X20(c)DO6529

1 General information

The module is equipped with 6 relay outputs.

- · 6 digital outputs
- · Relay module for 115 VAC
- · 6 normally open contacts
- · Single-channel isolated outputs

Danger!

Risk of electric shock!

The terminal block must only be allowed to conduct voltage when it is inserted. It must not under any circumstances be removed or inserted when voltage is applied or have voltage applied to it when it is removed.

Danger!

The voltage classes on the terminal block must not be mixed! Only operation at mains voltage (e.g. 115 VAC) OR safety extra-low voltage (e.g. 24 VDC SELV) is permitted.

2 Coated modules

Coated modules are X20 modules with a protective coating for the electronics component. This coating protects X20c modules from condensation and corrosive gases.

The modules' electronics are fully compatible with the corresponding X20 modules.

For simplification purposes, only images and module IDs of uncoated modules are used in this data sheet.

The coating has been certified according to the following standards:

- Condensation: BMW GS 95011-4, 2x 1 cycle
- Corrosive gas: EN 60068-2-60, method 4, exposure 21 days







3 Order data

| Model number | Short description | Figure |
|--------------|--|----------|
| | Digital outputs | |
| X20DO6529 | X20 digital output module, 6 relays, normally open contacts, 115 VAC / 0.5 A, 30 VDC / 1 A | 33 |
| X20cDO6529 | X20 digital output module, coated, 6 relays, normally open contacts, 115 VAC / 0.5 A, 30 VDC / 1 A | G3 9 7 1 |
| | Required accessories | XX |
| | Bus modules | A E |
| X20BM11 | X20 bus module, 24 VDC keyed, internal I/O supply continuous | |
| X20BM15 | X20 bus module, with node number switch, 24 VDC keyed, internal I/O supply continuous | |
| X20cBM11 | X20 bus module, coated, 24 VDC keyed, internal I/O supply continuous | |
| | Terminal blocks | 1 |
| X20TB12 | X20 terminal block, 12-pin, 24 VDC keyed | |

