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NTC probe Stainless Part number 89750182



- Direct connection with no converter on analog input
 Low-cost temperature control solution
- Fields of application:
- HVAC
- Compressors
- Geothermal systems
- Building management
 Swimming pools
- Fountains

| Type | Description | Ohmic value | Measurement range |
|--------------------|--|--------------|-------------------|
| 89750174 PVC | NTC probe PVC for Millenium 3 (24 V DC, ± 10%) | 10 kΩ @ 25°C | -25 →+85°C |
| 89750180 AS | NTC probe (batch of 10) for Millenium 3 (24 V DC, ± 10%) | 10 kΩ @ 25°C | -25 →+85°C |
| 89750182 Stainless | NTC probe stainless 305 for Millenium 3 (24 V DC, ± 10%) | 10 kΩ @ 25°C | -35 →+120°C |
| 89750185 Silicone | NTC probe silicone for Millenium 3 (24 V DC, ± 10%) | 10 kΩ @ 25°C | -20 →+105°C |

| Certifications | UL, CSA |
|---|---|
| Certifications | GL: except for 88 970 32x (pending) |
| Conformity with the low voltage directive | In accordance with 73/23/EEC: EN (IEC) 61131-2 (Open equipment) |
| Conformity with the EMC directive | In accordance with 89/336/EEC: EN (IEC) 61131-2 (Zone B) EN (IEC) 61000-6-2, EN (IEC) 61000-6-3 (*) EN (IEC) 61000-6-4 (*) Except configuration (88 970 1.1 or 88 970 1.2) + (88 970 250 or 88 970 270) + 88 970 241 class A (class B in a metal enclosure) |
| Earthing | Not included |
| Protection rating | In accordance with IEC/EN 60529: IP40 on front panel IP20 on terminal block |
| Overvoltage category | 3 in accordance with IEC/EN 60664-1 |
| Pollution | Degree: 2 in accordance with IEC/EN 61131-2 |
| Max operating Altitude | Operation: 2000 m Transport: 3048 m |
| Mechanical resistance | Immunity to vibrations IEC/EN 60068-2-6, test Fc Immunity to shock IEC/EN 60068-2-27, test Ea |
| Resistance to electrostatic discharge | Immunity to ESD IEC/EN 61000-4-2, level 3 |
| Resistance to HF interference | Immunity to radiated electrostatic fields IEC/EN 61000-4-3 Immunity to fast transients (burst immunity) IEC/EN 61000-4-4, level 3 Immunity to shock waves IEC/EN 61000-4-5 Radio frequency in common mode IEC/EN 61000-4-6, level 3 Voltage dips and breaks (AC) IEC/EN 61000-4-11 Immunity to damped oscillatory waves IEC/EN 61000-4-12 |
| Conducted and radiated emissions | Class B (*) in accordance with EN 55022/11 group 1 (*) Except configuration (88 970 1.1 or 88 970 1.2) + (88 970 250 or 88 970 270) + 88 970 241 class A (class B in a metal enclosure) |
| Operating temperature | -20 →+55°C (+40°C in a non-ventilated enclosure) in accordance with IEC/EN 60068-2-1 and IEC/EN 60068-2-2 |
| Storage temperature | -40 →+70°C in accordance with IEC/EN 60068-2-1 and IEC/EN 60068-2-2 |
| Relative humidity | 95% max. (no condensation or dripping water) in accordance with IEC/EN 60068-2-30 |
| Mounting | On symmetrical DIN rail, 35 x 7.5 mm and 35 x 15 mm, or on panel (2 x Ø 4 mm) |
| Screw terminals connection capacity | Flexible wire with ferrule = |
| | 1 conductor: 0.25 to 2.5 mm ² (AWG 24AWG 14) 2 conductors 0.25 to 0.75 mm ² (AWG 24AWG 18) Semi-rigid wire = 1 conductor: 0.2 to 2.5 mm ² (AWG 25AWG 14) |
| | Rigid wire = |
| | 1 conductor: 0.2 to 2.5 mm ² (AWG 25AWG 14) |
| | 2 conductors 0.2 to 1.5 mm ² (AWG 25AWG 16) |
| | Tightening torque = 0.5 N.m (4.5 lb-in) (tighten using screwdriver diam. 3.5 mm) |

| General characteristics | | | | | | | | |
|--|--|---|---|---------------------------------------|---|---|-------------------------------|---|
| Environmental characteristics | | | | | | | | |
