Transmission procedure | 100BASE-TX |
| Number of PROFINET interfaces | 1 |
| **1. Interface** | |
| Interface types | |
| ● integrated switch | Yes |
| PROFINET IO Device | |
| Services | |
| — IRT with the option "high flexibility" | Yes |
| — Prioritized startup | Yes |
| **Interface types** | |
| M12 port | |
| ● Autonegotiation | Yes |
| ● Autocrossing | Yes |
| ● Transmission rate, max. | 100 Mbit/s |
| **Protocols** | |
| Supports protocol for PROFINET IO | Yes |
| PROFINET CBA | No |
| PROFIsafe | No |
| Redundancy mode | |
| Media redundancy | |
| — MRP | Yes |
| Open IE communication | |
| ● TCP/IP | No |
| ● SNMP | Yes |
| ● DCP | Yes |
| ● LLDP | Yes |
| ● ping | Yes |
| ● ARP | Yes |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes |
| Alarms | |
| ● Diagnostic alarm | Yes |
| Diagnoses | |
| ● Diagnostic information readable | Yes |
| ● Monitoring the supply voltage | Yes; green "ON" LED |
| ● Wire-break in actuator cable | Yes |
| ● Short-circuit | Yes |
| ● Group error | Yes; Red/yellow "SF/MT" LED |
| **Potential separation** | |
| between the load voltages | Yes |
| between load voltage and all other switching components | No |
| between Ethernet and electronics | Yes |
| Potential separation channels | |
| ● between the channels | No |
| **Isolation** | |
| tested with | |
| ● 24 V DC circuits | 707 V DC (type test) |
| ● Test voltage for interface, rms value [Vrms] | 1 500 V; According to IEEE 802.3 |


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|---|---|
| **Degree and class of protection** | |
| IP degree of protection | IP65/67 |
| **Standards, approvals, certificates** | |
| Suitable for safety-related tripping of standard modules | Yes |
| Highest safety class achievable for safety-related tripping of standard modules | |
| ● Performance level according to ISO 13849-1 | PL d |
| ● Category according to ISO 13849-1 | Cat. 3 |
| ● SIL acc. to IEC 62061 | SIL 2 |
| ● remark on safety-oriented shutdown | https://support.industry.siemens.com/cs/de/en/view/39198632 |
| Use in hazardous areas | |
| ● Explosion protection category for gas | ATEX II 3G Ex nA II T4 |
| ● Explosion protection category for dust | ATEX II 3D Ex tc IIIC T90°C Dc |
| **Connection method** | |
| Design of electrical connection | 4/5-pin M12 circular connectors |
| **Dimensions** | |
| Width | 60 mm |
| Height | 175 mm |
| Depth | 49 mm |
| **Weights** | |
| Weight, approx. | 910 g |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-24-26-04 |
| eClass | 14 | 27-24-26-04 |
| eClass | 12 | 27-24-26-04 |
| eClass | 9.1 | 27-24-26-04 |
| eClass | 9 | 27-24-26-04 |
| eClass | 8 | 27-24-26-04 |
| eClass | 7.1 | 27-24-26-04 |
| eClass | 6 | 27-24-26-04 |
| ETIM | 10 | EC001599 |
| ETIM | 9 | EC001599 |
| ETIM | 8 | EC001599 |
| ETIM | 7 | EC001599 |
| IDEA | 4 | 3566 |
| UNSPSC | 15 | 32-15-17-05 |

**Approvals / Certificates**

**General Product Approval**

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

| General Product Approval | EMV | For use in hazardous locations |
|---|---|---|

RCM | EAC | China RoHS | RCM | ATEX | IECEx

| For use in hazardous locations | Maritime application |
|---|---|


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CCC-Ex | ATEX | Miscellaneous | CCC-Ex | ABS | BUREAU VERITAS

**Maritime application**

DNV | LRS | NK / Nippon Kaiji Kyokai | RINA | CCS (China Classification Society) | KR (Korean Register of Shipping)

**Industrial Communication**

PROFINET

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