Table 1: X20DO6529, X20cDO6529 - Order data

4 Technical data

| Computed 6 digital outputs 30 VDC / 118 VAC, outputs are single-channel isolated | Model number | X20DO6529 | X20cDO6529 | | |
|---|---|--|---|--|--|
| Search Information | Short description | | | | |
| BBR Dode | I/O module | 6 digital outputs 30 VDC / 115 VA | AC, outputs are single-channel isolated | | |
| Silus infortablis Module universor Module universor Module universor Module universor Module universor Outputs Yes, using status LED and softwares Yes, using status LED and softwares 1.1 W Internal ICO | | | | | |
| Disponenties Ves. using status LED and software | | | | | |
| Module run/error Yes, using status LED and software Yes Internal VC Internal | | I/O function per channel, operating state, module status | | | |
| Description | • | Voc. using stat | us LED and software | | |
| Proper consumption | | | | | |
| Bus | · | res, usi | ng status LED | | |
| Additional power dissipation caused by actuators (resistive) (IM) | · | | 1 1 W | | |
| ### ################################## | | | - | | |
| CE | Additional power dissipation caused by actuators (resistive) [W] 1) | | +0.45 | | |
| FC | Certifications | | | | |
| EAC | | | Yes | | |
| UL GLUE E115267 Industrial control equipment HazLoc GCSAus 244605 Process control equipment GCSAus 244605 Process control equipment Grazardous locations GLass I, Division 2, Groups ABCD, T5 ATEX Zone 2, II 3G Ex nA nC IIA 15 GC IP20, IT 3G (see X20 users manual) FTZ 09 ATEX 0083X TRUE 0 ATEX 0 ATE | | Yes | | | |
| HazLoc | | | | | |
| Process control equipment From the activation locations | | Industrial c | control equipment | | |
| Grazardous locations Class I, Division 2, Groups ABCD, T5 | HazLoc | | | | |
| Class Division 2, Groups ABCD, T5 | | | | | |
| AFEX 20ne 2, II 3G Ex n An Cli IA T Ge 1972, Ta (see x 250 user's manual) FTZU 09 ATEX 0083X FTZU 09 ATEX 0093X FTZU | | | | | |
| DNV GL Temperature 8 (0 - 55°C) Humidity, 8 (up to 100%) Vibration: 8 (4 g) EMC: 8 (bridge and open deck) | ATEX | | | | |
| Humidity, B (up to 100%) Vibration: B (4 g) EMC: B (bridge and open deck) | | | | | |
| Record | DNV GL | Temperati | ure: B (0 - 55°C) | | |
| EMC: B (bridge and open deck) | | Humidity: | B (up to 100%) | | |
| LR | | | | | |
| March Mar | 1.0 | | | | |
| Digital outputs Relay / Normally open contact Channels are single-channel isolated Nominal voltage 30 VDC / 115 VAC Max. voltage 125 VAC Switching voltage Max. 110 VDC / 125 VAC Rated frequency DC / 45 to 81 Hz Nominal output current 1 A at 30 VDC / 0.5 A at 115 VAC Total nominal current 6 A at 30 VDC / 3 A at 115 VAC Actuator power supply External Contact resistance 75 mΩ at 6 VDC / 1A Switching delay 34 ms 0 → 1 54 ms Switching delay 4ms 0 → 1 54 ms Stolation voltages 7ested at 1500 VAC Channel - Bus Tested at 1500 VAC Channel - Bus Tested at 1500 VAC Channel - Channel Tested at 1000 VAC Service life 8 Electrical ²⁷ Min. 100 x 10 ² ops. Mechanical Min. 50 x 10 ² ops. (3 Hz) Switching capacity Min. 50 x 10 ² ops. Minimum 0.01 mA / 10 mV DC Maximum None External RC comb | | ENV1 | | | |
| Relay / Normally open contact Channels are single-channel isolated | | | Yes | | |
| Channels are single-channel isolated | • . | Dalay / Nam | | | |
| Nominal voltage 30 VDC / 115 VAC | variant | • | • • | | |
| Max. voltage 125 VAC Switching voltage Max. 110 VDC / 125 VAC Rated frequency DC / 45 to 63 Hz Nominal output current 1 A at 30 VDC / 3.6 at 115 VAC Total nominal current 6 A at 30 VDC / 3.6 at 115 VAC Actuator power supply External Innush current Max. 2.A (per channel) Contact resistance 75 mΩ at 6 VDC / 1A Switching delay 0 → 1 ≤4 ms Isolation voltages Channel - Bus Tested at 1500 VAC Channel - Channel Service life Field Min. 50 x 10° ops. (3 Hz) Switching capacity Minimum 0.01 mA / 10 mV DC Maximum 0.01 mA / 10 mV DC Maximum 0.00 mA / 10 mV DC Maximum 0.00 max of VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Poperties Electrical isolation Poperties Electrical isolation Poperties Mounting orientation Poperties Horizontal Yes Mounting orientation Poperties Electrical isolation Poperties Electrical Poperties El | Nominal voltage | | <u>-</u> | | |