| 89750174 | | 89750180 | | 89750182 | | 89750185 | | 20 1405 02 |
| Operating temperature | | -25 →+85 °C | | -25 →+85°C | | -25 →+120 °C | | -20 →+105 °C |
| Storage temperature | -30 →+100 °C | | -30 →+100°C | | -40 →+180 °C | | | -40 →+105 °C |
| Accuracy | -25 →+40 °C: ≤± 0 (repeatability ≤± 0, +40 →+70 °C: ≤± 2 (repeatability ≤± 1 +70 →+85 °C: ≤± 3 (repeatability ≤± 2 | 5°C) 2°C °C) 3°C | $-25 \rightarrow +40$ °C: ≤± 0,8 (repeatability ≤± 0,5 +40 →+50 °C: =± 1 (repeatability ≤± 1,6 +50 →+60 °C: =± 1 (repeatability ≤± 1,4 +60 →+70 °C: =± 2 (repeatability ≤± 2 °0 +70 °C →+85: =± 3 | °C) 2°C C) 4°C °C) °C | -35 →+40 °C: ≤± ((repeatability ≤± 0 +40 →+70 °C: ≤± 1 (repeatability ≤± 1 +70 →+120 °C: ≤± 1 (repeatability ≤± 2 | ,5 °C) 2 °C °C) : 3 °C | | $-20 \rightarrow +40$ °C: ≤± 0,8 °C (repeatability ≤± 0,5 °C) $+40 \rightarrow +70$ °C: ≤± 2 °C (repeatability ≤± 1 °C) $+70 \rightarrow +105$ °C: ≤± 3 °C (repeatability ≤± 2 °C) |
| | | | (repeatability ≤± 2 °C | | | | | |
| lechanical characteristics | | | | | | | | |
| Cable | PVC | 2 wire | es Silicone | (180 °C max.) | | F | PVC (10 | 05 °C max.) |
| Cable length | 3000 mm | 600 m | | n | | | 8000 mn | n |
| Protection rating | IP67 | - | IP64 | | | | P67 | |
| solation class | - | - | 1 | | | 2 | 2 | |
| Dielectric strength according to IEC 335 | - | - | 1250 V | AC / 1 mm | | - | | |
| omments | | | | | | | | |
| Analog input configured as potentiometer via he function NTC1 and NTC2 in M3 SOFT software part no.: 88970111 (AC5 version ninimum). | the function NTC1 and NTC2 software part no.: 88970111 minimum). | pinput configured as potentiometer viction NTC1 and NTC2 in M3 SOFT re part no.: 88970111 (AC5 version m). | | the function NTC1 and NTC2 in M3 SOFT | | Analog input configured as potentiometer the function NTC1 and NTC2 in M3 SOFT software part no.: 88970111 (AC5 version minimum). | | |
| Processing characteristics of CB, CD, XD LCD display | O & XB product types CD, XD: Display w | vith 4 lines of 19 | 8 characters | | | | | |
| Programming method | Ladder or FBD/SF | | o characters | | | | | |
| Program size | Ladder: 120 lines | O (Graicel) | | | | | | |
| rogium oizo | FBD: CB, CD: 350 typica XB, XD: 700 typica | | | | | | | |
| Program memory | Flash EEPROM | | | | | | | |
| Removable memory | EEPROM | | | | | | | |
| Data memory | 368 bits/200 word | 368 bits/200 words | | | | | | |
| Back-up time in the event of power failure | Program and setting | Program and settings in the controller: 10 years Program and settings in the plug-in memory: 10 years Data memory: 10 years | | | | | | |
| Cycle time | Ladder: typically 2 FBD: 6 →90 ms | 20 ms | | | | | | |
| Response time | Input acquisition tir | me + 1 to 2 cycl | le times | | | | | |
| Clock data retention | 10 years (lithium b | | | | | | | |
| Clock drift | Drift < 12 min/year | Drift < 12 min/year (at 25 °C) | | | | | | |
| | 6 s/month (at 25 ° | C with user-def | finable correction of | drift) | | | | |
| Timer block accuracy | 1% ± 2 cycle times | S | | | | | | |
| Start up time on power up | < 1,2 s | | | | | | | |
| haracteristics of products with AC power | er supplied | | | | | | | |
| | | | | | | | | |
| Supply | | | | | | | | |
| Nominal voltage | | 24 V AC | | | | | | |
| <u> </u> | 150/ / 1200/ | -15% / +20% | | | 100 →240 V AC | | | |
| Š | | 0 \/ AC | | | -15% / +10% | ./ AC | | |
| Operating limits | or 20.4 V AC→28. | | | | | V AC | | |
| Operating limits | or 20.4 V AC→28. 50/60 Hz (+4% / -6 | 6%) | | | -15% / +10% | | 7 →53 | Hz/57 →63 Hz |
