











### **Model Number**

NCB5-18GM40-N0

### **Features**

- 5 mm flush
- Usable up to SIL 2 acc. to IEC 61508

#### **Accessories**

EXG-18

Quick mounting bracket with dead stop

**BF 18** 

Mounting flange, 18 mm

## **Technical Data**

### General specifications Switching function

Normally closed (NC) NAMUR Output type Rated operating distance 5 mm Installation flush 0 ... 4.05 mm 4.5 ... 5.5 mm typ. 5 mm Assured operating distance Sa Actual operating distance Reduction factor r<sub>Al</sub> 0.35 Reduction factor r<sub>Cu</sub> Reduction factor r<sub>304</sub> 0.74

Output type Nominal ratings

Nominal voltage 8.2 V ( $R_i$  approx. 1  $k\Omega$ ) Switching frequency 0 ... 400 Hz 1 ... 15 typ. 5 % Hysteresis Reverse polarity protection reverse polarity protected Short-circuit protection

2-wire

0 %

-25 ... 100 °C (-13 ... 212 °F)

Current consumption  $\geq$  3 mA Measuring plate not detected Measuring plate detected ≤ 1 mA

Switching state indicator all direction LED, yellow

Functional safety related parameters MTTF<sub>d</sub> Mission Time (T<sub>M</sub>) 2040 a 20 a

Diagnostic Coverage (DC)

Ambient conditions Ambient temperature

Storage temperature -40 ... 100 °C (-40 ... 212 °F) Mechanical specifications

Connection type cable PVC, 2 m Core cross-section 0.75 mm<sup>2</sup>

Housing material Stainless steel 1.4305 / AISI 303 Sensing face PBT IP66 / IP67

Degree of protection Cable

Bending radius > 10 x cable diameter

General information

Use in the hazardous area see instruction manuals 1G; 2G; 3G; 1D; 3D Category

Compliance with standards and

directives

Standard conformity EN 60947-5-6:2000 NAMUR IEC 60947-5-6:1999 NE 21:2007 Electromagnetic compatibility

EN 60947-5-2:2007 Standards EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

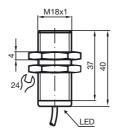
Approvals and certificates

EAC conformity TR CU 012/2011 FM approval

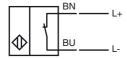
Control drawing 116-0165 UL approval

cULus Listed, General Purpose cCSAus Listed, General Purpose CCC approval / marking not required for products rated ≤36 V CSA approval

