



Part type designation	Part number
NCN102	00042226-00
NCN102 EC	00042227-00

#### **NCN102**

### Node Adapter CAN/CANopen

The NCN102 node adapter maps the powerful and flexibly configurable M100 station to a standard CANopen interface. The operating modes of the M100 I/O modules are defined during the configuration and are transferred to the station node during start-up. The CANopen synchronization features enables clock-synchronous sampling and processing of the I/O signals.

#### **Features**

- CAN/CANopen node adapter
- Wiring on M100 standard terminal block
- Integrated termination resistor
- Address configuration: via 2 rotary switches, or via LSS service according to CiA 305
- Baud rate setting: via rotary switches, or automatic detection
- Synchronization: CANopen sync consumer
- Maximum process image per station: 2048 bytes
- Integrated power supply unit for module supply: 20 W
- Diagnostic LEDs according to CANopen standard

Common properties	
Basic function	CAN/CANopen fieldbus IO node adapter, integrated station power supply
System	Bachmann system M100
Module bus interface	
System	M100
Slot type	0/C
Network interface / bus interface	
Protocol standard	CANopen
Node address setting	Via 2 rotary switches
Baud rate setting	Via rotary switch, via automatic baud rate detection or via LSS service on the CAN bus
Integrated line terminators	Yes, can be activated via jumper on standard terminal block
Substitute value during interruptions	Configurable behavior:  Substitute value  Off state Last value
Process data image per station (PDO)	Max. 128 TPDOs, max. 128 RPDOs
Service data image per station (SDO)	2 SDO server
Bus interface	M100 standard terminal block
Data transfer rate	10, 20, 50, 100, 125, 250, 500, 800 and 1000 kbit/s
Cable specification	Shielded two-wire line with 120 $\Omega$ impedance
Maximum cable length	Total length depending on baud rate
Synchronization	
Synchronization functions	<ul><li>PDO modes</li><li>Asynchronous</li><li>Synchronous</li><li>Timer-driven</li><li>RTR</li></ul>
Diagnostics	
Electronic type plate	Yes (application interface and in the engineering tool)
Machine readable type plate	Yes (QR code with type and part information and internet link)
Environmental conditions sensor	Integrated temperature sensor
Diagnostics interface	USB-C socket
Operational indications	LED "MOD" (red/green) module status LED "RUN" (green) to indicate CAN status, according to CANopen specification
Error indications	LED "ERR" (red) to indicate CAN bus fault, blinking pattern according to CANopen specification
Energy supply	
Supply voltage, nominal	24 V DC
Supply voltage, range	18 V to 32 V DC
Supply voltage, short-term overload	40 V for 100 ms
Power consumption, continuous, max.	25 W
Input current, continuous, max.	1.4 A @ 18 V DC, T <sub>a</sub> = 25 °C
Input current, inrush	46 A for < 1 ms (@ 24 V DC, T <sub>a</sub> = 25 °C)
Input capacity	Typ. 220 μF
Maximum residual ripple	2.4 V <sub>ss</sub> at 50 Hz, 60 Hz, 100 Hz and 120 Hz
Power output for I/O modules/backplane	20 W

