SIEMENS

Data sheet

6ES7211-1HE40-0XB0

SIMATIC S7-1200, CPU 1211C, compact CPU, DC/DC/relay, onboard I/O: 6 DI 24 V DC; 4 DO relay 2A; 2 AI 0-10 V DC, Power supply: DC 20.4-28.8V DC, Program/data memory 50 KB



| General information | |
|---|--|
| Product type designation | CPU 1211C DC/DC/relay |
| Firmware version | V4.2 |
| Engineering with | |
| Programming package | STEP 7 V14 or higher |
| Supply voltage | |
| Rated value (DC) | |
| • 24 V DC | Yes |
| permissible range, lower limit (DC) | 20.4 V |
| permissible range, upper limit (DC) | 28.8 V |
| Reverse polarity protection | Yes |
| Load voltage L+ | |
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 20.4 V |
| permissible range, upper limit (DC) | 28.8 V |
| Input current | |
| Current consumption (rated value) | 300 mA; CPU only |
| Current consumption, max. | 900 mA; CPU with all expansion modules |

| Inrush current, max. | 12 A; at 28.8 V DC |
|---|---|
| l²t | 0.8 A ² ·s |
| Output current | |
| for backplane bus (5 V DC), max. | 750 mA; Max. 5 V DC for CM |
| Encoder output | |
| Encoder supply 24 V encoder supply | |
| • 24 V | L+ minus 4 V DC min. |
| | |
| Power loss | A W |
| Power loss, typ. | 8 W |
| Memory | |
| Work memory | |
| • integrated | 50 kbyte |
| • expandable | No |
| Load memory | |
| • integrated | 1 Mbyte |
| Plug-in (SIMATIC Memory Card), max. | with SIMATIC memory card |
| Backup | |
| • present | Yes |
| maintenance-free | Yes |
| • without battery | Yes |
| CPU processing times | |
| for bit operations, typ. | 0.08 μs; / instruction |
| for word operations, typ. | 1.7 μs; / instruction |
| for floating point arithmetic, typ. | 2.3 µs; / instruction |
| CPU-blocks | |
| Number of blocks (total) | DBs, FCs, FBs, counters and timers. The maximum number of |
| | addressable blocks ranges from 1 to 65535. There is no |
| | restriction, the entire working memory can be used |
| OB | Limited only by DAM for orde |
| • Number, max. | Limited only by RAM for code |
| Data areas and their retentivity | |
| Retentive data area (incl. timers, counters, flags), | 10 kbyte |
| max. | |
| Flag | |
| • Number, max. | 4 kbyte; Size of bit memory address area |
| Local data | |
| per priority class, max. | 16 kbyte; Priority class 1 (program cycle): 16 KB, priority class 2 to 26: 6 KB |
| Address area | |
| Process image | |
| | |

| Inputs, adjustable | 1 kbyte |
|--|--|
| Outputs, adjustable | 1 kbyte |
| | |
| Hardware configuration | 2 communication modulos, 1 signal board |
| Number of modules per system, max. | 3 communication modules, 1 signal board |
| Time of day | |
| Clock | |
| Hardware clock (real-time) | Yes |
| Backup time | 480 h; Typical |
| Deviation per day, max. | ±60 s/month at 25 °C |
| Digital inputs | |
| Number of digital inputs | 6; Integrated |
| of which inputs usable for technological functions | 6; HSC (High Speed Counting) |
| Source/sink input | Yes |
| Number of simultaneously controllable inputs | |
| all mounting positions | |
| — up to 40 °C, max. | 6 |
| Input voltage | |
| Rated value (DC) | 24 V |
| • for signal "0" | 5 V DC at 1 mA |
| • for signal "1" | 15 V DC at 2.5 mA |
| Input current | |
| ● for signal "1", typ. | 4 mA; nominal |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — parameterizable | 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four |
| — at "0" to "1", min. | 0.2 ms |
| — at "0" to "1", max. | 12.8 ms |
| for interrupt inputs | |
| — parameterizable | Yes |
| for technological functions | |
| — parameterizable | Single phase : 3 @ 100 kHz, differential: 3 @ 80 kHz |
| Cable length | |
| • shielded, max. | 500 m; 50 m for technological functions |
| • unshielded, max. | 300 m; for technological functions: No |
| Digital outputs | |
| Number of digital outputs | 4; Relays |
| Switching capacity of the outputs | |
| with resistive load, max. | 2 A |
| • on lamp load, max. | 30 W with DC, 200 W with AC |

