SIEMENS

Data sheet 6ES7137-6BD00-0BA0

SIMATIC ET 200SP, CM 4xIO-Link ST Communication module IO-Link Master V1.1

General information	
Product type designation	CM 4 x IO-Link ST
HW functional status	FS20
Firmware version	V2.2.2
● FW update possible	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC04
Product function	
● I&M data	Yes; I&M0 to I&M3
● Isochronous mode	No; Only for PROFINET and configuration as version with FW V2.0 or V2.1
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	STEP 7 V15 or higher
● STEP 7 configurable/integrated from version	STEP 7 V5.5 or higher
● PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
● PROFINET from GSD version/GSD revision	GSDML V2.3
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V; 20.5 V if IO-Link is used, as the supply voltage for IO-Link devices has to be at least 20 V at the master.
permissible range, upper limit (DC)	28.8 V
power supply according to NEC Class 2 required	No
Input current	
Current consumption, max.	45 mA; without load
Encoder supply	
Number of outputs	4
Output current	
● Rated value	700 mA; Per channel
24 V encoder supply	
● Short-circuit protection	Yes
● Output current, max.	2.1 A
Power loss	
Power loss, typ.	1 W
Hardware configuration	
Automatic encoding	Yes
● Electronic coding element type H	Yes
Digital outputs	
Cable length	
● unshielded, max.	20 m; Also applies for shielded cables
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), 230.4 kBaud (COM3)
Cycle time, min.	2 ms; dynamic, depending on user data length
Size of process data, input per port	32 byte; max.
Size of process data, input per module	144 byte; max.
Size of process data, output per port	32 byte; max.
Size of process data, output per module	128 byte; max.
Memory size for device parameter	2 kbyte; for each port
Master backup	Yes
Configuration without S7-PCT	Yes
Cable length unshielded, max.	20 m
Operating modes	
● IO-Link	Yes
● DI	Yes
● DQ	Yes; max. 100 mA per channel
Time Based IO	
— TIO IO-Link IN	No; Only for PROFINET and configuration as version with FW V2.0 or V2.1
— TIO IO-Link OUT	No; Only for PROFINET and configuration as version with FW V2.0 or V2.1
— TIO IO-Link IN/OUT	No; Only for PROFINET and configuration as version with FW V2.0 or V2.1
Connection of IO-Link devices	
● Port type A	Yes
● Port type B	Yes; 24 V DC via external terminal
● via three-wire connection	Yes
Interrupts/diagnostics/status information	
Alarms	
● Diagnostic alarm	Yes; The port diagnosis is available in the IO-Link mode only.
Diagnoses	
● Monitoring the supply voltage	Yes
● Wire-break	Yes
● Short-circuit	Yes
● Group error	Yes
Diagnostics indication LED	
● Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
● Channel status display	Yes; one green LED for channel status Qn (SIO mode) and port status Cn (IO-Link mode) per channel
● for channel diagnostics	Yes; red Fn LED
● for module diagnostics	Yes; green/red DIAG LED
Potential separation	
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)
Ambient conditions	
Ambient temperature during operation	
● horizontal installation, min.	-30 °C
● horizontal installation, max.	60 °C
● vertical installation, min.	-30 °C
● vertical installation, max.	50 °C
Altitude during operation relating to sea level	
● Installation altitude above sea level, max.	2 000 m; On request: Installation altitudes greater than 2 000 m
Dimensions	
Width	13 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	30 g

last modified: 8/16/2023