SIEMENS

Data sheet

6ES7147-6BG00-0AB0

SIMATIC DP, ET 200ECO PN, 8 DIO 24V DC/1,3A; 8 X M12, DEGREE OF PROTECTION IP67



Figure similar

General information	
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0306H
Supply voltage	
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
 Reverse polarity protection 	Yes
Input current	
Current consumption, typ.	100 mA
from supply voltage 1L+, max.	4 A
from load voltage 2L+, max.	4 A
Encoder supply	

Number of outputs	8
Short-circuit protection	Yes; Electronic
Output current	
Rated value	100 mA; per output
Power loss Power loss, typ.	6.5 W
	0.5 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	
 Type of input voltage 	DC
 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 "0" residual current, max.	1.5 mA
Parallel switching of two outputs	
 for uprating 	No

	Yes
for redundant control of a load	res
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	1.5 mA
sensor), max.	
Interfaces	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1
PROFINET IO	
Autocrossing	Yes
 automatic detection of transmission rate 	Yes
 Transmission rate, max. 	100 Mbit/s
 integrated switch 	Yes
Protocols	
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No
Protocols (Ethernet)	
• TCP/IP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
• ping	Yes
• ARP	Yes
ARP PROFINET IO Device	
Services	
	Yes
— IRT with the option "high flexibility"	
— Prioritized startup	Yes
Interrupts/diagnostics/status information	
Status indicator	Yes; Green LED
Diagnostic functions	Yes

Alarms	
Diagnostic alarm	Yes
Diagnostic messages	
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 digital inputs	
 between the channels 	No
Potential separation digital outputs	
• between the channels	No
Isolation	
tested with	
• 24 V DC circuits	707 V DC (type test)
 24 V DC circuits Interface	707 V DC (type test) 1 500 V; According to IEEE 802.3
Interface	
Interface Degree and class of protection IP degree of protection	1 500 V; According to IEEE 802.3
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Interface Degree and class of protection IP degree of protection Standards, approvals, certificates	1 500 V; According to IEEE 802.3 IP65/67
Interface Degree and class of protection IP degree of protection Standards, approvals, certificates Suitable for safety-oriented group deactivation	1 500 V; According to IEEE 802.3 IP65/67
Interface Degree and class of protection IP degree of protection Standards, approvals, certificates Suitable for safety-oriented group deactivation Highest safety class achievable in safety mode	1 500 V; According to IEEE 802.3 IP65/67 Yes
Interface Degree and class of protection IP degree of protection Standards, approvals, certificates Suitable for safety-oriented group deactivation Highest safety class achievable in safety mode • Performance level according to ISO 13849-1	1 500 V; According to IEEE 802.3 IP65/67 Yes d
Interface Degree and class of protection IP degree of protection Standards, approvals, certificates Suitable for safety-oriented group deactivation Highest safety class achievable in safety mode Performance level according to ISO 13849-1 SIL acc. to IEC 61508	1 500 V; According to IEEE 802.3 IP65/67 Yes d
 Interface Degree and class of protection IP degree of protection Standards, approvals, certificates Suitable for safety-oriented group deactivation Highest safety class achievable in safety mode • Performance level according to ISO 13849-1 • SIL acc. to IEC 61508 Connection method Design of electrical connection Dimensions	1 500 V; According to IEEE 802.3 IP65/67 Yes d 2 4/5-pin M12 circular connectors
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