| Operating limits Supply frequency range | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - | 6%) →63 Hz | | | -15% / +10% or 85 V AC→264 V 50/60 Hz (+ 4% / - | 6%) or 4 | 7 →53 | Hz/57 →63 Hz |
| Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power | or 20.4 V AC→28. 50/60 Hz (+4% / -6 | 6%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 | | | -15% / +10% or 85 V AC→264 V | 6%) or 4 0 times) XB10: 7 V A xtension | VA - XD26 | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e | 6%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 | | | -15% / +10% or 85 V AC→264 \ 50/60 Hz (+ 4% / - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 11 V/ XD10-XB10 with e | 6%) or 4 0 times) XB10: 7 V A xtension | VA - XD26 | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e | 6%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 | | | -15% / +10% or 85 V AC→264 V 50/60 Hz (+ 4% / - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e | 6%) or 4 0 times) XB10: 7 V A xtension | VA - XD26 | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V | | | -15% / +10% or 85 V AC→264 V 50/60 Hz (+ 4% / - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e 1780 V AC | 6%) or 4° 0 times) XB10: 7° A xtension xtension: | VA - XD26 : 17 VA | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage aputs nput voltage | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC→264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e 1780 V AC 100 →240 V AC (0.24 mA @ 85 V A | 6%) or 4: 0 times) XB10: 7 A xtension: -15% / +1 | VA - XD26 : 17 VA | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage aputs nput voltage nput current | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC—264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/XD10-XB10 with e XD26-XB26 with e XD26-XB26 with e 1780 V AC (-100 —240 V AC (-0.24 mA @ 85 V A 0.75 mA @ 264 V | 6%) or 4: 0 times) XB10: 7 A xtension: -15% / +1 | VA - XD26 : 17 VA | -XB26: 12 VA |
| Operating limits Supply frequency range Immunity from micro power cuts Max. absorbed power Isolation voltage Inputs Input voltage Input current Input impedance | or 20.4 V AC—28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC—264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/XD10-XB10 with e XD26-XB26 with e XD26-XB26 V AC (-100 →240 V AC (-0.24 mA @ 85 V AO.75 mA @ 264 V 350 kΩ | 6%) or 4: 0 times) XB10: 7 A xtension: -15% / +1 | VA - XD26 : 17 VA | -XB26: 12 VA |
| Operating limits Supply frequency range Immunity from micro power cuts If ax. absorbed power Isolation voltage Input supply current Input impedance Input impe | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC →264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/XD10-XB10 with e XD26-XB26 with e XD26-XB26 V AC (-100 →240 V AC (-100 → | 6%) or 4: 0 times) XB10: 7 A xtension: -15% / +1 | VA - XD26 : 17 VA | -XB26: 12 VA |
| Operating limits Supply frequency range Immunity from micro power cuts Immunity from micro power cuts Imputs Inputs Input voltage Input current Input impedance Input impedance Input impedance Input impedance Input current at logic state 1 | or 20.4 V AC→28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC > 2 mA | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC →264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e 1780 V AC $\frac{100}{2}$ →240 V AC | 6%) or 4' 0 times) XB10: 7' A xtension: xtension: | VA - XD26- 17 VA 0%) | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage nputs nput voltage nput current nput impedance ogic 1 voltage threshold Making current at logic state 1 ogic 0 voltage threshold | or 20.4 V AC → 28. 