## **Dimensions**



# **Electrical Connection**



C   C   C   C   C   C   C   C   C   C			
Sandards San	Equipment protection level Ga		
Sandards	CE marking		€0102
Use is restricted to the following stated conditions	ATEX marking		(Ex) II 1G Ex ia IIC T6T1 Ga The Ex-related marking can also be printed on the enclosed label.
Effective internal inductance L <sub>1</sub> < 100 µH; a cable length of 10 m is considered.  Effective internal inductance L <sub>1</sub> < 100 µH; a cable length of 10 m is considered.  Ambient temperature Database of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the control of the second process of the correlation between the type of circuit connected, the maximum permissible ambient temperature above applied to the temperature table for category 1 till The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1 till The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1 till The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1 till The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1 till The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1.  Equipment protection level Gb  CE marking  CE 0102  ATEX marking  Appropriate type  NOB5-186MNo.  Effective internal inductivity  C <sub>1</sub> ≤ 95 nF; a cable length of 10 m is considered.  Effective internal inductivity  C <sub>2</sub> ≤ 95 nF; a cable length of 10 m is considered.  Effective internal inductivity  CE of 102 lF is a cable length of 10 m is considered.  CE marking  CE marking  Appropriate type  CE of 102 lF is a cable length of 10 m is considered.  Effective internal inductivity  CE of 102 lF is a cable length of 10 m is considered.  CE marking  CE of 103 lF is a cable length of 10 m is considered.  Effective internal inductivity  CE of 103 lF is a cable length of 10 m is considered.  Effective internal inductivity  CE of 103 lF is a cable length of 10 m is considered.  Effective internal inductivity  CE of 103 lF is a cable length of 10 m is considered.  Effective internal inductivity  CE of 103 lF is a cable length of 10 m is considered.  Effectiv	Standards		
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Ambient temperature    Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature is temperature class, and the effective internal reactance values can be from the EC-type examination certificate from the properties of the prograture class, and the effective internal reactance values can be found on the EC-type variance or certificate from the properties of the correlation between the type of circuit connected, the maximum permissible ambient temperature. The temperature table for category 1. If The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. If The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1.    Equipment protection level Gb	Effective internal inductivity	C <sub>i</sub>	$\leq$ 95 nF ; a cable length of 10 m is considered.
temperature class, and the effective internal reactance values can be found on the EC-type examination certificate been applied to the temperature table for category 1. If The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature data. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature data. The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature data in accordance values can be found on the EC-type examination certificate applied to the temperature data. The 20 % reduction is accordance values can be found on the EC-type examination certificate applied to the	Effective internal inductance	L <sub>i</sub>	$\leq 100~\mu H$ ; a cable length of 10 m is considered.
