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 similar

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
Switching frequency	
with resistive load, max.	100 Hz
 with resistive load, max. 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	Vac
Autoregotiation	Yes
Autocrossing Transmission rate, max	Yes 100 Mbit/s
Transmission rate, max.	
Protocols	No.
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No
PROFINET IO Device	
Services	Voo
 IRT with the option "high flexibility" Prioritized startup 	Yes
- Prioritized startup	
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
Short-circuit	Yes
Group error	Yes; Red/yellow "SF/MT" LED
Potential separation	
	Yes
between the load voltages	Yes
between load voltage and all other switching components between Ethernet and electronics	Yes
Potential separation channels • between the channels	No
	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
connection method / header	
Design of electrical connection	4/5-pin M12 circular connectors
Design of electrical connection Dimensions	4/5-pin M12 circular connectors
	4/5-pin M12 circular connectors 30 mm
Dimensions	
Dimensions Width	30 mm
Dimensions Width Height	30 mm 200 mm
Dimensions Width Height Depth	30 mm 200 mm