## SIEMENS

## Data sheet

## 6ES7148-6JA00-0AB0



SIMATIC DP, ET 200ECO PN, IO-Link master, 4IO-L+8DI+4DO 24 V DC/1.3A 8xM12, Duplicate assignment, Degree of protection IP67

Fi	gı	ure	S	mi	lar

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			
<ul> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V			
<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V			
<ul> <li>Reverse polarity protection</li> </ul>	Yes			
Input current				
Current consumption, typ.	200 mA			
from supply voltage 1L+, max.	4 A			
from load voltage 2L+, max.	4 A			
Encoder supply				
Number of outputs	6			
24 V encoder supply				
<ul> <li>Short-circuit protection</li> </ul>	Yes			
Output current, max.	200 mA; 100 mA per output to X5-X6			
Power loss				
Power loss, typ.	8 W			
Digital inputs				
Number of digital inputs	8			
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			
<ul> <li>for signal "0"</li> </ul>	-3 to +5V			
● for signal "1"	+11 to +30V			
Input current				
<ul> <li>for signal "0", max. (permissible quiescent current)</li> </ul>	1.5 mA			
<ul> <li>for signal "1", typ.</li> </ul>	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	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	
<ul> <li>for signal "1" rated value</li> </ul>	1.3 A; Maximum
<ul> <li>for signal "0" residual current, max.</li> </ul>	1.5 mA
Parallel switching of two outputs	
• for uprating	No
<ul> <li>for redundant control of a load</li> </ul>	Yes
Switching frequency	
<ul> <li>with resistive load, max.</li> </ul>	100 Hz
<ul> <li>with inductive load, max.</li> </ul>	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
IO-Link	
Number of ports	4
<ul> <li>of which simultaneously controllable</li> </ul>	4
IO-Link protocol 1.0	Yes
IO-Link protocol 1.1	No
Transmission rate	4.8 kBd (COM1); 38.4 kBd (COM2)
Size of process data, input per port	32 byte
Size of process data, input per module	32 byte
Size of process data, output per port	32 byte
Size of process data, output per module	32 byte
Cable length unshielded, max.	20 m
Operating modes	N
• IO-Link	Yes
• DI • DQ	Yes
Connection of IO-Link devices	Tes
Port type A	Yes
via three-wire connection	Yes
Interfaces	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1
1. Interface	
Interface types	
	Yes
<ul> <li>M12 port</li> <li>integrated switch</li> </ul>	Yes
Integrated switch     Interface types	
M12 port	
Autonegotiation	Yes
Autoregoliation     Autoressing	Yes
Autocrossing     Transmission rate, max.	100 Mbit/s
Protocols	
	Yes
Supports protocol for PROFINET IO PROFINET CBA	No
PROFINET CBA	No
I NUFISAIC	NU

EtherNet/IP	No			
PROFINET IO Device				
Services				
<ul> <li>IRT with the option "high flexibility"</li> </ul>	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				
Diagnostic alarm	Yes			
Diagnoses				
Diagnostic information readable	Yes			
<ul> <li>Monitoring the supply voltage</li> </ul>	Yes; green "ON" LED			
Wire-break in actuator cable	Yes			
Wire-break in signal transmitter cable	Yes			
Short-circuit	Yes			
<ul> <li>Short-circuit encoder supply</li> </ul>	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				
Use in hazardous areas				
Explosion protection category for gas	ATEX II 3G Ex nA II T4			
Explosion protection category for dust	ATEX II 3G EX IA II 14 ATEX II 3D Ex tc IIIC T90°C Dc			
Dimensions				
	60 mm			
Width	60 mm			
Height	175 mm			
Depth	49 mm			
Weights	040			
Weight, approx. 910 g				
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