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CE marking  CE marking  CE 11 Is Ex is III C 16T1 Ga The Ex-related marking can also be printed on the enclosed label.  Standards  Standards  EN 60079-02012-x11-12013 EN 60079-11-2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions  Appropriate type  NCB5-18 GMNO  NCB5-18 GMNO  Price internal inductivity  C <sub>1</sub> < 555 F1 cable length of 10 m is considered.  Effective internal inductance  L <sub>1</sub> < 100 µH; a cable length of 10 m is considered.  Maximum permissible ambient temperature T <sub>amb</sub> Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature Cass, and the effective internal reactance values can be found on the EC-type examination certificate  Equipment protection level Gc (ic)  Certificate  PF 13 CERT 2895 X  CE marking  CE (S) Il 3G Ex is III T G  The Ex-related marking can also be printed on the enclosed label.  The Ex-related marking can also be printed on the enclosed label.  Standards  EN 60079-0-2012-x11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions  Effective internal inductivity  C <sub>1</sub> < 59 fi F; a cable length of 10 m is considered.  Special conditions  For Pi=34 mW, II=25 mA, T6  For Pi=34 mW, II=25 mA, T5  For Pi=34 mW, II=25 mA, T5  For Pi=34 mW, II=25 mA, T6  For Pi=44 mW, II=25 mA, T6  For Pi=64 mW, II=25 mA, T6  For Pi=	Highest permissible ambient temperature		temperature class, and the effective internal reactance values can be found on the EC-type examination certificate <b>Note:</b> Use the temperature table for category 1!!! The 20 % reduction in accordance with EN 1127-1 has already
ATEX marking  \( \begin{array}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Equipment protection level Gb		
The Ex-related marking can also be printed on the enclosed label.  Standards  Standards  Standards  Standards  Standards  Apropriate type  NCB5-18GMNO  Effective internal inductivity  C <sub>1</sub> Spring a cable length of 10 m is considered.  Maximum permissible ambient temperature T <sub>amb</sub> Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate between the type of circuit connected, the maximum permissible ambient temperature, the temperature of th	CE marking		€0102
Use is restricted to the following stated conditions  Appropriate type  Effective internal inductivity  C₁	ATEX marking		
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Effective internal inductance L <sub>i</sub> ≤ 100 µH; a cable length of 10 m is considered.  Maximum permissible ambient temperature T <sub>amb</sub> betails of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate control tends of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate control tends of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate control tends of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate control tends.  Standards  EN 6079-0.2012+A11.203 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions  Effective internal inductance  L <sub>1</sub> ≤ 95 nF; a cable length of 10 m is considered.  Special conditions  For Pi=34 mW, li=25 mA, T6  for Pi=34 mW, li=25 mA, T6  for Pi=34 mW, li=25 mA, T4-T1  for Pi=64 mW, li=25 mA, T5  for Pi=64 mW, li=25 mA, T5  for Pi=64 mW, li=25 mA, T6  for Pi=169 mW, li=25 mA, T6  for Pi=169 mW, li=52 mA, T6  for Pi=242 mW, li=76 mA, T6  for Pi=	Appropriate type		NCB5-18GMN0
Maximum permissible ambient temperature T <sub>amb</sub> Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EC-type examination certificate companies. The Experiment of the Experiment of Equipment protection level Gc (ic)  Certificate  PF 13 CERT 2895 X  CE marking  CE MATEX marking  ATEX marking  Standards  EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions  Effective internal inductivity  C <sub>1</sub> ≤ 95 nF; a cable length of 10 m is considered.  Effective internal inductance  L <sub>1</sub> ≤ 100 μH; A cable length of 10 m is considered.  Special conditions  for Pi=34 mW, li=25 mA, T6  for Pi=34 mW, li=25 mA, T4-T1  for Pi=64 mW, li=25 mA, T6  for Pi=64 mW, li=25 mA, T5  for Pi=64 mW, li=25 mA, T6  for Pi=64 mW, li=25 mA, T6  for Pi=169 mW, li=52 mA, T6  for Pi=242 mW, li=76 mA, T6	Effective internal inductivity	C <sub>i</sub>	$\leq$ 95 nF; a cable length of 10 m is considered.
