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Data sheet 6ES7147-5JD01-0BA0



SIMATIC ET 200AL, CM 4x IO-Link, 4x M12, degree of protection IP67

General information	
Product type designation	CM 4x IO-Link
HW functional status	FS01
Firmware version	V2.0.0
Product function	
● I&M data	Yes; I&M0 to I&M4
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	STEP 7 V18 or higher
● STEP 7 configurable/integrated from version	STEP 7 V5.7 or higher SP1 or higher
● PROFIBUS from GSD version/GSD revision	GSD as of Revision 5
● PROFINET from GSD version/GSD revision	GSDML V2.4.x
Operating mode	
● IO-Link	Yes
● DI	Yes
● DQ	Yes; max. 100 mA
Supply voltage	
power supply according to NEC Class 2 required	No
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; against destruction
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; Against destruction; actuator power supply outputs applied with reversed polarity
Input current	
Current consumption (rated value)	30 mA; without load
from load voltage 1L+ (unswitched voltage)	4 A; Maximum value
from load voltage 2L+, max.	4 A; Maximum value
Encoder supply	
Number of outputs	4
24 V encoder supply	
● Short-circuit protection	Yes; per channel, electronic
● Output current, max.	4 A; total current of all ports, max. 2 A per channel
Power loss	
Power loss, typ.	3 W

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Address area	
Address space per module	
● Inputs	132 byte
● Outputs	128 byte
IO-Link	
Number of ports	4
● of which simultaneously controllable	4
IO-Link protocol 1.0	Yes
IO-Link protocol 1.1	Yes
Transmission rate	4.8 kBaud (COM1); 38.4 kBaud (COM2), 230 kBaud (COM3)
Cycle time, min.	2 ms
Size of process data, input per port	33 byte
Size of process data, input per module	132 byte
Size of process data, output per port	32 byte
Size of process data, output per module	128 byte
Memory size for device parameter	2 kbyte; for each port
Master backup	possible with LIOLink_Master function block
Configuration without S7-PCT	Possible; autostart/manual function
Cable length unshielded, max.	20 m
Connection of IO-Link devices	
● Port type A	Yes; via 3-core cable
● Port type B	Yes; additional device supply: max. 1.6 A per port, max. 4 A per module
Interrupts/diagnostics/status information	
Alarms	
● Diagnostic alarm	Yes; Parameterizable
Diagnoses	
● Monitoring the supply voltage	Yes
● Wire break	Yes
● Short-circuit	Yes
Diagnostics indication LED	
● Channel status display	Yes; green LED
● for module diagnostics	Yes; green/red LED
● For load voltage monitoring	Yes; green LED
Potential separation	
between the load voltages	Yes
Potential separation channels	
● between the channels	No
● between the channels and backplane bus	Yes
● between the channels and the power supply of the electronics	No
Isolation	
Isolation tested with	707 V DC (type test)
Degree and class of protection	
IP degree of protection	IP65/67
Standards, approvals, certificates	
Suitable for safety-related tripping of standard modules	Yes
Security	
signed firmware update	Yes
data integrity	Yes
Ambient conditions	
Ambient temperature during operation	
● min.	-30 °C
● max.	55 °C
Connection method	
Design of electrical connection for the inputs and outputs	M12, 5-pin, A-coded
Design of electrical connection for supply voltage	M8, 4-pole
ET-Connection	
● ET-Connection	M8, 4-pin, shielded

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Dimensions	
Width	30 mm
Height	159 mm
Depth	40 mm

Weights	
Weight, approx.	145 g

Classifications

	Version	Classification
eClass	16	27-24-26-08
eClass	14	27-24-26-08
eClass	12	27-24-26-08
eClass	9.1	27-24-26-08
eClass	9	27-24-26-08
eClass	8	27-24-26-08
eClass	7.1	27-24-26-08
eClass	6	27-24-26-08
ETIM	10	EC001604
ETIM	9	EC001604
ETIM	8	EC001604
ETIM	7	EC001604

Approvals / Certificates

General Product Approval

Miscellaneous | Manufacturer Declaration | UL | RCM | China RoHS | EG-Konf.

General Product Approval	EMV	Maritime application

UKCA | RCM | ABS | BUREAU VERITAS | DNV | LRS

Maritime application

NK / Nippon Kaiji Kyokai | RINA | CCS (China Classification Society) | KR (Korean Register of Shipping)

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