| Switching voltage Max. 110 VDC / 125 VAC Rated frequency DC / 45 to 63 Hz Nominal output current 1 A at 30 VDC / 3 A at 115 VAC Total nominal current 6 A at 30 VDC / 3 A at 115 VAC Actuator power supply External Inrush current Max. 2 A (per channel) Contact resistance 75 mΩ at 6 VDC / 1A Switching delay ≤4 ms 0 → 1 ≤4 ms solation voltages ≤4 ms Channel - Bus Tested at 1500 VAC Channel - Channel Tested at 1000 VAC Service life Electrical 3 Electrical 3 Min. 100 x 103 ops. Mechanical Min. 50 x 106 ops. (3 Hz) Switching capacity Minimum Maximum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit None Internal None External AC DC Inverse diode, RC combination or VDR DC Inverse diode, RC combination or VDR Electrical isolation Channel isolated from channel and bus | <u> </u> | | | | |
| Rated frequency Nominal output current 1 A at 30 VDC / 0.5 A at 115 VAC Total nominal output current 6 A at 30 VDC / 0.5 A at 115 VAC Actuator power supply External Incush current Max. 2 A (per channel) Contact resistance 75 mΩ at 6 VDC / 1A Switching delay 0 → 1 ≤ 4 ms 1 → 0 ≤ 4 ms Solation voltages Channel - Bus Channel - Channel Electrical ¹² Min. 100 x 10³ ops. Mechanical Min. 50 x 10° ops. (3 Hz) Switching capacity Minimum 0.01 mA / 10 mV DC Maximum None External AC Caccombination or VDR DC Inverse diode, RC combination or VDR Electrical isolation Channel as Channel and bus Operating conditions Mounting orientation Horizontal Yes Wertical No imitations Pes Contact resistance No imitations No imitations Pes Ves Installation elevation above sea level 10 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | | | |
| Nominal output current 1 A at 30 VDC / 0.5 A at 115 VAC Total nominal current 6 A at 30 VDC / 3 A at 115 VAC Actuator power supply External Inrush current Max. 2 A (per channel) Contact resistance 75 mQ at 6 VDC / 1A Switching delay 4 ms 0 → 1 ≤4 ms solation voltages 54 ms Channel - Bus Tested at 1500 VAC Channel - Channel Tested at 1000 VAC Service life 6 Electrical ²⁰ Min. 100 x 10 ² ops. Mechanical Min. 50 x 10 ² ops. (3 Hz) Switching capacity Min. 50 x 10 ² ops. (3 Hz) Minimum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit None Internal None External AC AC RC combination or VDR Electrical properties Electrical solation Channel isolated from channel and bus Operating conditions Mounting orientation Yes Vertical Yes 10 | | | | | |
| Total nominal current Actuator power supply External Intrush current Max. 2 A (per channel) Contact resistance 75 mΩ at 6 VDC / 1A Switching delay 0 → 1 ≤ 4 ms 1 → 0 ≤ 4 ms 1 → 0 ≤ 4 ms Isolation voltages Channel - Channel - Channel Contact resistance Channel - Channel Celetrical ²⁾ Mechanical Switching capacity Minimum Maximum Maximum Maximum Maximum Maximum Maximum Mount and Mount All Mount External AC RC combination or VDR DC DC Inverse diode, RC combination or VDR Electrical properties Electrical properties Electrical solation Channel solated from channel and bus Operating conditions Mounting orientation Horizontal Yes Vertical No limitations Position of ambient temperature by 0.5°C per 100 m Reduction of ambient temperature by 0.5°C per 100 m | | · · · · · · · · · · · · · · · · · · · | | | |
| Inrush current Contact resistance Contact resistance 75 mΩ at 6 VDC / 1A Switching delay 0 → 1 | Total nominal current | | | | |
| Inrush current Contact resistance Contact resistance 75 mΩ at 6 VDC / 1A Switching delay 0 → 1 | Actuator power supply | E | External | | |
| Contact resistance 75 mΩ at 6 VDC / 1A Switching delay ≤4 ms 1 → 0 ≤4 ms Isolation voltages Tested at 1500 VAC Channel - Bus Tested at 1000 VAC Channel - Channel Tested at 1000 VAC Service life Flectrical ² Electrical ² Min. 100 x 10³ ops. Mechanical Min. 50 x 10° ops. (3 Hz) Switching capacity Minimum Maximum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit None Internal None External AC DC Inverse diode, RC combination or VDR Electrical properties Flectrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Yes Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | Inrush current | Max. 2 A | A (per channel) | | |
| 0 → 1 ≤4 ms 1 → 0 ≤4 ms Isolation voltages Isolation voltages Channel - Bus Tested at 1500 VAC Channel - Channel Tested at 1000 VAC Service life Image: Service life se | Contact resistance | | | | |
| 1 → 0 | Switching delay | | | | |
| Scalation voltages Tested at 1500 VAC | 0 → 1 | | ≤4 ms | | |
| Channel - Bus Tested at 1500 VAC Channel - Channel Tested at 1000 VAC Service life Image: Control of the part of | 1 → 0 | | ≤4 ms | | |
| Channel - Channel Tested at 1000 VAC Service life Min. 100 x 10³ ops. Electrical ²) Min. 100 x 10° ops. (3 Hz) Switching capacity Min. 50 x 10° ops. (3 Hz) Switching capacity O.01 mA / 10 mV DC Maximum 0.01 mA / 10 mV DC Maximum None External None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Electrical isolation Channel isolated from channel and bus Operating conditions Channel isolated from channel and bus Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | Isolation voltages | | | | |