temperature class, and the effective internal reactance values can be found on the EC-type examination certificate  CE duipment protection level Gc (ic)  Certificate  CE marking  ATEX marking  ATEX marking  Standards  Etheron Standards  Eth	Effective internal inductance	L <sub>i</sub>	$\leq 100~\mu H$ ; a cable length of 10 m is considered.
Cettflicate         PF 13 CERT 2895 X           CE marking         C€           ATEX marking         ⟨∞⟩ II 3G Ex ic IIC T6T1 Gc The Ex-related marking can also be printed on the enclosed label.           Standards         EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions           Effective internal inductivity         C₁         ≤ 95 nF; a cable length of 10 m is considered.           Effective internal inductance         L₁         ≤ 100 μH; A cable length of 10 m is considered.           Special conditions           for Pi=34 mW, Ii=25 mA, T6         55 °C (131 °F)           for Pi=34 mW, Ii=25 mA, T5         55 °C (131 °F)           for Pi=34 mW, Ii=25 mA, T4-T1         55 °C (131 °F)           for Pi=64 mW, Ii=25 mA, T6         55 °C (131 °F)           for Pi=64 mW, Ii=25 mA, T5         55 °C (131 °F)           for Pi=169 mW, Ii=25 mA, T4-T1         55 °C (131 °F)           for Pi=169 mW, Ii=52 mA, T4-T1         55 °C (125.6 °F)           for Pi=169 mW, Ii=52 mA, T4-T1         52 °C (125.6 °F)           for Pi=169 mW, Ii=52 mA, T4-T1         52 °C (125.6 °F)           for Pi=169 mW, Ii=52 mA, T6         44 °C (111.2 °F)           for Pi=242 mW, Ii=76 mA, T6         44 °C (111.2 °F)	Maximum permissible ambient temperature T <sub>amb</sub>		
CE marking         €           ATEX marking         Sign II 3G Ex ic IIC T6T1 Gc The Ex-related marking can also be printed on the enclosed label.           Standards         EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions           Effective internal inductivity         C₁         ≤ 95 nF; a cable length of 10 m is considered.           Effective internal inductance         L₁         ≤ 100 μH; A cable length of 10 m is considered.           Special conditions         55 °C (131 °F)           for Pi=34 mW, li=25 mA, T6         55 °C (131 °F)           for Pi=34 mW, li=25 mA, T4-T1         55 °C (131 °F)           for Pi=64 mW, li=25 mA, T6         55 °C (131 °F)           for Pi=64 mW, li=25 mA, T5         55 °C (131 °F)           for Pi=64 mW, li=25 mA, T5         55 °C (131 °F)           for Pi=169 mW, li=52 mA, T6         55 °C (131 °F)           for Pi=169 mW, li=25 mA, T5         55 °C (125.6 °F)           for Pi=169 mW, li=52 mA, T5         52 °C (125.6 °F)           for Pi=169 mW, li=52 mA, T5         52 °C (125.6 °F)           for Pi=169 mW, li=52 mA, T6         52 °C (125.6 °F)           for Pi=169 mW, li=52 mA, T6         52 °C (125.6 °F)           for Pi=169 mW, li=27 mA, T4-T1         52 °C (125.6 °F)           for Pi=242 mW, li=76 mA, T6	Equipment protection level Gc (	(ic)	
ATEX marking    Standards   EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions    Effective internal inductivity   C <sub>i</sub>   ≤ 95 nF; a cable length of 10 m is considered.    Effective internal inductance   L <sub>i</sub>   ≤ 100 μH; A cable length of 10 m is considered.    Special conditions	Certificate		PF 13 CERT 2895 X
The Ex-related marking can also be printed on the enclosed label.  Standards $EN  60079 - 0:2012 + A11:2013 EN  60079 - 11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions  Effective internal inductance L_i \le 95 \text{ nF}; a cable length of 10 m is considered.  Effective internal inductance L_i \le 100  \mu\text{H}; A cable length of 10 m is considered.  