| Output delay with resistive load | |
|--|---|
| • "0" to "1", max. | 10 ms; max. |
| • "1" to "0", max. | 10 ms; max. |
| Relay outputs | |
| Number of relay outputs | 4 |
| Number of operating cycles, max. | mechanically 10 million, at rated load voltage 100 000 |
| Cable length | |
| shielded, max. | 500 m |
| • unshielded, max. | 150 m |
| Analog inputs | |
| Number of analog inputs | 2 |
| Input ranges | |
| Voltage | Yes |
| Input ranges (rated values), voltages | |
| • 0 to +10 V | Yes |
| Input resistance (0 to 10 V) | ≥100k ohms |
| Cable length | |
| • shielded, max. | 100 m; twisted and shielded |
| Analog outputs | |
| Number of analog outputs | 0 |
| Analog value generation for the inputs | |
| Integration and conversion time/resolution per channel | |
| Resolution with overrange (bit including sign), | 10 bit |
| | |
| max. | |
| | Yes |
| max. | Yes 625 µs |
| max.Integration time, parameterizable | |
| max. Integration time, parameterizable Conversion time (per channel) | |
| max. Integration time, parameterizable Conversion time (per channel) Encoder | |
| max. | 625 μs Yes |
| max. | 625 μs Yes PROFINET |
| max. Integration time, parameterizable Conversion time (per channel) Encoder Connectable encoders 2-wire sensor 1. Interface Interface type Physics | 625 μs Yes PROFINET Ethernet |
| max. | 625 μs Yes PROFINET Ethernet Yes |
| max. | 625 μs Yes PROFINET Ethernet Yes Yes |
| max. | 625 μs Yes PROFINET Ethernet Yes Yes Yes |
| max. Integration time, parameterizable Conversion time (per channel) Encoder Connectable encoders 2-wire sensor 1. Interface Interface type Physics Isolated automatic detection of transmission rate Autonegotiation Autocrossing | 625 μs Yes PROFINET Ethernet Yes Yes |
| max. Integration time, parameterizable Conversion time (per channel) Encoder Connectable encoders 2-wire sensor 1. Interface Interface type Physics Isolated automatic detection of transmission rate Autonegotiation | 625 μs Yes PROFINET Ethernet Yes Yes Yes Yes |
| max. Integration time, parameterizable Conversion time (per channel) Encoder Connectable encoders 2-wire sensor 1. Interface Interface type Physics Isolated automatic detection of transmission rate Autonegotiation Autocrossing | 625 μs Yes PROFINET Ethernet Yes Yes Yes |
| max. Integration time, parameterizable Conversion time (per channel) Encoder Connectable encoders 2-wire sensor 1. Interface Interface type Physics Isolated automatic detection of transmission rate Autonegotiation Autocrossing Interface types | 625 μs Yes PROFINET Ethernet Yes Yes Yes Yes |

| Yes |
|---|
| Yes |
| Yes |
| Yes |
| Yes |
| No |
| |
| 100 Mbit/s |
| |
| Yes |
| Yes |
| No |
| Yes |
| No |
| No |
| No |
| No |
| Yes |
| 16 |
| |
| 16 |
| 16 |
| |
| 16 |
| Yes |
| 8 |
| |
| The minimum value of the update time also depends on the communication component set for PROFINET IO, on the number |
| |

PROFINET IO Device

| Services | |
|-------------------------|-----|
| — PG/OP communication | Yes |
| — S7 routing | Yes |
| — Isochronous mode | No |
| — Open IE communication | Yes |
| — IRT | No |
| — MRP | No |
| — MRPD | No |
| — PROFlenergy | Yes |
| — Shared device | Yes |
| | |

of IO devices and the quantity of configured user data.

- Number of IO Controllers with shared device, max.

