



S7-1500, CM 8xIO-Link, communication module IO-Link Master V1.1; Front connector (screw terminals or push-in) to be ordered separately

| General information                                      |                                   |
|----------------------------------------------------------|-----------------------------------|
| Product type designation                                 | CM 8xIO-Link                      |
| HW functional status                                     | FS04                              |
| Firmware version                                         | V1.0.2                            |
| • FW update possible                                     | Yes                               |
| Product function                                         |                                   |
| • I&M data                                               | Yes; I&M0 to I&M3                 |
| • Isochronous mode                                       | No                                |
| Engineering with                                         |                                   |
| • STEP 7 TIA Portal configurable/integrated from version | V15.1 with HSP 274                |
| • STEP 7 configurable/integrated from version            | Configurable via GSD file         |
| • PROFIBUS from GSD version/GSD revision                 | GSD as of Revision 5              |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.34                       |
| Operating mode                                           |                                   |
| • IO-Link                                                | Yes                               |
| • DI                                                     | Yes                               |
| • DQ                                                     | No                                |
| Supply voltage                                           |                                   |
| 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                               |
| Input current                                            |                                   |
| Current consumption, max.                                | 50 mA; without load               |
| Encoder supply                                           |                                   |
| Number of outputs                                        | 8                                 |
| Output current                                           |                                   |
| • Rated value                                            | 1 A; 4 A total current per module |
| 24 V encoder supply                                      |                                   |
| • Short-circuit protection                               | Yes; per channel, electronic      |
| Power                                                    |                                   |
| Power consumption from the backplane bus                 | 1.1 W                             |
| IO-Link                                                  |                                   |
| Number of ports                                          | 8                                 |
| • of which simultaneously controllable                   | 8                                 |
| IO-Link protocol 1.0                                     | Yes                               |
| IO-Link protocol 1.1                                     | Yes                               |
| Cycle time, min.                                         | 2 ms                              |
| Size of process data, input per port                     | 33 byte; max.                     |

|                                                                                               |                                                                        |         |                |
|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------|----------------|
| Size of process data, input per module                                                        | 240 byte; max.                                                         |         |                |
| Size of process data, output per port                                                         | 32 byte; max.                                                          |         |                |
| Size of process data, output per module                                                       | 240 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"><li>• TIO IO-Link IN</li></ul>                              | No                                                                     |         |                |
| <ul style="list-style-type: none"><li>• TIO IO-Link OUT</li></ul>                             | No                                                                     |         |                |
| <ul style="list-style-type: none"><li>• TIO IO-Link IN/OUT</li></ul>                          | No                                                                     |         |                |
| Connection of IO-Link devices                                                                 |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• Port type A</li></ul>                                 | Yes                                                                    |         |                |
| <ul style="list-style-type: none"><li>• Port type B</li></ul>                                 | Yes; 24 V DC via external terminal                                     |         |                |
| Interrupts/diagnostics/status information                                                     |                                                                        |         |                |
| Alarms                                                                                        |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• Diagnostic alarm</li></ul>                            | Yes; The port diagnosis is available in the IO-Link mode only.         |         |                |
| Diagnoses                                                                                     |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• Monitoring the supply voltage</li></ul>               | Yes                                                                    |         |                |
| <ul style="list-style-type: none"><li>• Wire-break</li></ul>                                  | Yes                                                                    |         |                |
| <ul style="list-style-type: none"><li>• Short-circuit</li></ul>                               | Yes                                                                    |         |                |
| <ul style="list-style-type: none"><li>• Group error</li></ul>                                 | Yes                                                                    |         |                |
| Diagnostics indication LED                                                                    |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• Monitoring of the supply voltage (PWR-LED)</li></ul>  | Yes; green LED                                                         |         |                |
| <ul style="list-style-type: none"><li>• Channel status display</li></ul>                      | Yes; green LED                                                         |         |                |
| <ul style="list-style-type: none"><li>• for channel diagnostics</li></ul>                     | Yes; red LED                                                           |         |                |
| <ul style="list-style-type: none"><li>• for module diagnostics</li></ul>                      | Yes; red LED                                                           |         |                |
| Potential separation                                                                          |                                                                        |         |                |
| Potential separation channels                                                                 |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• between the channels</li></ul>                        | No                                                                     |         |                |
| <ul style="list-style-type: none"><li>• between the channels and backplane bus</li></ul>      | Yes                                                                    |         |                |
| Isolation                                                                                     |                                                                        |         |                |
| Isolation tested with                                                                         | 707 V DC (type test)                                                   |         |                |
| Ambient conditions                                                                            |                                                                        |         |                |
| Ambient temperature during operation                                                          |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• horizontal installation, min.</li></ul>               | -30 °C                                                                 |         |                |
| <ul style="list-style-type: none"><li>• horizontal installation, max.</li></ul>               | 60 °C; Observe derating                                                |         |                |
| <ul style="list-style-type: none"><li>• vertical installation, min.</li></ul>                 | -30 °C                                                                 |         |                |
| <ul style="list-style-type: none"><li>• vertical installation, max.</li></ul>                 | 40 °C; Observe derating                                                |         |                |
| Altitude during operation relating to sea level                                               |                                                                        |         |                |
| <ul style="list-style-type: none"><li>• Installation altitude above sea level, max.</li></ul> | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |         |                |
| Dimensions                                                                                    |                                                                        |         |                |
| Width                                                                                         | 35 mm                                                                  |         |                |
| Height                                                                                        | 147 mm                                                                 |         |                |
| Depth                                                                                         | 129 mm                                                                 |         |                |
| Classifications                                                                               |                                                                        |         |                |
|                                                                                               |                                                                        | Version | Classification |
|                                                                                               | eClass                                                                 | 14      | 27-24-22-08    |
|                                                                                               | eClass                                                                 | 12      | 27-24-22-08    |
|                                                                                               | eClass                                                                 | 9.1     | 27-24-22-08    |
|                                                                                               | eClass                                                                 | 9       | 27-24-22-08    |
|                                                                                               | eClass                                                                 | 8       | 27-24-22-08    |
|                                                                                               | eClass                                                                 | 7.1     | 27-24-22-08    |
|                                                                                               | eClass                                                                 | 6       | 27-24-22-08    |
|                                                                                               | ETIM                                                                   | 10      | EC001423       |
|                                                                                               | ETIM                                                                   | 9       | EC001423       |
|                                                                                               | ETIM                                                                   | 8       | EC001423       |

|        |    |             |
|--------|----|-------------|
| ETIM   | 7  | EC001423    |
| IDEA   | 4  | 3564        |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval



[Miscellaneous](#)

[Manufacturer Declaration](#)

[China RoHS](#)



General Product ApprovalFor use in hazardous locations



[FM](#)

[CCC-Ex](#)



For use in hazardous locationsMaritime application

[Type Examination Certificate](#)

[Miscellaneous](#)



Maritime application

[NK / Nippon Kaiji Kyokai](#)



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



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