SIEMENS

Data sheet

6ES7142-6BF50-0AB0



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

Figure	simil	ar
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General information	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		
 for redundant control of a load 	Yes		

Outlinking for success	
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
Interface types	
M12 port	
Autonegotiation	Yes
Autocrossing	Yes
Transmission rate, max.	100 Mbit/s
• Transmission rate, max. Protocols	
	Vac
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No
PROFINET IO Device	
Services	
 IRT with the option "high flexibility" 	Yes
— Prioritized startup	Yes
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	100
Diagnostic alarm	Yes
Diagnoses	100
Diagnostic information readable	Vac
	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
Degree and class of protection	
IP degree of protection	IP65/67
J F	

Standards, approvals, certificates		
	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	
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