Special conditions  for Pi=34 mW, Ii=25 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=34 mW, Ii=25 mA, T4-T1 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=64 mW, Ii=25 mA, T4-T1 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=64 mW, Ii=25 mA, T5 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=64 mW, Ii=25 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=64 mW, Ii=25 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=64 mW, Ii=25 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=69 mW, Ii=25 mA, T5 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=69 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=169 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=169 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=169 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=169 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (131  ^{\circ}\text{F})  for Pi=169 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (125.6  ^{\circ}\text{F})  for Pi=169 mW, Ii=52 mA, T6 55  ^{\circ}\text{C}  (125.6  ^{\circ}\text{F})$	CE marking		(€
Standards $ \begin{array}{c} \text{En 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following stated conditions } \\ \text{Effective internal inductivity} \qquad \textbf{C}_{i} \qquad \qquad \leq 95  \text{nF} ; \text{ a cable length of 10 m is considered.} \\ \text{Effective internal inductance} \qquad \textbf{L}_{i} \qquad \qquad \leq 100  \mu\text{H ; A cable length of 10 m is considered.} \\ \textbf{Special conditions} \\ \text{for Pi=34 mW, Ii=25 mA, T6} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=34 mW, Ii=25 mA, T5} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=34 mW, Ii=25 mA, T4-T1} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=64 mW, Ii=25 mA, T6} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=64 mW, Ii=25 mA, T6} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=64 mW, Ii=25 mA, T5} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=169 mW, Ii=25 mA, T6} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=169 mW, Ii=25 mA, T6} \qquad \qquad 55  ^{\circ}\text{C (131 °F)} \\ \text{for Pi=169 mW, Ii=25 mA, T6} \qquad \qquad 52  ^{\circ}\text{C (125.6 °F)} \\ \text{for Pi=169 mW, Ii=52 mA, T4-T1} \qquad \qquad 52  ^{\circ}\text{C (125.6 °F)} \\ \text{for Pi=169 mW, Ii=52 mA, T6} \qquad \qquad 52  ^{\circ}\text{C (125.6 °F)} \\ \text{for Pi=242 mW, Ii=76 mA, T6} \qquad 44  ^{\circ}\text{C (111.2 °F)} \\ \text{for Pi=242 mW, Ii=76 mA, T6} \qquad 44  ^{\circ}\text{C (111.2 °F)} \\ \text{for Pi=242 mW, Ii=76 mA, T5} \qquad 44  ^{\circ}\text{C (111.2 °F)} \\ \end{array}$	ATEX marking		
Effective internal inductance $L_i$ ≤ 100 μH; A cable length of 10 m is considered.           Special conditions           for Pi=34 mW, li=25 mA, T6         55 °C (131 °F)           for Pi=34 mW, li=25 mA, T5         55 °C (131 °F)           for Pi=34 mW, li=25 mA, T4-T1         55 °C (131 °F)           for Pi=64 mW, li=25 mA, T6         55 °C (131 °F)           for Pi=64 mW, li=25 mA, T5         55 °C (131 °F)           for Pi=69 mW, li=25 mA, T4-T1         55 °C (131 °F)           for Pi=169 mW, li=52 mA, T6         52 °C (125.6 °F)           for Pi=169 mW, li=52 mA, T5         52 °C (125.6 °F)           for Pi=169 mW, li=52 mA, T4-T1         52 °C (125.6 °F)           for Pi=242 mW, li=76 mA, T6         44 °C (111.2 °F)           for Pi=242 mW, li=76 mA, T6         44 °C (111.2 °F)	Standards		EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection category "ic" Use is restricted to the following
Special conditions         for Pi=34 mW, li=25 mA, T6       55 °C (131 °F)         for Pi=34 mW, li=25 mA, T5       55 °C (131 °F)         for Pi=34 mW, li=25 mA, T4-T1       55 °C (131 °F)         for Pi=64 mW, li=25 mA, T6       55 °C (131 °F)         for Pi=64 mW, li=25 mA, T5       55 °C (131 °F)         for Pi=69 mW, li=25 mA, T4-T1       55 °C (131 °F)         for Pi=169 mW, li=52 mA, T6       52 °C (125.6 °F)         for Pi=169 mW, li=52 mA, T5       52 °C (125.6 °F)         for Pi=169 mW, li=52 mA, T4-T1       52 °C (125.6 °F)         for Pi=242 mW, li=76 mA, T6       44 °C (111.2 °F)         for Pi=242 mW, li=76 mA, T5       44 °C (111.2 °F)	Effective internal inductivity	Ci	≤ 95 nF; a cable length of 10 m is considered.