Permitted voltage interruptions Reverse polarity protection Ves. continuously (up to -32 V) Limitation of supply / fusing No internal protection in External protection in External protection with circuit breaker characteristic; B, C, D, Z or K Max. nominal current B A DC for the supply forwarding Parallel operation Yes, with PSI135 modules (if galvanic isolation is required, the NCN102 module must not be supplied via the 24 V signal supply) Power dissipation 2,7 W @ 24 V DC, Ta = 25 °C, Pac, = 0 W 4,0 W @ 24 V DC, Ta = 25 °C, Pac, = 0 W 4,8 W @ 32 V DC, Ta = 60 °C, Pac, = 0 W 4,8 W @ 32 V DC, Ta = 60 °C, Pac, = 0 W 4,8 W @ 32 V DC, Ta = 60 °C, Pac, = 20 W Supply terminal block bridge Yes, internal connection from 1+ to 2+, and 1- to 2- Products asfety Galvanic isolation 850 V AC Degree of protection acc. IEC 60529 IP40, terminal block IP30 Protection dasa acc. IEC 61010-1, III IEC 61010-2-201 Up to 2000 module remained in the packer of the	Energy supply	
Limitation of supply / fusing  No internal protection External protection External protection External protection with circuit breaker characteristics B, C, D, Z or K Max. nominal current a A Dc for the supply forwarding Parallel operation  Yes, with PSI 35 modules (if galvanic isolation is required, the NCN102 module must not be supplied via the 24 V signal supply)  Power dissipation  2.7 W @ 24 V DC, T <sub>a</sub> = 2.5 °C, P <sub>ent</sub> = 0 W 4.0 W @ 2.4 V DC, T <sub>a</sub> = 2.5 °C, P <sub>ent</sub> = 0 W 4.8 W @ 2.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 3.3 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 20 W 4.8 W @ 3.2 V DC, T <sub>a</sub> = 6.0 °C, P <sub>ent</sub> = 6.0		PS1 according to IEC 61131-2
External protection with circuit breaker characteristic B, C, D, Z or K Max. nominal current B A DC for the supply forwarding Parallel operation  Yes, with PS1135 modules (if galvanic isolation is required, the NCN102 module must not be supplied via the 24 V signal supply)  Power dissipation  2,7 W @ 24 V DC, T <sub>3</sub> = 25 °C, Pout = 0 W 4.0 W @ 24 V DC, T <sub>3</sub> = 25 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, T <sub>3</sub> = 60 °C, Pout = 0 W 4.8 W @ 22 V DC, Ta = 60 °C, P	Reverse polarity protection	Yes, continuously (up to -32 V)
Parallel operation       Max. nominal current 8 A DC for the supply forwarding         Parallel operation       Yes, with PSI135 modules (if galvanic isolation is required, the NCN102 module must not be supplied via the 24 V signal supply)         Power dissipation       2.7 W ⊕ 24 V DC, T₃ = 25 °C, P₀x₂ = 0 W 4.0 W ⊕ 24 V DC, T₃ = 60 °C, P₀x₂ = 0 W 4.8 W ⊕ 22 V DC, T₃ = 60 °C, P₀x₂ = 20 W         Supply terminal block bridge       Yes, internal connection from 1+ to 2+, and 1- to 2-         Product safety       Froduct safety         Galvanic isolation       850 V AC         Degree of protection acc. IEC 60529       IP40, terminal block IP30         Protection class acc. IEC 61010-1, IEC 61010-2.201       III         Environmental conditions       III         Temperature, operating       Standard: -30 °C to +60 °C         Extended Climate: -30 °C to +70 °C         Temperature, operating       Standard: -30 °C to +60 °C         Installation altitude, max.       Up to 2000 m without temperature derating         2000 m to 4500 m Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation         Air pressure       106 kPa to 58 kPa (0 m to 4500 m)         Relative humidity, operation       Standard: 0 % to 100 % noncondensing         Extended Climate: 2       Yes many littude (2 Mz to 14.1 Hz)         - 7.5 mm amplitude (2 Mz to 14.1 Hz)       - 7.5 mm amplitude (2 Mz to 14.1 Hz)	Limitation of supply / fusing	No internal protection
Parallel operation  Yes, with PS1135 modules (If galvanic isolation is required, the NCN102 module must not be supplied via the 24 V signal supply)  Power dissipation  2, 7 W @ 24 V DC, T <sub>a</sub> = 5 C, P <sub>aux</sub> = 0 W 4.0 W @ 24 V DC, T <sub>a</sub> = 25 C, P <sub>aux</sub> = 0 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 3.3 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>aux</sub>		External protection with circuit breaker characteristic: B, C, D, Z or K