50/60 Hz (+4% / -6 or 47 → 53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC > 2 mA ≤ 5 V AC | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC →264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e 1780 V AC (-0.24 mA @ 85 V A 0.75 mA @ 264 V 350 kΩ ≥ 79 V AC \times 0.17 mA ≤ 20 V AC (≤ 28 V | 6%) or 4' 0 times) XB10: 7' A xtension: xtension: | VA - XD26- 17 VA 0%) | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage nputs nput voltage nput current nput impedance .ogic 1 voltage threshold Making current at logic state 1 .ogic 0 voltage threshold Release current at logic state 0 | or 20.4 V AC → 28. 50/60 Hz (+4% / -6 or 47 → 53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kQ ≥ 14 V AC > 2 mA ≤ 5 V AC < 0.5 mA | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC | | | -15% / +10% or 85 V AC \rightarrow 264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V XD10-XB10 with e XD26-XB26 with e 1780 V AC (-0.24 mA @ 85 V A 0.75 mA @ 264 V 350 kΩ \geq 79 V AC > 0.17 mA \leq 20 V AC (\leq 28 V < 0.5 mA | 6%) or 4' 0 times) XB10: 7' A xtension: xtension: | VA - XD26- 17 VA 0%) | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage nputs nput voltage nput current nput impedance ogic 1 voltage threshold Vlaking current at logic state 1 ogic 0 voltage threshold Release current at logic state 0 | or 20.4 V AC → 28. 50/60 Hz (+4% / -6 or 47 → 53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC > 2 mA ≤ 5 V AC < 0.5 mA 50 ms | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC AC | | | -15% / +10% or 85 V AC \rightarrow 264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V X XD10-XB10 with e XD26-XB26 with e 1780 V AC (-100 \rightarrow 240 V AC (-100 \rightarrow 240 V AC (-100 \rightarrow 240 V AC (-100 \rightarrow 264 V 350 kΩ \rightarrow 279 V AC \rightarrow 0.17 mA \rightarrow 20 V AC (\rightarrow 28 V \rightarrow 0.5 mA 50 ms | 6%) or 4' 0 times) XB10: 7 'A A Xtension: xtension: -15% / +1 AC AC AC: XE10 | VA - XD26- 17 VA 0%) | -XB26: 12 VA |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage nputs nput voltage nput current nput impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time with LADDER programming | or 20.4 V AC →28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC > 2 mA ≤ 5 V AC < 0.5 mA 50 ms State 0 →1 (50/60 | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC AC AC | A | | -15% / +10% or 85 V AC \rightarrow 264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V XD10-XB10 with e XD26-XB26 with e 1780 V AC (-100 \rightarrow 240 V AC (-100 \rightarrow 240 V AC (-100 \rightarrow 240 V AC (-100 \rightarrow 250 kΩ \rightarrow 279 V AC \rightarrow 279 V AC \rightarrow 20 V AC (\rightarrow 28 V \rightarrow 20 MAC (\rightarrow 28 V \rightarrow 20 MAC (\rightarrow 28 MAC \rightarrow 350 mS State 0 \rightarrow 1 (50/60 | 6%) or 4' 0 times) XB10: 7 'A Xtension: xtension: -15% / +1 AC AC AC: XE10 Hz) | VA - XD26- 17 VA 0%) | -XB26: 12 VA 5, XR10, XR14) |
