



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
<ul style="list-style-type: none"> FW update possible 	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC04
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No; Only for PROFINET and configuration as version with FW V2.0 or V2.1
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	STEP 7 V15 or higher
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	STEP 7 V5.5 or higher
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> IO-Link 	Yes
<ul style="list-style-type: none"> DI 	Yes
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Rated value 	700 mA; Per channel
24 V encoder supply	
<ul style="list-style-type: none"> Short-circuit protection 	Yes
<ul style="list-style-type: none"> Output current, max. 	2.1 A
Power loss	
Power loss, typ.	1 W
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> Electronic coding element type H 	Yes
Digital outputs	

Cable length	
<ul style="list-style-type: none"> unshielded, max. 	20 m; Also applies for shielded cables
IO-Link	
Number of ports	4
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> TIO IO-Link IN TIO IO-Link OUT TIO IO-Link IN/OUT 	No; Only for PROFINET and configuration as version with FW V2.0 or V2.1 No; Only for PROFINET and configuration as version with FW V2.0 or V2.1 No; Only for PROFINET and configuration as version with FW V2.0 or V2.1
Connection of IO-Link devices	
<ul style="list-style-type: none"> Port type A Port type B via three-wire connection 	Yes Yes; 24 V DC via external terminal Yes
Interrupts/diagnostics/status information	
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	Yes; The port diagnosis is available in the IO-Link mode only.
Diagnoses	
<ul style="list-style-type: none"> Monitoring the supply voltage Wire-break Short-circuit Group error 	Yes Yes Yes Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics 	Yes; green PWR LED Yes; one green LED for channel status Qn (SIO mode) and port status Cn (IO-Link mode) per channel Yes; red Fn LED Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> between the channels between the channels and backplane bus between the channels and the power supply of the electronics 	No Yes No
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Ecological footprint	
<ul style="list-style-type: none"> 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	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

[Manufacturer Declaration](#)

[Miscellaneous](#)



For use in hazardous locations



[CCC-Ex](#)

[FM](#)



[Type Examination Certificate](#)

[Miscellaneous](#)

For use in hazardous locations | **Maritime application**



[NK / Nippon Kaiji Kyokai](#)


Maritime application | **Environment**



[CCS \(China Classification Society\)](#)



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