2

| Supports protocol for PROFINET IO Yes PROFIBUS Yes: CM 1243-5 (master) or CM 1242-5 (slave) required AS-interface Yes; CM 1243-2 required Protocols (Ethernet) Yes • TCP/IP Yes • DHCP No • SNMP Yes • DCP Yes • LLDP Yes • DCP Yes • LLDP Yes • DCP Yes • DCP Yes • Data length, max. 8 kbyte saveral passive connections per port, supported Yes • ISO-on-TCP (RFC1006) Yes Data length, max. 1472 byte Web server Yes • UDP Yes - Data length, max. 1472 byte Web server Yes • Supported Yes • UDP Yes • Data length, max. 1472 byte Web server Yes • Suported Yes • Suported Yes • Suported Yes • Supported Yes • Supported Yes • as client Yes • as client Yes • as client Yes • Status | Protocols | |
|--|---|---|
| AS-Interface Yes; CM 1243-2 required Protocols (Ethernet) Yes • TCP/IP Yes • DHCP No • SIMMP Yes • DCP Yes • LLDP Yes • DCP/IP Yes • LLDP Yes • DCP Yes • LLDP Yes • Data length, max. 8 kbyte - Data length, max. Yes • SD-on-TCP (RFC1006) Yes • DDP Yes • UDP Yes - Data length, max. 1472 byte Web server Yes • Supported Yes • Super join max | Supports protocol for PROFINET IO | Yes |
| Protocols (Ethernet) Ves • TCP/IP • TCP/IP Ves • DMCP Ves • DCP Ves • DCP Ves • DCP Ves • Data length, max. • Skyte • Data length, max. 8 kbyte • several passive connections per port, supported • Kes • ISO-on-TCP (RFC1006) Ves • ISO-on-TCP (RFC1006) Ves • ISO-on-TCP (RFC1006) Ves • ISO-on-TCP (RFC1006) Ves • Data length, max. 8 kbyte • UDP 1472 byte Web server • supported • Supported Yes • MODBUS Yes Sommunication | PROFIBUS | Yes; CM 1243-5 (master) or CM 1242-5 (slave) required |
| • TCP/IPYes• DHCPNo• SNMPYes• DCPYes• DCPYes• LLDPYes• TCP/IPYes- Data length, max.8 kbyte- several passive connections per port, supportedYes• ISCo-n-TCP (RFC106)Yes- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.9 kbyte- Data length, max.Yes- SupportedYes- SupportedYes- supportedYes- supportedYes- supportedYes- supportedYes- supportedYes- supportedYes- supportedYes- overall16; dynamically- overallYes- overallYes- subusioning functionsYes- Satus/control variableYes | AS-Interface | Yes; CM 1243-2 required |
| eNdCPNo•SNMPYes•DCPYes•DCPYes•LDPYesOpen EcommunicationKallen•TCP/IPYes•Data length, max.8 kbyte-several passive connections per port, supportedYes-Data length, max.8 kbyte-Data length, max.8 kbyte-Data length, max.8 kbyte-Data length, max.8 kbyte-Data length, max.1472 byte•DBPYes-Data length, max.1472 byteVesYes-Data length, max.Yes-Data length, max.Yes•DDPYes-Data length, max.Yes•DDPYes-Data length, max.Yes-Data length, max.Yes-NordalYes-NordalYes-Data lengthYes-Data length <t< td=""><td>Protocols (Ethernet)</td><td></td></t<> | Protocols (Ethernet) | |
| NMPYesDCPYesLLDPYesOpen IE communicationYes• TCP/IPYes- Data length, max.8 kbyte- several passive connections per port, supportedYes- ISO-on-TCP (RFC1006)Yes- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.9 Kes- Data length, max.Yes- Data length, max.9 Kes- Data length, max.9 Kes- Data length, max.Yes- SupportedYes- User defined websitesYes- SupportedYes- Status/controlYes- Status/control variableYes- OronauticationYes- Status/control variableYes- Status/cont | • TCP/IP | Yes |
| DCPYesLLDPYesOpen IE communicationYes- TCP/IPYes- Data length, max.8 kbyte- bata length, max.9 ksould- several passive connections per port, supportedYes- ISC-on-TCP (RFC1006)Yes- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.8 kbyte- Data length, max.1472 byteVBDPYes- Data length, max.1472 byteVB serverYes- Data length, max.Yes- StormmunicationYes- StormmunicationYes- StormmunicationYes- StormmunicationYes- OveralYes- OveralYes- Status/control variableYes- Status/control variableYes <td>• DHCP</td> <td>No</td> | • DHCP | No |
| • LLDP Yes Open IE communication ************************************ | • SNMP | Yes |
| CPUIL Ves - Data length, max. 8 kbyte - several passive connections per port, supported Yes - Solata length, max. 9 kbyte - Data length, max. 8 kbyte - Data length, max. 8 kbyte - Data length, max. 8 kbyte - Data length, max. 9 ks - UpP Yes - Data length, max. Yes - User-defined websites Yes - MODBUS Yes - Supported Yes - s selient Yes - s cornections - Number of connections S | • DCP | Yes |
| • TCP/IPYes- Data length, max.8 kbyte- several passive connections per port, supportedYes• ISO-on-TCP (RFC1006)Yes- Data length, max.8 kbyte• UDPYes- Data length, max.1 472 byteWeb server1 472 byte• SupportedYes• UDPYes• UDPYes• UDPYes• UDPYes• UDPYes• User-defined websitesYes• MODBUSYesSommunicationYes• supportedYes• as clientYes• overall16; dynamicalilyTestex/control variableYes• VerablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, counters | • LLDP | Yes |
| A base 8 kbyte - bata length, max. 8 kbyte - several passive connections per port, supported Yes • ISO-on-TCP (RFC1006) Yes - Data length, max. 8 kbyte • UDP Yes - Data length, max. 1 472 byte Veb server 1 472 byte • UDP Yes - Data length, max. Yes • UDP Yes • Supported Yes • MODBUS Yes Communication functions Yes Socommunication Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Status/control Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters | Open IE communication | |
| several passive connections per port, supportedYessupportedYesData length, max.8 kbyteData length, max.8 kbyteData length, max.1472 byteWeb server1472 byteData length, max.1472 byteWeb serverYesData length, max.YesData length, max.1472 byteWeb serverYesData length, max.YesData length, max.YesSupportedYesSupportedYessupportedYessupportedYessupportedYessupportedIt dynamicallysupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupportedYessupported | • TCP/IP | Yes |
| supported A • ISO-on-TCP (RFC1006) Yes - Data length, max. 8 kbyte • UDP Yes - Data length, max. 1472 byte Web server Yes • USP- obta length, max. Yes • UDP Yes • UDP Yes • User-defined websites Yes Further protocols Yes • MODBUS Yes Communication functions Yes S7 communication Yes • supported Yes • user er Yes • as server Yes • as client Yes • user data per job, max. See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Status/control Yes • overall 16; dynamically Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters | — Data length, max. | 8 kbyte |