| Operating limits Supply frequency range mmunity from micro power cuts Max. absorbed power solation voltage nputs nput voltage nput current nput impedance Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time with LADDER programming Response time with function blocks programming | or 20.4 V AC →28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC > 2 mA ≤ 5 V AC < 0.5 mA 50 ms State 0 →1 (50/60 Configurable in inc 50 ms min. up to 2: State 0 →1 (50/60 | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC AC AC HZ) HZ) crements of 10 in the second sec | A ms | | -15% / +10% or 85 V AC →264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e 1780 V AC (-10.24 mA @ 85 V A 0.75 mA @ 264 V 350 kΩ ≥ 79 V AC (-10.24 mA ≤ 20 V AC (≤ 28 V < 0.5 mA 50 ms State 0 →1 (50/60 Configurable in inc 50 ms min. up to 2 State 0 →1 (50/60 | 6%) or 4' 0 times) XB10: 7 'A xtension: xtension: -15% / +1 AC AC AC: XE10 Hz) crements (55 ms Hz) | VVA - XD26-17 VA 17 VA 0%) | -XB26: 12 VA 5, XR10, XR14) |
| Operating limits Supply frequency range Immunity from micro power cuts | or 20.4 V AC →28. 50/60 Hz (+4% / -6 or 47 →53 Hz/57 - 10 ms (repetition 2 CB12-CD12-XD10- CB20-CD20: 6 VA XD10-XB10 with e XD26-XB26 with e 1780 V AC 24 V AC (-15% / + 4.4 mA @ 20.4 V / 5.2 mA @ 24.0 V / 6.3 mA @ 28.8 V / 4.6 kΩ ≥ 14 V AC > 2 mA ≤ 5 V AC < 0.5 mA 50 ms State 0 →1 (50/60 Configurable in inc 50 ms min. up to 2: State 0 →1 (50/60 | 5%) →63 Hz 20 times) -XB10: 4 VA extension - XD2 extension: 10 V -20%) AC AC AC AC HZ) HZ) crements of 10 in the second sec | A | e time (Tr) : | -15% / +10% or 85 V AC →264 V 50/60 Hz (+ 4% / -10 ms (repetition 2 CB12-CD12-XD10-CB20-CD20: 11 V/ XD10-XB10 with e XD26-XB26 with e 1780 V AC (-10.24 mA @ 85 V A 0.75 mA @ 264 V 350 kΩ ≥ 79 V AC (-10.24 mA ≤ 20 V AC (≤ 28 V < 0.5 mA 50 ms State 0 →1 (50/60 Configurable in inc 50 ms min. up to 2 State 0 →1 (50/60 | 6%) or 4' 0 times) XB10: 7 'A xtension: xtension: -15% / +1 AC AC AC: XE10 Hz) crements (55 ms Hz) | VVA - XD26-17 VA 17 VA 0%) | -XB26: 12 VA 5, XR10, XR14) |

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|--|--|-----------------------|--|--|--|
| Isolation between power supply and inputs | None | | None | | |
| Isolation between inputs | None | | None | | |
| Protection against polarity inversions | Yes | | Yes | | |
| Status indicator | On LCD screen for CD and XD | | On LCD screen for CD and XD | | |
| Characteristics of relay outputs common to the | entire range | | | | |
| · ' | | | | | |
| Max. breaking voltage | 5 →30 V DC 24 →250 V AC | | | | |
| Drocking ourrent | CB-CD-XD10-XB10-XR06-XR10: 8 A | | | | |
| Breaking current | XD26-XB26: 8 x 8 A relays, 2 x 5 A relays | | | | |
| | XE10: 4 x 5 A relays | | | | |
| | XR14: 4 x 8 A relays, 2 x 5 A relays | | | | |
| Electrical durability for 500 000 operating cycles | Utilization category DC-12: 24 V, 1.5 A | | | | |
| 3 3,000 | Utilization category DC-13: 24 V (L/R = 10 m | ns), 0.6 A | | | |
| | Utilization category AC-12: 230 V, 1.5 A | , | | | |
| | Utilization category AC-15: 230 V, 0.9 A | | | | |
| Max. Output Common Current | 12 A for O8, O9, OA | | | | |
| Minimum switching capacity | 10 mA (at minimum voltage of 12 V) | | | | |
| Minimum load | 12 V, 10 mA | | | | |
| Maximum rate | Off load: 10 Hz | | | | |
| | At operating current: 0.1 Hz | | | | |
| Mechanical life | 10,000,000 (operations) | | | | |
| Voltage for withstanding shocks | In accordance with IEC/EN 60947-1 and IEC/ | /EN 60664-1: 4 kV | | | |
| Response time | Make 10 ms | | | | |
| | Release 5 ms | | | | |
| Built-in protections | Against short-circuits: None | | | | |
| | Against overvoltages and overloads: None | | | | |
| Status indicator | On LCD screen for CD and XD | | | | |
| Characteristics of product with DC power supp | lied | | | | |
| | | | | | |
| Supply | | | | | |