for Pi=34 mW, li=25 mA, T6  for Pi=34 mW, li=25 mA, T5  for Pi=34 mW, li=25 mA, T4-T1  for Pi=64 mW, li=25 mA, T6  for Pi=64 mW, li=25 mA, T5  for Pi=69 mW, li=52 mA, T6  for Pi=169 mW, li=52 mA, T6  for Pi=169 mW, li=52 mA, T5  for Pi=169 mW, li=52 mA, T6  for Pi=242 mW, li=76 mA, T6  4° C (111.2°F)  for Pi=242 mW, li=76 mA, T5  44° C (111.2°F)	Effective internal inductance	L <sub>i</sub>	$\leq 100~\mu H$ ; A cable length of 10 m is considered.
for Pi=34 mW, li=25 mA, T5  for Pi=34 mW, li=25 mA, T4-T1  55 °C (131 °F)  for Pi=64 mW, li=25 mA, T6  55 °C (131 °F)  for Pi=64 mW, li=25 mA, T5  55 °C (131 °F)  for Pi=64 mW, li=25 mA, T5  55 °C (131 °F)  for Pi=64 mW, li=25 mA, T4-T1  55 °C (131 °F)  for Pi=169 mW, li=52 mA, T4-T1  55 °C (131 °F)  for Pi=169 mW, li=52 mA, T6  52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T4-T1  52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T4-T1  52 °C (125.6 °F)  for Pi=242 mW, li=76 mA, T6  44 °C (111.2 °F)  for Pi=242 mW, li=76 mA, T5  44 °C (111.2 °F)	Special conditions		
for Pi=34 mW, li=25 mA, T4-T1 55 °C (131 °F)  for Pi=64 mW, li=25 mA, T6 55 °C (131 °F)  for Pi=64 mW, li=25 mA, T5 55 °C (131 °F)  for Pi=64 mW, li=25 mA, T4-T1 55 °C (131 °F)  for Pi=169 mW, li=52 mA, T6 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T5 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T5 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T4-T1 52 °C (125.6 °F)  for Pi=242 mW, li=76 mA, T6 44 °C (111.2 °F)  for Pi=242 mW, li=76 mA, T5 44 °C (111.2 °F)	for Pi=34 mW, li=25 mA, T6		55 °C (131 °F)
for Pi=64 mW, li=25 mA, T6  for Pi=64 mW, li=25 mA, T5  for Pi=64 mW, li=25 mA, T5  for Pi=64 mW, li=25 mA, T4-T1  for Pi=169 mW, li=52 mA, T6  for Pi=169 mW, li=52 mA, T5  for Pi=169 mW, li=52 mA, T5  for Pi=169 mW, li=52 mA, T5  for Pi=169 mW, li=52 mA, T4-T1  for Pi=169 mW, li=52 mA, T4-T1  for Pi=242 mW, li=76 mA, T6  44 °C (111.2 °F)  for Pi=242 mW, li=76 mA, T5  44 °C (111.2 °F)	for Pi=34 mW, Ii=25 mA, T5		55 °C (131 °F)
for Pi=64 mW, li=25 mA, T5 55 °C (131 °F)  for Pi=64 mW, li=25 mA, T4-T1 55 °C (131 °F)  for Pi=169 mW, li=52 mA, T6 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T5 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T4-T1 52 °C (125.6 °F)  for Pi=242 mW, li=76 mA, T6 44 °C (111.2 °F)  for Pi=242 mW, li=76 mA, T5 44 °C (111.2 °F)	for Pi=34 mW, Ii=25 mA, T4-T1		55 °C (131 °F)
for Pi=64 mW, li=25 mA, T4-T1 55 °C (131 °F)  for Pi=169 mW, li=52 mA, T6 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T5 52 °C (125.6 °F)  for Pi=169 mW, li=52 mA, T4-T1 52 °C (125.6 °F)  for Pi=242 mW, li=76 mA, T6 44 °C (111.2 °F)  for Pi=242 mW, li=76 mA, T5 44 °C (111.2 °F)	for Pi=64 mW, Ii=25 mA, T6		55 °C (131 °F)
for Pi=169 mW, li=52 mA, T6 52 °C (125.6 °F) for Pi=169 mW, li=52 mA, T5 52 °C (125.6 °F) for Pi=169 mW, li=52 mA, T4-T1 52 °C (125.6 °F) for Pi=242 mW, li=76 mA, T6 44 °C (111.2 °F) for Pi=242 mW, li=76 mA, T5 44 °C (111.2 °F)	for Pi=64 mW, Ii=25 mA, T5		55 °C (131 °F)
for Pi=169 mW, li=52 mA, T5 52 °C (125.6 °F) for Pi=169 mW, li=52 mA, T4-T1 52 °C (125.6 °F) for Pi=242 mW, li=76 mA, T6 44 °C (111.2 °F) for Pi=242 mW, li=76 mA, T5 44 °C (111.2 °F)	for Pi=64 mW, li=25 mA, T4-T1		55 °C (131 °F)
for Pi=169 mW, li=52 mA, T4-T1 52 °C (125.6 °F) for Pi=242 mW, li=76 mA, T6 44 °C (111.2 °F) for Pi=242 mW, li=76 mA, T5 44 °C (111.2 °F)	for Pi=169 mW, Ii=52 mA, 1	Γ6	52 °C (125.6 °F)
for Pi=242 mW, Ii=76 mA, T6 44 °C (111.2 °F) for Pi=242 mW, Ii=76 mA, T5 44 °C (111.2 °F)	for Pi=169 mW, Ii=52 mA, 1	Г5	52 °C (125.6 °F)
for Pi=242 mW, Ii=76 mA, T5 44 °C (111.2 °F)	for Pi=169 mW, Ii=52 mA, 1	Г4-Т1	52 °C (125.6 °F)
	for Pi=242 mW, Ii=76 mA, 1	Г6	44 °C (111.2 °F)
for Pi=242 mW, Ii=76 mA, T4-T1 44 °C (111.2 °F)	for Pi=242 mW, Ii=76 mA, 1	Г5	44 °C (111.2 °F)
	for Pi=242 mW, Ii=76 mA, 1	Γ4-T1	44 °C (111.2 °F)