module must not be supplied via the 24 V signal supply)  Power dissipation  2.7 W @ 24 V DC, Ta = 25 °C, Pows = 0 W 4.0 W @ 24 V DC, Ta = 60 °C, Pows = 0 W 4.8 W @ 32 V DC, Ta = 60 °C, Pows = 20 W  Supply terminal block bridge  Yes, internal connection from 1+ to 2+, and 1- to 2-  Product safety  Galvanic isolation  850 V AC  Degree of protection acc. IEC 60529  Protection class acc. IEC 61010-1  III  EC 61010-2-201  Brivinomental conditions  Temperature, operating  Standard: -30 °C to +60 °C  Extended Climate: -30 °C to +70 °C  Temperature, transport and storage  40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C  per 100 m elevation  Air pressure  106 KPa to 58 KPa (0 m to 4500 m)  Relative humidity, operation  Standard: -9.0 °C to 10.0 % noncondensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 monomensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 monomensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 monomensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 monomensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 monomensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 monomensing Extended Climate: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 % to 10.0 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: -9.0 % to 10.0 % unit of the max.  P		Max. nominal current 8 A DC for the supply forwarding
4.0 W @ 24 V DC, T <sub>a</sub> = 25 °C, P <sub>oot</sub> = 20 W 3.3 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 20 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub> = 60 PC, P <sub>oot</sub> = 30 W 5. W @ 32 V DC, T <sub>a</sub>	Parallel operation	
3.3 W @ 32 V DC, T <sub>3</sub> = 60 °C, P <sub>out</sub> = 0 W 4.8 W @ 32 V DC, T <sub>3</sub> = 60 °C, P <sub>out</sub> = 20 W  Yes, internal connection from 1+ to 2+, and 1- to 2-  Product safety  Galvanic Isolation   850 V AC  Degree of protection acc. IEC 60529   IP40, terminal block IP30   Protection class acc. IEC 61010-1,   III IEC 61010-2-201   III IEC 61010-2-200   III IEC 61010-2-200   III IEC 61010-	Power dissipation	
4.8 W @ 32 V DC, T <sub>a</sub> = 60 °C, P <sub>out</sub> = 20 W  Supply terminal block bridge  Yes, internal connection from 1+ to 2+, and 1- to 2-  Product safety  Galvanic Isolation  Begree of protection acc. IEC 60529  IP40, terminal block IP30  Protection class acc. IEC 61010-1  III  Environmental conditions  Temperature, operating  Sandard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage  40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 10m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: 2 who 100 % noncondensing Extended Climate: 2  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 St no. 12.5 My Hz to 4 g me and 15.1 My Hz to 500 Hz to 4 g me and 15.1 My Hz to 500 Hz to 4 g me and 15.1 My Hz to 500 Hz to 500 Hz to 7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 40.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  4 g (14.5 Hz to 40.1 Hz)  4 g (14.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  8 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.6 S E10. IEC 61131-2)  Shock  4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 4 g (14.5 Hz to 500 Hz)  7 to 50 Hz to 100 Hz to 50 Hz to 100		
Supply terminal block bridge  Yes, internal connection from 1+ to 2+, and 1- to 2-  Product safety  Galvanic Isolation  B50 V AC  Degree of protection acc. IEC 60529  Protection class acc. IEC 61010-1, III  EC 61010-2-201  III  Environmental conditions  Temperature, operating  Standard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage  -40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 10m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: -0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Standard: 2, noncondensing Extended Climate: 2  With BPS1nn:  -4 g (11.5 Hz to 500 Hz) -7.5 mm amplitude (2 Hz to 14.1 Hz) -Test duration: 15 h With BPR1nn: -4 g (14.5 E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX. Ex II 3 G Ex ec IIC G  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation (Bullish preparation)  Engineering  Configuration tool  SolutionCenter (e V2.85)		
Product safety Galvanic isolation Degree of protection acc. IEC 60529 IP40, terminal block IP30 Protection class acc. IEC 61010-1, IEC 61010-2-201  Overvoltage category acc. IEC 61010-1 II  III  III  III  III  III  III		
Galvanic isolation 850 V AC Degree of protection acc. IEC 60529   P40, terminal block IP30   III   Ec 61010-2-201   III   Environmental conditions  Temperature, operating Standard: -30 °C to +60 °C   Extended Climate: -30 °C to +70 °C   Temperature, transport and storage 40 °C to +85 °C   Installation altitude, max. Up to 2000 m without temperature derating   2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C   per 100 m elevation   Air pressure 106 kPa to 58 kPa (0 m to 4500 m) Relative humidity, operation Standard: -3 0 % to 100 % noncondensing   Extended Climate: 0 % to 100 % with temporary condensation   Pollution degree acc. IEC 61010-1 Standard: -2, noncondensing   Extended Climate: 0 % to 100 % with temporary condensation   With BPS1nn:		Yes, internal connection from 1+ to 2+, and 1- to 2-
Degree of protection acc. IEC 60529 IP40, terminal block IP30  Protection class acc. IEC 61010-1, IEC 61010-2-201 III  Environmental conditions  Temperature, operating Standard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage -40 °C to +85 °C  Installation altitude, max. Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure 106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation Standard: 0 % to 100 % noncondensing Extended Climate: 2  Vibration With BPS1nn: 4 g(11.5 Hz to 500 Hz) 7.5 mm amplitude (2 Hz to 14.1 Hz) 7.5 mm amplitude (2		