| - Data length, max.8 kbyte• UDPYes- Data length, max.1472 byteVeb serverYes• supportedYes• User-defined websitesYesFurther protocolsYes• MODBUSYesCommunication functionsYesS7 communicationYes• supportedYes• supportedYes• supportedYes• supportedYes• supportedYes• supportedYes• overallYes• overallSe online help (S7 communication, user data size)PotentionsYesStatus/control variableYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingForcing | | Yes |
| • UDPYes- Data length, max.1 472 byteWeb server1 472 byte• supportedYes• User-defined websitesYesFurther protocolsYes• MODBUSYesCommunication functionsYesS7 communicationYes• supportedYes• as serverYes• as clientYes• User data per job, max.See online help (S7 communication, user data size)Number of connectionsSee online help (S7 communication, user data size)Number of connections16; dynamicallyFotcingYesStatus/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingInputs/outputs, memory bits, DBs, distributed I/Os, timers, counters | ISO-on-TCP (RFC1006) | Yes |
| - Data length, max.1 472 byteWeb serverYes• supportedYes• User-defined websitesYesFurther protocolsYes• MODBUSYesCommunication functionsYes\$7 communicationYes• supportedYes• supportedYes• supportedYes• as serverYes• data per job, max.See online help (S7 communication, user data size)Number of connectionsIfc; dynamicallytest commissioning functionsIfc; dynamicallyStatus/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcingInputs/outputs, memory bits, DBs, distributed I/Os, timers, counters | — Data length, max. | 8 kbyte |
| Web server Yes • supported Yes • User-defined websites Yes Further protocols Yes • MODBUS Yes Communication functions Yes S7 communication Yes • supported Yes • as server Yes • as client Yes • user data per job, max. See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically • overall Yes • status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | • UDP | Yes |
| Web server • supported Yes • User-defined websites Yes Further protocols Yes • MODBUS Yes Communication functions Yes S7 communication Yes • supported Yes • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Status/control Yes • overall 16; dynamically • overall Yes • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | — Data length, max. | 1 472 byte |
| • User-defined websites Yes Further protocols Yes • MODBUS Yes Communication functions Yes Communication Yes • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Status/control Yes • overall 16; dynamically Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | Web server | |
| Further protocols • MODBUS Yes Communication functions \$7 communication • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (\$7 communication, user data size) Number of connections See online help (\$7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically Fostatus/control Yes • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters | • supported | Yes |
| • MODBUS Yes Communication functions S7 communication \$ supported Yes • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically Status/control Yes • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | User-defined websites | Yes |
| Communication functions S7 communication • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically Test commissioning functions Yes • Status/control Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | Further protocols | |
| S7 communication • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections See online help (S7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically Test commissioning functions Status/control • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Forcing | • MODBUS | Yes |
| S7 communication Yes • supported Yes • as server Yes • as client Yes • User data per job, max. See online help (S7 communication, user data size) Number of connections see online help (S7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically Status/control Yes • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Forcing | Communication functions | |
| • as serverYes• as clientYes• User data per job, max.See online help (S7 communication, user data size)Number of connectionsIf; dynamically• overall16; dynamicallyTest commissioning functionsStatus/control• Status/controlYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcing | | |
| • as clientYes• User data per job, max.See online help (S7 communication, user data size)Number of connections16; dynamically• overall16; dynamicallyTest commissioning functionsStatus/control• Status/controlYes• Status/control variableYes• VariablesInputs/outputs, memory bits, DBs, distributed I/Os, timers, countersForcing | • supported | Yes |
| • User data per job, max. See online help (S7 communication, user data size) Number of connections 16; dynamically • overall 16; dynamically Test commissioning functions Status/control • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing | • as server | Yes |
| Number of connections 16; dynamically • overall 16; dynamically Test commissioning functions 16; dynamically Status/control Yes • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | ● as client | Yes |
| • overall 16; dynamically Test commissioning functions Status/control • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Yes | • User data per job, max. | See online help (S7 communication, user data size) |
| Test commissioning functions Status/control • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Forcing | Number of connections | |
| Status/control • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Forcing | • overall | 16; dynamically |
| Status/control • Status/control variable Yes • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing Forcing | Test commissioning functions | |
| • Variables Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters Forcing | | |
| Forcing | Status/control variable | Yes |
| | Variables | |
| • Forcing Yes | Forcing | |
| | Forcing | Yes |