| Service life Electrical 20 Min. 100 x 100 ops. Mechanical Min. 50 x 100 ops. (3 Hz) Switching capacity Winimum Minimum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit None External None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Electrical isolation Channel isolated from channel and bus Operating conditions Yes Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | | | |
| Electrical 20 Min. 100 x 103 ops. Mechanical Min. 50 x 106 ops. (3 Hz) Switching capacity Min. 50 x 106 ops. (3 Hz) Minimum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit None Internal None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Operating conditions Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | Tested | at 1000 VAC | | |
| Mechanical Min. 50 x 10° ops. (3 Hz) Switching capacity Instrum Minimum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit None Internal None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Channel isolated from channel and bus Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | Service life | | | | |
| Switching capacity 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit Internal Internal None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Electrical isolation Channel isolated from channel and bus Operating conditions Yes Mounting orientation Yes Vertical Yes Vertical isolation elevation above sea level 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | · | | |
| Minimum 0.01 mA / 10 mV DC Maximum 30 W / 62.5 VA Protective circuit Internal None External RC combination or VDR AC RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Horizontal Yes Vertical Yes Installation elevation above sea level 0 to 2000 m No limitations > 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | Min. 50 x | 10 ⁶ ops. (3 Hz) | | |
| Maximum 30 W / 62.5 VA Protective circuit None Internal None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Yes Vertical Yes Vertical olivation above sea level Yes 0 to 2000 m No limitations > 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | A. (40. A. D.O. | | |
| Protective circuit None Internal None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | | | |
| Internal None External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | 30 V | V / 62.5 VA | | |
| External RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Channel isolated from channel and bus Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | Name | | |
| AC RC combination or VDR DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Horizontal Yes Vertical Yes Installation elevation above sea level 0 to 2000 m No limitations > 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | none | | |
| DC Inverse diode, RC combination or VDR Electrical properties Electrical isolation Operating conditions Mounting orientation Horizontal Yes Vertical Yes Installation elevation above sea level 0 to 2000 m No limitations > 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | 50 | singtion or VDD | | |
| Electrical properties Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | | | |
| Electrical isolation Channel isolated from channel and bus Operating conditions Mounting orientation Horizontal Yes Vertical Yes Installation elevation above sea level 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | inverse diode, R | C COMORIAMON OF VDK | | |
| Operating conditions Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | Channal inclated | I from channel and hus | | |
| Mounting orientation Yes Horizontal Yes Vertical Yes Installation elevation above sea level 0 to 2000 m 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | Charmer Isolated | THOM CHAINE AND DUS | | |
| Horizontal Yes Vertical Yes Installation elevation above sea level 0 to 2000 m 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | • | | | | |
| Vertical Yes Installation elevation above sea level No limitations 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | Yes | | |
| Installation elevation above sea level 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | | | | |
| 0 to 2000 m No limitations >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | 162 | | | |
| >2000 m Reduction of ambient temperature by 0.5°C per 100 m | | No | limitations | | |
| i i i i i i i i i i i i i i i i i i i | | | | | |
| | Degree of protection per EN 60529 | Treduction of ambient te | IP20 | | |