| Nominal voltage | 12 V DC | 24 V DC | | | |
| Operating limits | -13% / +20% | -20% / +25% | | | |
| | or 10.4 V DC→14.4 V DC (including ripple) | or 19.2 V DC→30 V | | | |
| Immunity from micro power cuts | ≤ 1 ms (repetition 20 times) | ≤ 1 ms (repetition 20 | | | |
| Max. absorbed power | CB12 with solid state outputs: 1.5 W | | ith solid state outputs - XD10-XB10 with solid state outputs: 3 W | | |
| | CD12: 1.5 W | XD10-XB10 with rela | · · · | | |
| | CD20: 2.5 W | XD26-XB26 with soli | · | | |
| | XD26-XB26: 3 W XD26-XB26 with extension: 5 W | XD10-XB10 with rela | ay outputs - XD26 with relay outputs: 6 W | | |
| | XD26 with solid state outputs: 2.5 W | XD26-XB26 with exte | | | |
| Protection against polarity inversions | Yes | Yes | Stidion. To W | | |
| | 103 | 103 | | | |
| Digital inputs (I1 to IA and IH to IY) | | | | | |
| Input voltage | 12 V DC (-13% / +20%) | | 24 V DC (-20% / +25%) | | |
| Input current | 3.9 mA @ 10.44 V DC | | 2.6 mA @ 19.2 V DC | | |
| | 4.4 mA @ 12.0 V DC | | 3.2 mA @ 24 V DC | | |
| | 5.3 mA @ 14.4 VDC | | 4.0 mA @ 30.0 VDC | | |
| | | | 7.4 kΩ | | |
| Input impedance | 2.7 kΩ | | | | |
| Logic 1 voltage threshold | ≥7 V DC | | ≥ 15 V DC | | |
| Logic 1 voltage threshold Making current at logic state 1 | ≥7 V DC ≥2 mA | | ≥ 2.2 mA | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC | | ≥ 2.2 mA ≤ 5 V DC | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation against polarity inversions | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG $(0 \rightarrow 10 \text{ V})$ or $(0 \rightarrow \text{V})$ power supply) 14 kΩ | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG $(0 \rightarrow 10 \text{ V}) \text{ or } (0 \rightarrow \text{V power supply})$ $12 \text{ k}\Omega$ | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance Input voltage | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG $(0 \rightarrow 10 \text{ V})$ or $(0 \rightarrow \text{V})$ power supply) 14 kΩ 14.4 V DC max. | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG $(0 \rightarrow 10 \text{ V}) \text{ or } (0 \rightarrow \text{V power supply})$ 12 kΩ 30 V DC max. | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance Input voltage Value of LSB | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Ves On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG $(0 \rightarrow 10 \text{ V}) \text{ or } (0 \rightarrow \text{V} \text{ power supply})$ 12 k Ω 30 V DC max. 29 mV, 4 mA Common mode | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type Resolution Conversion time | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode 10 bits at max. input voltage | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA Common mode 10 bits at max. input voltage | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type Resolution Conversion time Accuracy at 25°C | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Ves On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Input sused as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type Resolution Conversion time Accuracy at 25°C Accuracy at 25°C Accuracy at 55°C | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Ves On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Input sused as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type Resolution Conversion time Accuracy at 25°C Repeat accuracy at 55 °C Repeat accuracy at 55 °C | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Ves On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% ± 2% | | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% ± 2% | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Inputs used as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type Resolution Conversion time Accuracy at 25°C Accuracy at 25°C Repeat accuracy at 55 °C Isolation between analogue channel and power supply | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Ves On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% ± 2% None | cycle time (Tc) and | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% ± 2% None | | |
| Logic 1 voltage threshold Making current at logic state 1 Logic 0 voltage threshold Release current at logic state 0 Response time Maximum counting frequency Sensor type Conforming to IEC/EN 61131-2 Input type Isolation between power supply and inputs Isolation between inputs Protection against polarity inversions Status indicator Analogue or digital inputs (IB to IG) CB12-CD12-XD10-XB10 CB20-CD20-XB26-XD26 Input sused as analogue inputs Measurement range Input impedance Input voltage Value of LSB Input type Resolution Conversion time Accuracy at 25°C Repeat accuracy at 55 °C Repeat accuracy at 55 °C | ≥ 7 V DC ≥ 2 mA ≤ 3 V DC < 0.9 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 Inputs I3 to IA & IH to IY: In accordance with input response time (Tr): 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None Ves On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 14 kΩ 14.4 V DC max. 14 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% ± 2% | cycle time (Tc) and | ≥ 2.2 mA ≤ 5 V DC < 0.75 mA 1 →2 cycle times Inputs I1 & I2: Ladder (1 kHz) & FBD (up to 6 kHz) Inputs I3 to IA & IH to IY: In accordance with cycle time (Tc) and input response time (Tr) : 1/ ((2 x Tc) + Tr) Contact or 3-wire PNP Type 1 Resistive None None None Yes On LCD screen for CD and XD 4 inputs IB →IE 6 inputs IB →IG (0 →10 V) or (0 →V power supply) 12 kΩ 30 V DC max. 29 mV, 4 mA Common mode 10 bits at max. input voltage Controller cycle time ± 5% ± 6.2% ± 2% | | |

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| 2/02/2012 | | www.crouzet.c |
|---|--|---|
| Potentiometer control | 2.2 k Ω /0.5 W (recommended) 10 k Ω max. | $2.2 \text{ k}\Omega/0.5 \text{ W (recommended)}$ 10 k Ω max. |
| nputs used as digital inputs | TO N2 HIGA. | TO N.Z. HIGA. |
| | 42 \/ DC / 429/ / +209/ \ | 24 \ / DC / 200/ / + 250/ \ |
| nput voltage | 12 V DC (-13% / +20%) | 24 V DC (-20% / +25%) |
| nput current | 0.7 mA @ 10.44 VDC | 1.6 mA @ 19.2 VDC |
| | 0.9 mA @ 12.0 VDC | 2.0 mA @ 24.0 V DC |
| | 1.0 mA @ 14.4VDC | 2.5 mA @ 30.0 VDC |
| put impedance | 14 kΩ | 12 kΩ |
| ogic 1 voltage threshold | ≥7 V DC | ≥ 15 VDC |
| laking current at logic state 1 | ≥ 0.5 mA | ≥ 1.2 mA |
| ogic 0 voltage threshold | ≤3 V DC | ≤5 V DC |
| telease current at logic state 0 | ≤ 0.2 mA | ≤ 0.5 mA |
| Response time | 1 →2 cycle times | 1 →2 cycle times |
| Maximum counting frequency | In accordance with cycle time (Tc) and input response time (Tr): | · |
| | 1/ ((2 x Tc) + Tr) | 1/ ((2 x Tc) + Tr) |
| Sensor type | Contact or 3-wire PNP | Contact or 3-wire PNP |
| conforming to IEC/EN 61131-2 | Type 1 | Type 1 |
| <u> </u> | | |
| nput type | Resistive | Resistive |
| colation between power supply and inputs | None | None |
| solation between inputs | None | None |
| rotection against polarity inversions | Yes | Yes |
| tatus indicator | On LCD screen for CD and XD | On LCD screen for CD and XD |
| naracteristics of relay outputs common to the | entire range | |