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	Equipment protection level Gc (nL)			
	Standard conformity	EN 60079-15:2005 Ignition protection category "n" Use is restricted to the following stated conditions		
	Effective internal capacitance C <sub>i</sub>	≤ 95 nF; a cable length of 10 m is considered.		
	Effective internal inductance L <sub>i</sub>	$\leq$ 100 $\mu H$ ; A cable length of 10 m is considered.		
	General	The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The data stated in the data sheet are restricted by this operating instruction!  The special conditions must be observed!  The ATEX Directive applies only to the use of apparatus under atmospheric conditions.  If you use the device outside atmospheric conditions, consider that the permissible safety parameters should be reduced.		
	Special conditions			
	for Pi=34 mW, Ii=25 mA, T6	55 °C (131 °F)		
	for Pi=34 mW, li=25 mA, T5	55 °C (131 °F)		
	for Pi=34 mW, li=25 mA, T4-T1	55 °C (131 °F)		
	for Pi=64 mW, li=25 mA, T6	55 °C (131 °F)		
	for Pi=64 mW, li=25 mA, T5	55 °C (131 °F)		
	for Pi=64 mW, li=25 mA, T4-T1	55 °C (131 °F)		
	for Pi=169 mW, Ii=52 mA, T6	52 °C (125.6 °F)		
	for Pi=169 mW, li=52 mA, T5	52 °C (125.6 °F)		
	for Pi=169 mW, Ii=52 mA, T4-T1	52 °C (125.6 °F)		
	for Pi=242 mW, Ii=76 mA, T6	44 °C (111.2 °F)		
	for Pi=242 mW, li=76 mA, T5	44 °C (111.2 °F)		
	for Pi=242 mW, li=76 mA, T4-T1	44 °C (111.2 °F)		
	1011 1-242 11100, 11-70 11123, 14-11	# <b>5</b> (111.2-1)		
	Equipment protection level Da			
	CE marking	C €0102 The Ex-related marking can also be printed on the enclosed label.		
	ATEX marking	⟨x⟩ II 1D Ex ia IIIC T135°C Da		
	Standards	EN 60079-0:2012+A11:2013 EN 60079-11:2012 Ignition protection "Intrinsic safety" Use is restricted to the following stated conditions		
	Appropriate type	NCB5-18GMN0		
	Effective internal inductivity C <sub>i</sub>	$\leq$ 95 nF ; a cable length of 10 m is considered.		
	Effective internal inductance L <sub>i</sub>	$\leq 100~\mu H$ ; a cable length of 10 m is considered.		
	Maximum permissible ambient temperature T <sub>amb</sub>	Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the surface temperature, and the effective internal reactance values can be found on the EC-type-examination certificate.  The maximum permissible ambient temperature of the data sheet must be noted, in addition, the lower of the transfer must be maintained.		
		the two values must be maintained.		
	Equipment protection level Dc			
	CE marking	C€0102		
	ATEX marking	<ul> <li>⟨x⟩ II 3D IP67 T 109 °C (228.2 °F) X</li> <li>The Ex-significant identification is on the enclosed adhesive label</li> </ul>		
	Standards	EN 50281-1-1 Protection via housing Use is restricted to the following stated conditions		
	Special conditions			
	Maximum heating (Temperature rise)	Values can be obtained from the following list, depending on the max. operating voltage Ub max and the minimum series resistance Rv.		
	at $U_{Bmax}$ =9 V, $R_V$ =562 $\Omega$	9 K		
	using an amplifier in accordance with EN 60947- 5-6	9 K		
	Equipment protection level Dc (tc)			
	CE marking	(€		
2	ATEX marking			
2	Standards	EN 60079-0:2012+A11:2013, EN 60079-31:2014 Protection by enclosure "tc" Some of the information in this instruction manual is more specific than the information provided in the datasheet.		
	General	The corresponding datasheets, declarations of conformity, EC-type examination certificates, certifications, and control drawings, where applicable (see datasheets), form an integral part of this document. These documents can be found at www.pepperl-fuchs.com. The maximum surface temperature of the device was determined without a layer of dust on the apparatus. Some of the information in this instruction manual is more specific than the information provided in the datasheet.		
5	Special conditions			
	Maximum permissible ambient temperature T <sub>Umax</sub>	Values can be obtained from the following list, depending on the max. operating voltage Ub max and the minimum series resistance Rv.		
)	at II = -9 V By=562 O	61 °C (141 8 °F)		

at U<sub>Bmax</sub>=9 V, R<sub>V</sub>=562  $\Omega$ 

using an amplifier in accordance with EN 60947- 61  $^{\circ}\text{C}$  (141.8  $^{\circ}\text{F})$ 

61 °C (141.8 °F)