Table 2: X20DO6529, X20cDO6529 - Technical data

| Model number | X20DO6529 | X20cDO6529 | | | |
|---------------------------------|--|--|--|--|--|
| Ambient conditions | | | | | |
| Temperature | | | | | |
| Operation | | | | | |
| Horizontal mounting orientation | -25 to | 60°C | | | |
| Vertical mounting orientation | -25 to | 50°C | | | |
| Derating | See section | n "Derating" | | | |
| Storage | -40 to | -40 to 85°C | | | |
| Transport | -40 to | -40 to 85°C | | | |
| Relative humidity | | | | | |
| Operation | 5 to 95%, non-condensing | Up to 100%, condensing | | | |
| Storage | 5 to 95%, no | n-condensing | | | |
| Transport | 5 to 95%, no | n-condensing | | | |
| Mechanical properties | | | | | |
| Note | Order 1x X20TB12 terminal block separately | Order 1x X20TB12 terminal block separately | | | |
| | Order 1x X20BM11 bus module separately | Order 1x X20cBM11 bus module separately | | | |
| Spacing | 12.5 ⁺ | 12.5 ^{+0.2} mm | | | |

Table 2: X20DO6529, X20cDO6529 - Technical data

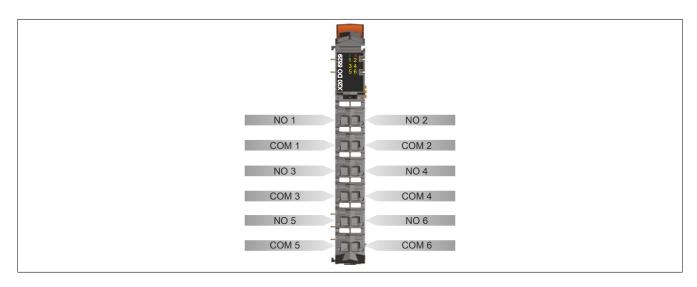
- 1) Number of outputs x Contact resistance x Nominal output current². For a calculation example, see section "Mechanical and electrical configuration" of the X20 system user's manual.
- 2) With a resistive load. See also section "Electrical service life"

5 Status LEDs

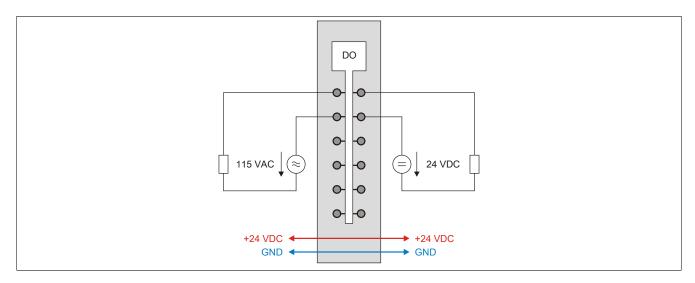
For a description of the various operating modes, see section "Additional information - Diagnostic LEDs" of the X20 system user's manual.

| Figure | LED | Color | Status | Description |
|---------|-------|----------------|---------------------------------------|---|
| | r | Green | Green Off Module supply not connected | |
| - | | | Single flash | RESET mode |
| | | | Blinking | PREOPERATIONAL mode |
| g • • | | | On | RUN mode |
| 6259 | е | Red | Off | Module supply not connected or everything OK |
| 0 5 6 E | | | On | Error or reset status |
| | e+r | Red on / Green | single flash | Invalid firmware |
| X20 | 1 - 6 | Orange | | Output status of the corresponding digital output |
| 1 | | | | |

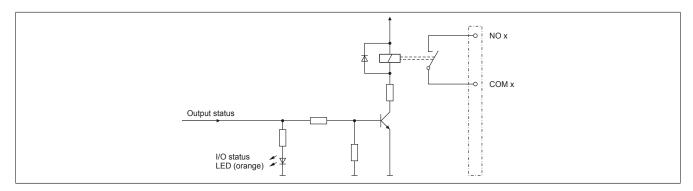
6 Pinout



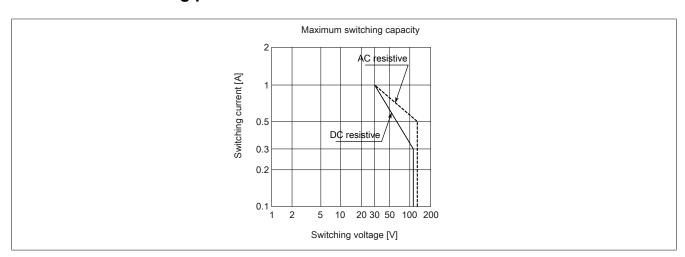
7 Connection example



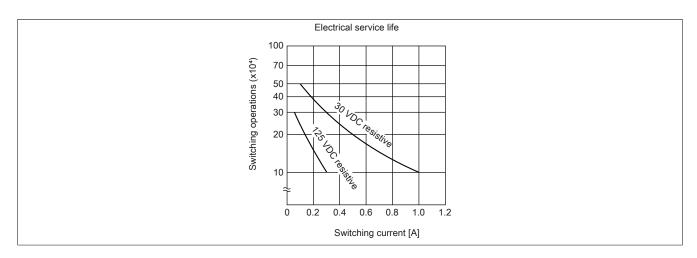
8 Output circuit diagram



9 Maximum switching power



10 Electrical service life

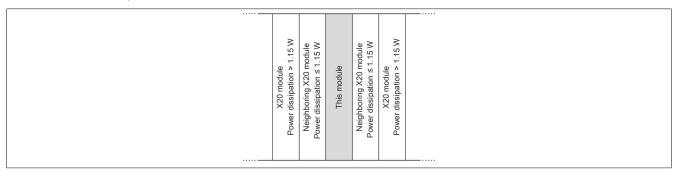


11 Derating

There is no derating when operated below 55°C.