Protection class acc. IEC 61010-1, IEC 61010-2-201  Overvoltage category acc. IEC 61010-1  II  Environmental conditions  Temperature, operating  Standard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage  -40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h With BPR1nn:  4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: EX II 3G Ex ex II C Gc  Maritime  ABS, BV, DN, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment  ROHS, ROHS China, REACH, WEEE  Quality management  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		
IEC 61010-2-201  Overvoltage category acc. IEC 61010-1  II  Environmental conditions  Temperature, operating Standard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage -40 °C to +85 °C  Installation altitude, max. Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure 106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation Standard: 0 % to 100 % noncondensing Extended Climate: 2  Vibration With BPS1nn:		IP40, terminal block IP30
Environmental conditions  Temperature, operating Standard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage -40 °C to +85 °C Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure 106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1 Standard: 2, noncondensing Extended Climate: 2  Vibration With BPS1nn: 4 g (11.5 Hz to 500 Hz) 7.5 mm amplitude (2 Hz to 14.1 Hz) 7.5 mm amp		III
Temperature, operating  Standard: -30 °C to +60 °C Extended Climate: -30 °C to +70 °C  Temperature, transport and storage  -40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h With BPR1nn:  4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ex e IIC GC  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment ROHS, ROHS China, REACH, WEEE  Quality management  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Overvoltage category acc. IEC 61010-1	II
Extended Climate: -30 °C to +70 °C  Temperature, transport and storage  -40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h  With BPR1nn:  4 g (14CS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation  ∪Llus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation  ULlus (NRA, REACH, WEEE  Quality management  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Environmental conditions	
Temperature, transport and storage  -40 °C to +85 °C  Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h With BPR1nn:  4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment RoHS, RoHS China, REACH, WEEE  Quality management  Fooliguration tool  SolutionCenter (≥ V2.85)	Temperature, operating	Standard: -30 °C to +60 °C
Installation altitude, max.  Up to 2000 m without temperature derating 2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure 106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1 Standard: 2, noncondensing Extended Climate: 2  Vibration With BPS1nn: 4 g (11.5 Hz to 500 Hz) 7.5 mm amplitude (2 Hz to 14.1 Hz) 1 Test duration: 15 h  With BPR1nn: 4 g (IACS E10, IEC 61131-2)  Shock 45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation ATEX: Ex II 3G Ex ec IIC Gc  Maritime ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment RoHS, RoHS China, REACH, WEEE  Quality management ISO 9001 for development and production  Engineering Configuration tool SolutionCenter (≥ V2.85)		Extended Climate: -30 °C to +70 °C
2000 m to 4500 m: Reduction of the max. ambient temperature by 0.1 °C per 100 m elevation  Air pressure 106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation 5tandard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1 5tandard: 2, noncondensing Extended Climate: 2  Vibration With BPS1 nn:	Temperature, transport and storage	-40 °C to +85 °C
per 100 m elevation  Air pressure  106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation  Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h  With BPR1nn:  4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment ROHS, ROHS China, REACH, WEEE  Quality management  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Installation altitude, max.	, ,
Air pressure 106 kPa to 58 kPa (0 m to 4500 m)  Relative humidity, operation Standard: 0 % to 100 % noncondensing Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1 Standard: 2, noncondensing Extended Climate: 2  Vibration With BPS1nn:		· ·
Extended Climate: 0 % to 100 % with temporary condensation  Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h  With BPR1nn:  4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment ROHS, ROHS China, REACH, WEEE  Quality management  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Air pressure	'