| Diagnostic buffer | |
|---|----------------------|
| present | Yes |
| Traces | |
| Number of configurable Traces | 2 |
| Memory size per trace, max. | 512 kbyte |
| | - |
| Interrupts/diagnostics/status information | |
| Diagnostics indication LED | |
| RUN/STOP LED | Yes |
| • ERROR LED | Yes |
| MAINT LED | Yes |
| Integrated Functions | |
| Number of counters | 3 |
| Counting frequency (counter) max. | 100 kHz |
| Frequency measurement | Yes |
| controlled positioning | Yes |
| Number of position-controlled positioning axes, max. | 8 |
| Number of positioning axes via pulse-direction | Up to 4 with SB 1222 |
| interface | |
| PID controller | Yes |
| Number of alarm inputs | 4 |
| Potential separation | |
| Potential separation digital inputs | |
| Potential separation digital inputs | 500V AC for 1 minute |
| between the channels, in groups of | 1 |
| Potential separation digital outputs | |
| Potential separation digital outputs | Relays |
| between the channels | No |
| between the channels, in groups of | 1 |
| EMC | |
| Interference immunity against discharge of static electric | city |
| Interference immunity against discharge of | Yes |
| static electricity acc. to IEC 61000-4-2 | |
| — Test voltage at air discharge | 8 kV |
| Test voltage at contact discharge | 6 kV |
| Interference immunity to cable-borne interference | |
| interference infinitianity to ouble borne interference | |
| Interference immunity on supply lines acc. to | Yes |
| Interference immunity on supply lines acc. to IEC 61000-4-4 Interference immunity on signal cables acc. to | Yes |
| Interference immunity on supply lines acc. to IEC 61000-4-4 Interference immunity on signal cables acc. to IEC 61000-4-4 | |
| Interference immunity on supply lines acc. to IEC 61000-4-4 Interference immunity on signal cables acc. to | |