During operation over 55°C, the power dissipation of the modules to the left and right of this module is not permitted to exceed 1.15 W!

For an example of calculating the power dissipation of I/O modules, see section "Mechanical and electrical configuration - Power dissipation of I/O modules" in the X20 user's manual.



12 Register description

12.1 General data points

In addition to the registers described in the register description, the module has additional general data points. These are not module-specific but contain general information such as serial number and hardware variant.

General data points are described in section "Additional information - General data points" of the X20 system user's manual.

12.2 Function model 0 - Standard

| Register | Fixed offset | Name | Data type | Read | | Write | |
|----------|--------------|-----------------|-----------|--------|---------|--------|---------|
| | | | | Cyclic | Acyclic | Cyclic | Acyclic |
| 2 | 0 | DigitalOutput | USINT | | | • | |
| | | DigitalOutput01 | Bit 0 | | | | |
| | | | | | | | |
| | | DigitalOutput06 | Bit 5 | | | | |

Fixed modules require their data points to be in a specific order in the X2X frame. Cyclic access occurs according to a predefined offset, not based on the register address.

Acyclic access continues to be based on the register numbers.

12.3 Function model 254 - Bus Controller

| Register | Offset1) | Name | Data type | Read Write | | rite | |
|----------|----------|---|-----------|------------|---------|--------|---------|
| | | | | Cyclic | Acyclic | Cyclic | Acyclic |
| 2 | 0 | Switching state of digital outputs 1 to 6 | USINT | | | • | |
| | | DigitalOutput01 | Bit 0 |] | | | |
| | | | | | | | |
| | | DigitalOutput06 | Bit 5 |] | | | |

¹⁾ The offset specifies where the register is within the CAN object.

12.3.1 Using the module on the bus controller

Function model 254 "Bus controller" is used by default only by non-configurable bus controllers. All other bus controllers can use additional registers and functions depending on the fieldbus used.

For detailed information, see section "Additional information - Using I/O modules on the bus controller" of the X20 user's manual (version 3.50 or later).

12.3.2 CAN I/O bus controller

The module occupies 1 digital logical slot on CAN I/O.

12.4 Digital outputs

The output status is transferred to the output channels with a fixed offset (<60 µs) based on the network cycle (SyncOut).

12.4.1 Switching state of digital outputs 1 to 6

Name:

DigitalOutput

DigitalOutput01 to DigitalOutput06

The switching state of digital outputs 1 to 6 are stored in this register.

Only function model 0 - Standard:

Setting "Packed outputs" in the Automation Studio I/O configuration determines whether all bits of this register should be applied individually as data points in the Automation Studio I/O assignment ("DigitalOutput01" to "DigitalOutput0x") or whether this register should be displayed as a single USINT data point ("DigitalOutput").

| Data type | Values | Information | |
|-----------|--------------------|--|--|
| USINT | 0 to 63 | Packed outputs = On | |
| | See bit structure. | Packed outputs = Off or Function model <> 0 - Standard | |

Bit structure:

| Bit | Name | Value | Information |
|-----|-----------------|-------|-------------------------|
| 0 | DigitalOutput01 | 0 | Digital output 01 reset |
| | | 1 | Digital output 01 set |
| | | | |
| 5 | DigitalOutput06 | 0 | Digital output 06 reset |
| | | 1 | Digital output 06 set |

12.5 Minimum cycle time

The minimum cycle time specifies the time up to which the bus cycle can be reduced without communication errors occurring. It is important to note that very fast cycles reduce the idle time available for handling monitoring, diagnostics and acyclic commands.

| Minimum cycle time |
|--------------------|
| 100 µs |

12.6 Minimum I/O update time

The minimum I/O update time specifies how far the bus cycle can be reduced so that an I/O update is performed in each cycle.

| Minimum I/O update time |
|---------------------------------|
| Equal to the minimum cycle time |