SIEMENS

Data sheet 6ES7147-5JD00-0BA0

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	FS08
Firmware version	V1.2.x
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	No
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	STEP 7 V13 SP1 or higher
● STEP 7 configurable/integrated from version	From V5.5 SP4 Hotfix 3
● PROFIBUS from GSD version/GSD revision	GSD as of Revision 5
● PROFINET from GSD version/GSD revision	GSDML V2.3.1
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
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; load increasing
Input current	
Current consumption (rated value)	40 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 module, electronic
● Output current, max.	1.4 A; Total current of all ports
Power loss	
Power loss, typ.	2.6 W
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)
Size of process data, input per port	32 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 function block IO_LINK_MASTER
Configuration without S7-PCT	Possible; autostart/manual function
Cable length unshielded, max.	20 m
Operating modes	
● IO-Link	Yes
● DI	Yes
● DQ	Yes; max. 100 mA
Connection of IO-Link devices	
● Port type A	Yes; via 3-core cable
● Port type B	Yes; Additional device supply: 1.6 A total current of all ports
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; from FS01
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
● SILCL according to IEC 62061	SILCL 2
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-pole
Design of electrical connection for supply voltage	M8, 4-pole
ET-Connection	
● ET-Connection	M8, 4-pin, shielded
Dimensions	
Width	30 mm
Height	159 mm

Depth	40 mm

Weights

Weight, approx.	145 g

Classifications

	Version	Classification
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
IDEA	4	3564
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

EG-Konf. | UKCA | Miscellaneous | Manufacturer Declaration | UL | RCM

EMV	Functional Saftey	Maritime application

RCM | TÜV | ABS | BUREAU VERITAS | DNV | LRS

Maritime application

NK / Nippon Kaiji Kyokai | RINA | CCS (China Classification Society) | KR

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