| Interference immunity against conducted variable distur | bance induced by high-frequency fields |
|---|---|
| Interference immunity against high-frequency rediction and to UEC 01000 4.0 | Yes |
| radiation acc. to IEC 61000-4-6 Emission of radio interference acc. to EN 55 011 | |
| | Yes; Group 1 |
| Limit class A, for use in industrial areas | |
| Limit class B, for use in residential areas | Yes; When appropriate measures are used to ensure compliance with the limits for Class B according to EN 55011 |
| Degree and class of protection | |
| Degree of protection acc. to EN 60529 | |
| • IP20 | Yes |
| Standards, approvals, certificates | |
| CE mark | Yes |
| UL approval | Yes |
| cULus | Yes |
| FM approval | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| Marine approval | Yes |
| Ambient conditions | |
| Free fall | |
| Fall height, max. | 0.3 m; five times, in product package |
| Ambient temperature during operation | |
| ● min. | -20 °C |
| • max. | 60 °C |
| horizontal installation, min. | -20 °C |
| horizontal installation, max. | 60 °C |
| vertical installation, min. | -20 °C |
| vertical installation, max. | 50 °C |
| Ambient temperature during storage/transportation | |
| ● min. | -40 °C |
| • max. | 70 °C |
| Air pressure acc. to IEC 60068-2-13 | |
| | 705 / D |
| • Operation, min. | 795 hPa |
| Operation, min.Operation, max. | 795 hPa 1 080 hPa |
| | |
| • Operation, max. | 1 080 hPa |
| Operation, max.Storage/transport, min. | 1 080 hPa 660 hPa |
| Operation, max. Storage/transport, min. Storage/transport, max. | 1 080 hPa 660 hPa |
| Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level | 1 080 hPa 660 hPa 1 080 hPa |
| Operation, max. Storage/transport, min. Storage/transport, max. Altitude during operation relating to sea level Installation altitude, min. | 1 080 hPa 660 hPa 1 080 hPa -1 000 m |

| Vibrations | |
|---|---|
| Vibration resistance during operation acc. to IEC 60068-2-6 | 2 g (m/s²) wall mounting, 1 g (m/s²) DIN rail |
| Operation, tested according to IEC 60068-2-6 | Yes |
| Shock testing | |
| tested according to IEC 60068-2-27 | Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms |
| Pollutant concentrations | |
| SO2 at RH < 60% without condensation | S02: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free |
| Configuration | |
| Programming | |
| Programming language | |
| — LAD | Yes |
| — FBD | Yes |
| — SCL | Yes |
| Know-how protection | |
| User program protection/password protection | Yes |
| Copy protection | Yes |
| Block protection | Yes |
| Access protection | |
| Protection level: Write protection | Yes |
| Protection level: Read/write protection | Yes |
| Protection level: Complete protection | Yes |
| Cycle time monitoring | |
| • adjustable | Yes |
| Dimensions | |
| Width | 90 mm |
| Height | 100 mm |
| Depth | 75 mm |
| Weights | |
| Weight, approx. | 380 g |
| last modified: | 08/27/2019 |