Pollution degree acc. IEC 61010-1  Standard: 2, noncondensing Extended Climate: 2  With BPS1nn:	Relative humidity, operation	Standard: 0 % to 100 % noncondensing
Extended Climate: 2  Vibration  With BPS1nn:  4 g (11.5 Hz to 500 Hz)  7.5 mm amplitude (2 Hz to 14.1 Hz)  Test duration: 15 h  With BPR1nn:  4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation  CULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		Extended Climate: 0 % to 100 % with temporary condensation
Vibration       With BPS1nn: <ul> <li>4 g (11.5 Hz to 500 Hz)</li> <li>7.5 mm amplitude (2 Hz to 14.1 Hz)</li> <li>Test duration: 15 h</li> <li>With BPR1nn:             <ul> <li>4 g (IACS E10, IEC 61131-2)</li> <li>Shock</li> <li>45 g max. (test scope 18 shocks)</li> <li>20 g permanently (test scope 6000 shocks)</li> <li>Approvals/certificates</li> <li>Product safety</li> <li>CE, UKCA: in preparation cULus (NRAQ, NRAQ7)</li> <li>Hazard area operation</li> <li>ATEX: Ex II 3G Ex ec IIC Gc</li> <li>Maritime</li> <li>ABS, BV, DNV, KR, LR, NK, RINA: in preparation</li> <li>Hazardous substances and waste treatment</li> <li>ROHS, ROHS China, REACH, WEEE</li> <li>Quality management</li> <li>ISO 9001 for development and production</li> <li>Engineering</li> <li>Configuration tool</li> <li>SolutionCenter (≥ V2.85)</li> <li>Possible of the content of the con</li></ul></li></ul>	Pollution degree acc. IEC 61010-1	_
<ul> <li>4 g (11.5 Hz to 500 Hz)</li> <li>7.5 mm amplitude (2 Hz to 14.1 Hz)</li> <li>Test duration: 15 h</li> <li>With BPR1nn:</li> <li>4 g (IACS E10, IEC 61131-2)</li> <li>Shock</li> <li>45 g max. (test scope 18 shocks)</li> <li>20 g permanently (test scope 6000 shocks)</li> <li>Approvals/certificates</li> <li>Product safety</li> <li>CE, UKCA: in preparation cULus (NRAQ, NRAQ7)</li> <li>Hazard area operation</li> <li>ATEX: Ex II 3G Ex ec IIC Gc</li> <li>Maritime</li> <li>ABS, BV, DNV, KR, LR, NK, RINA: in preparation</li> <li>Hazardous substances and waste treatment</li> <li>RoHS, RoHS China, REACH, WEEE</li> <li>Quality management</li> <li>ISO 9001 for development and production</li> <li>Engineering</li> <li>Configuration tool</li> <li>SolutionCenter (≥ V2.85)</li> </ul>		
T.5 mm amplitude (2 Hz to 14.1 Hz) Test duration: 15 h With BPR1nn: 4 g (IACS E10, IEC 61131-2)  Shock 45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation ATEX: Ex II 3G Ex ec IIC Gc Maritime ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment RoHS, RoHS China, REACH, WEEE  Quality management  Engineering  Configuration tool SolutionCenter (≥ V2.85)	Vibration	
• Test duration: 15 h With BPR1nn: • 4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		
With BPR1nn:		· · · · · · · · · · · · · · · · · · ·
• 4 g (IACS E10, IEC 61131-2)  Shock  45 g max. (test scope 18 shocks) 20 g permanently (test scope 6000 shocks)  Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment ROHS, ROHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		
Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation Hazardous substances and waste treatment RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		
Approvals/certificates  Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation  Hazardous substances and waste treatment  RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Shock	45 g max. (test scope 18 shocks)
Product safety  CE, UKCA: in preparation cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation  Hazardous substances and waste treatment  RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		20 g permanently (test scope 6000 shocks)
cULus (NRAQ, NRAQ7)  Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation  Hazardous substances and waste treatment  RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Approvals/certificates	
Hazard area operation  ATEX: Ex II 3G Ex ec IIC Gc  Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation  RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Product safety	CE, UKCA: in preparation
Maritime  ABS, BV, DNV, KR, LR, NK, RINA: in preparation  Hazardous substances and waste treatment  RoHS, RoHS China, REACH, WEEE  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)		cULus (NRAQ, NRAQ7)
Hazardous substances and waste treatment  Quality management  ISO 9001 for development and production  Engineering  Configuration tool  SolutionCenter (≥ V2.85)	Hazard area operation	ATEX: Ex II 3G Ex ec IIC Gc
Quality management     ISO 9001 for development and production       Engineering     SolutionCenter (≥ V2.85)	Maritime	ABS, BV, DNV, KR, LR, NK, RINA: in preparation
Engineering  Configuration tool SolutionCenter (≥ V2.85)	Hazardous substances and waste treatment	RoHS, RoHS China, REACH, WEEE
Configuration tool SolutionCenter (≥ V2.85)	Quality management	ISO 9001 for development and production
	Engineering	
Firmware package update Yes	Configuration tool	SolutionCenter (≥ V2.85)
	Firmware package update	Yes



