



Figure similar

SIPLUS ET 200SP CM 4xIO-LINK based on 6ES7137-6BD00-0BA0 with conformal coating, -40...+60 °C, communication module IO-Link master V1.1

General information	
Product type designation	CM 4 x IO-Link ST
based on	6ES7137-6BD00-0BA0
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	see entry ID: 109746275
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)	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
Reverse polarity protection	Yes
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
Cable length unshielded, max.	20 m; max.
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
Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation)
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-40 °C; = Tmin (incl. condensation/frost)
• horizontal installation, max.	60 °C; = Tmax; +70 °C with spacing modules (6AG1193-6BN00-7BA0) or configured slots to the left and right of the module
• vertical installation, min.	-40 °C; = Tmin
• vertical installation, max.	50 °C; = Tmax
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and	Yes; Incl. diesel and oil droplets in the air

lubricants																																								
Use in stationary industrial systems																																								
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request																																							
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *																																							
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *																																							
— Against mechanical environmental conditions acc. to EN 60721-3-3	Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)																																							
Use on ships/at sea																																								
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request																																							
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *																																							
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *																																							
— Against mechanical environmental conditions acc. to EN 60721-3-6	Yes; Class 6M4 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)																																							
Usage in industrial process technology																																								
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)																																							
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)																																							
Remark																																								
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!																																							
Conformal coating																																								
● Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability																																							
● Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection																																							
● Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life																																							
● Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A																																							
Dimensions																																								
Width	15 mm																																							
Height	73 mm																																							
Depth	58 mm																																							
Weights																																								
Weight, approx.	30 g																																							
Classifications																																								
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[Miscellaneous](#)

[Manufacturer Declaration](#)



For use in hazardous locations	Marine / Shipping	Environment
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[CCC-Ex](#)



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