

Data sheet

6ES7147-6BG00-0AB0



Figure similar

*** spare part *** SIMATIC DP, ET 200eco PN, 8 DIO 24 V DC/1.3 A; 8xM12, 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 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
Encoder supply	
24 V encoder supply	
• Short-circuit protection	Yes; Electronic
• Output current, max.	100 mA; per output
Power loss	
Power loss, typ.	6.5 W
Digital inputs	
Number of digital inputs	8
• in groups of	4
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
• for signal "0"	-3 to +5V
• for signal "1"	+11 to +30V
Input current	
• 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	8
• in groups of	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 "1" permissible range, max.	1.3 A
• 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
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Interfaces	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1
1. Interface	
Interface types	
• M12 port	Yes
• 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 • LLDP • ping • ARP	Yes Yes Yes Yes		
Interrupts/diagnostics/status information			
Diagnostics function	Yes		
Alarms			
• Diagnostic alarm	Yes		
Diagnoses			
• Diagnostic information readable • Monitoring the supply voltage • Wire-break in actuator cable • Wire-break in signal transmitter cable • Short-circuit • Short-circuit encoder supply • Group error	Yes Yes; green "ON" LED Yes Yes Yes Yes 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 • Test voltage for interface, rms value [Vrms]	707 V DC (type test) 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	No		
Use in hazardous areas			
• Explosion protection category for gas • Explosion protection category for dust	ATEX II 3G Ex nA II T4 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	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	EMV
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[Miscellaneous](#)



Maritime application



[CCS \(China Classification Society\)](#)

other	Environment
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[Miscellaneous](#)

[Environmental Confirmations](#)

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