| ax. breaking voltage | 5 →30 V DC | |
| | 24 →250 V AC | |
| Max. Output Common Current | 12A for O8, O9, OA | |
| Breaking current | CB-CD-XD10-XB10-XR06-XR10: 8 A | |
| neaking current | XD26-XB26: 8 x 8 A relays, 2 x 5 A relays | |
| | XE10: 4 x 5 A relays | |
| | XR14: 4 x 8 A relays, 2 x 5 A relays | |
| Electrical durability for 500 000 operating cycles | Utilization category DC-12: 24 V, 1.5 A | |
| ciectifical durability for 500 000 operating cycles | Utilization category DC-12: 24 V, 1.3 A Utilization category DC-13: 24 V (L/R = 10 ms), 0.6 A | |
| | Utilization category AC-12: 230 V, 1.5 A | |
| | Utilization category AC-15: 230 V, 1:3 A Utilization category AC-15: 230 V, 0.9 A | |
| finimum switching capacity | | |
| | 10 mA (at minimum voltage of 12 V) | |
| linimum load | 12 V, 10 mA | |
| Maximum rate | Off load: 10 Hz | |
| | At operating current: 0.1 Hz | |
| Mechanical life | 10,000,000 (operations) | |
| /oltage for withstanding shocks | In accordance with IEC/EN 60947-1 and IEC/EN 60664-1: 4 kV | |
| Response time | Make 10 ms | |
| | Release 5 ms | |
| Built-in protections | Against short-circuits: None | |
| | Against overvoltages and overloads: None | |
| Status indicator | On LCD screen for CD and XD | |
| | 511 205 5515511161 C5 dild 715 | |
| igital / PWM solid state output | | |
| PWM solid state output* | CB12: O4 | CD12-XD10-XB10: O4 |
| | XD26: O4 →O7 | CD20-XD26-XB26: O4 →O7 |
| Only available with "FBD" programming language | * Only available with "FBD" programming language | |
| reaking voltage | 10.4 →30 V DC | 19.2 →30 V DC |
| lominal voltage | 12-24 VDC | 24 V DC |
| lominal current | 0.5 A | 0.5 A |
| | | 0.625 A |
| lax. breaking current | 0,625 A | • |
| oltage drop | ≤ 2 V for I = 0.5 A (at state 1) | ≤ 2 V for I = 0.5 A (at state 1) |
| desponse time | Make ≤ 1 ms | Make ≤ 1 ms |
| | Release ≤ 1 ms | Release ≤ 1 ms |
| Built-in protections | Against overloads and short-circuits: Yes | Against overloads and short-circuits: Yes |
| | Against overvoltages (*): Yes | Against overvoltages (*): Yes |
| | Against inversions of power supply: Yes | Against inversions of power supply: Yes |
| | (*) In the absence of a volt-free contact between the logic | (*) In the absence of a volt-free contact between the logic |
| | controller output and the load | controller output and the load |
| fin. load | 1 mA | 1 mA |
| Maximum incandescent load | 0,2 A / 12 V DC | 0,1 A / 24 V DC |
| | 0,1 A / 24 V DC | 0,1 A / 24 V DO |
| Salvanic isolation | No | No |
| WM frequency | 14.11 Hz | 14.11 Hz |
| | 56.45 Hz | 56.45 Hz |
| | 112.90 Hz | 112.90 Hz |
| | 225.80 Hz | 225.80 Hz |
| | 451.59 Hz | 451.59 Hz |
| | 1806.37 Hz | 1806.37 Hz |
| PWM cyclic ratio | 0 →100% (256 steps for CD, XD and 1024 steps for XA) | 0 →100% (256 steps for CD, XD and 1024 steps for XA) |
| • | | |
| PWM accuracy at 120 Hz | < 5% (20% →80%) load at 10 mA | < 5% (20% →80%) load at 10 mA |
| WM accuracy at 500 Hz | < 10% (20% →80%) load at 10 mA | < 10% (20% →80%) load at 10 mA |
| tatus indicator | On LCD screen for XD | On LCD screen for CD and XD |
| | | |
| | | |
| ccessories | Operating temperature | Operating pressure Code |

| Accessories | Operating temperature | Operating pressure | Code |
|---------------------------------------|-----------------------|--------------------|----------|
| Copper protective sleeve | -20 →+100°C | 10 bar | 89750146 |
| 316 stainless steel protective sleeve | -20 →+400°C | 16 bar | 89750147 |
| | | | |