Engineering	
Secure boot / root-of-trust	Yes
Mounting/installation	
Mounting type	Inserting and screwing onto the backplane with integrated M4 screw
Dimensions	
Number of slots	1
Size unpacked W × H × D	95.7 mm × 152.5 mm × 23.3 mm
Mass unpacked	294 g

# Order data

Part type designation	Part number	Description
NCN102	00042226-00	Fieldbus node adapter CANopen for M100 system
		Baud rate up to 1 Mbit/s; wiring with M100 standard terminal block; integrated power supply unit 20 W; without terminal block
NCN102 EC	00042227-00	Like NCN102; Extended Climate Range

## **Accessories**

Part number	Description
00039235-nn	Backplane for DIN-rail mounting
	Active backplane system M100: BPR1nn with nn = 04 to 16 slots in increments of 1, as well as 20, 24, 28, 32 slots, for DIN-rail mounting; delivery without backplane slot covers and without mounting rail
00039236-nn	Like BPR1nn; Extended Climate Range 🌓
00039237-nn	Backplane for direct screw mounting
	Active backplane system M100: BPS1nn with nn = 04 to 16 slots in increments of 1, as well as 20, 24, 28, 32 slots, for direct screw mounting; delivery without backplane slot covers and without screws
00039238-nn	Like BPS1nn; Extended Climate Range 🌓
	Signal terminal block
	Completely removable terminal block, push-in spring connector for system M100, 24-way/contacts, pitch 5.0 mm, female, conductors flexible 0.2 mm² to 2.5 mm² (24 to 14 AWG), solid 0.2 mm² to 1.5 mm² (24 to 16 AWG), with wire end ferrules 0.25 mm² to 1.5 mm² (24 to 16 AWG), stripping length: 10 mm, rating: 300 V / 8 A per contact, connector color: gray, push-release: yellow, labeling: 1 to 24
	Supply terminal block
	Completely removable terminal block, push-in spring connector for system M100, 4-way/contacts, pitch 5.0 mm, female, conductors flex-ible 0.2 mm² to 2.5 mm² (24 to 14 AWG), solid 0.2 mm² to 1.5 mm² (24 to 16 AWG), with wire end ferrules 0.25 mm² to 1.5 mm² (24 to 16 AWG), stripping length: 10 mm, rating: 300 V / 8 A per contact, connector color: gray, push-release: yellow, labeling: 1+/1-/2+/2-
	Keying element
	Keying element for signal terminal blocks and supply terminal blocks TPI100 for system M100, plastic ring with 6 keying elements
00042412-00	Terminal block set for M100 standard modules:
	<ul><li>1x TPI100_W24_P5.0_Cgy_L1to24</li><li>1x TPI100_W4_P5.0_Cgy_Lsup</li><li>2x TKP106</li></ul>
	00039235-nn 00039236-nn 00039237-nn

<sup>&</sup>lt;sup>1)</sup> All components of the set are also available in bulk packages.