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Data sheet 6ES7142-6BF50-0AB0



Figure similar

*** spare part *** SIMATIC DP, ET 200eco PN, 8 DO 24 V DC/0.5 A; 4xM12, duplicate assignment, 1 load voltage supply DO; 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)	100 mA
from load voltage 2L+, max.	4 A
Power loss	
Power loss, typ.	3 W
Digital outputs	
Number of digital outputs	8
● in groups of	8
Short-circuit protection	Yes
● Response threshold, typ.	0.7 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	0.5 A
● for signal "0" residual current, max.	1.5 mA
Parallel switching of two outputs	
● for uprating	No

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● for redundant control of a load	Yes
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.	4 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)

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● Test voltage for interface, rms value [Vrms]	1 500 V; According to IEEE 802.3
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	30 mm
Height	200 mm
Depth	49 mm
Weights	
Weight, approx.	550 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

Miscellaneous | Manufacturer Declaration

General Product Approval

China RoHS

EMV

For use in hazardous locations

For use in hazardous locations

Maritime application

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CCC-Ex



Miscellaneous

CCC-Ex





Maritime application





NK / Nippon Kaiji Kyokai



CCS (China Classification Society)

KR (Korean Register of Shipping)

Industrial Communication

PROFINET

last modified: 10/23/2025

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