SIEMENS

Data sheet 6ES7148-6JA00-0AB0



Figure similar

spare part SIMATIC DP, ET 200eco PN, IO-Link master, 4IO-L + 8 DI + 4 DO 24 V DC/1.3 A 8xM12, Duplicate assignment, degree of protection IP67

General information	
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0306H
Product function	
● Isochronous mode	No
● IRT	No
Operating mode	
● IO-Link	Yes
● DI	Yes
● DQ	Yes
Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
power supply according to NEC Class 2 required	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.	200 mA
from supply voltage 1L+, max.	4 A
from load voltage 2L+, max.	4 A
Encoder supply	
Number of outputs	6
24 V encoder supply	
● Short-circuit protection	Yes
● Output current, max.	200 mA; 100 mA per output to X5-X6
Power loss	
Power loss, typ.	8 W
Digital inputs	
Number of digital inputs	8
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 60 °C, max.	8
Input voltage	
● Rated value (DC)	24 V

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● for signal "0"	-3 to +5V
● for signal "1"	+11 to +30V
Input current	
● for signal "0", max. (permissible quiescent current)	1.5 mA
● for signal "1", typ.	7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", max.	typically 3 ms
— at "1" to "0", max.	typically 3 ms
Cable length	
● unshielded, max.	30 m
Digital outputs	
Number of digital outputs	4
Short-circuit protection	Yes; Electronic
● 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
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
IO-Link	
Number of ports	4
● of which simultaneously controllable	4
IO-Link protocol 1.0	Yes
IO-Link protocol 1.1	No
Transmission rate	4.8 kBd (COM1); 38.4 kBd (COM2)
Size of process data, input per port	32 byte
Size of process data, input per module	32 byte
Size of process data, output per port	32 byte
Size of process data, output per module	32 byte
Cable length unshielded, max.	20 m
Operating modes	
● IO-Link	Yes
● DI	Yes
● DQ	Yes
Connection of IO-Link devices	
● Port type A	Yes
● via three-wire connection	Yes
Interfaces	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1
1. Interface	
Interface types	
● M12 port	Yes
● integrated switch	Yes

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PROFINET IO Device	
Services	
— IRT with the option "high flexibility"	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
EtherNet/IP	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
• Wire-break in signal transmitter cable	Yes
• short-circuit	Yes
• Short-circuit encoder supply	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
Degree and class of protection	
IP degree of protection	IP65/67
Standards, approvals, certificates	
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
Dimensions	
Width	60 mm
Height	175 mm
Depth	49 mm
Weights	
Weight, approx.	910 g
Classifications	

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	Version	Classification
eClass	16	27-24-26-08
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





Miscellaneous

Manufacturer Declaration





General Product Approval





China RoHS

EMV



For use in hazardous locations





For use in hazardous locations

CCC-Ex



Miscellaneous

CCC-Ex

Maritime application





Maritime application





NK / Nippon Kaiji Kyokai



CCS (China Classification Society)

KR (Korean Register of Shipping)

Industrial Communication

PROFINET

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