



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
Operating mode	
• IO-Link	Yes
• DI	Yes
• DQ	Yes; max. 100 mA per channel
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
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
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)
Standards, approvals, certificates	
Ecological footprint	
• environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	25.2 kg
— global warming potential, (during production) [CO2 eq]	6.15 kg
— global warming potential, (during operation) [CO2 eq]	19.4 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.289 kg
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	
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	9	EC001604
	ETIM	8	EC001604
	ETIM	7	EC001604
	IDEA	4	3564
	UNSPSC	15	32-15-17-05
Approvals / Certificates			
General Product Approval			For use in hazardous locations
Manufacturer Declaration  EG-Konf.   UL  RCM  UL			
For use in hazardous locations			Marine / Shipping
CCC-Ex FM  ATEX  IECEx Miscellaneous  ABS			
Marine / Shipping			
   NK / Nippon Kaiji Kyokai  			
Marine / Shipping		Environment	
CCS (China Classification Society)  			

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