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

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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			

Outbalies 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				
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				
-	Ven			
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)			
 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			
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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