



**Model Number**

**NJ15S+U4+N**

**Features**

- 15 mm flush

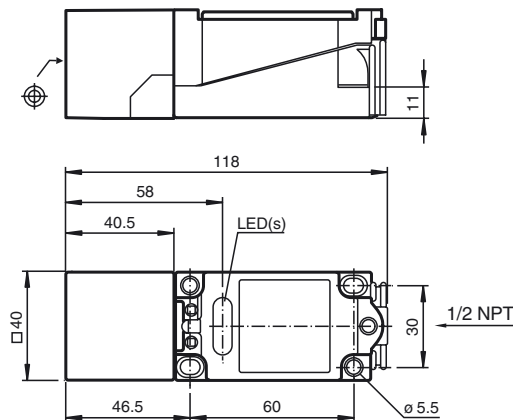
**Accessories**

- MHW 01**  
Modular mounting bracket
- MH 04-2681F**  
Mounting aid for VariKont, +U1+ and +U9\*
- MH 04-2057B**  
Mounting aid for VariKont and +U1+

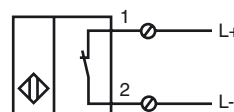
**Technical Data**

<b>General specifications</b>	
Switching function	Normally closed (NC)
Output type	NAMUR with safety function
Rated operating distance	$s_n$ 15 mm
Installation	flush
Assured operating distance	$s_a$ 0 ... 12.15 mm
Reduction factor $r_{AI}$	0.4
Reduction factor $r_{Cu}$	0.3
Reduction factor $r_{304}$	0.85
Output type	2-wire
<b>Nominal ratings</b>	
Nominal voltage	$U_o$ 8.2 V ( $R_i$ approx. 1 k $\Omega$ )
Switching frequency	$f$ 0 ... 150 Hz
<b>Current consumption</b>	
Measuring plate not detected	$\geq 3$ mA
Measuring plate detected	$\leq 1$ mA
<b>Ambient conditions</b>	
Ambient temperature	-40 ... 100 °C (-40 ... 212 °F)
<b>Mechanical specifications</b>	
Connection type	screw terminals
Information for connection	A maximum of two conductors with the same core cross section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross-section	up to 2.5 mm <sup>2</sup>
Minimum core cross-section	without wire end ferrule 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>
Maximum core cross-section	without wire end ferrule 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>
Housing material	PBT/metal
Sensing face	PBT
Degree of protection	IP68
<b>General information</b>	
Use in the hazardous area	see instruction manuals
<b>Compliance with standards and directives</b>	
<b>Standard conformity</b>	
NAMUR	EN 60947-5-6:2000 IEC 60947-5-6:1999
<b>Standards</b>	
	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
<b>Approvals and certificates</b>	
FM approval	
Control drawing	116-0165
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

**Dimensions**



**Electrical Connection**



**Data for application in connection with hazardous areas**

Equipment protection level	Ga , Gb , Da , Mb	
<b>Equipment protection level Ga</b>		
Type of protection	intrinsic safety	
CE marking	CE 0102	
<b>Certificates</b>		
Appropriate type	NJ15S+U.-N..	
ATEX certificate	PTB 00 ATEX 2049 X	
ATEX marking	Ex II 1G Ex ia IIC T6...T1 Ga	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
IECEX certificate	IECEX PTB 11.0092X	
IECEX marking	Ex ia IIC T6...T1 Ga	
Standards	IEC 60079-0:2011 , IEC 60079-11:2011	
Effective internal inductivity	$C_i$	$\leq 180 \text{ nF}$ A cable length of 10 m is considered.
Effective internal inductance	$L_i$	$\leq 150 \text{ }\mu\text{H}$ A cable length of 10 m is considered.
Maximum permissible ambient temperature $T_{amb}$	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values.	
for ATEX	at $U_i = 16 \text{ V}$ , $I_i = 25 \text{ mA}$ , $P_i = 34 \text{ mW}$ , T6 : 56 °C (132.8 °F) T5 : 68 °C (154.4 °F) T4 : 96 °C (204.8 °F) T3 : 96 °C (204.8 °F) T2 : 96 °C (204.8 °F) T1 : 96 °C (204.8 °F) at $U_i = 16 \text{ V}$ , $I_i = 25 \text{ mA}$ , $P_i = 64 \text{ mW}$ , T6 : 49 °C (120.2 °F) T5 : 61 °C (141.8 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 16 \text{ V}$ , $I_i = 52 \text{ mA}$ , $P_i = 169 \text{ mW}$ , T6 : 28 °C (82.4 °F) T5 : 40 °C (104 °F) T4 : 68 °C (154.4 °F) T3 : 68 °C (154.4 °F) T2 : 68 °C (154.4 °F) T1 : 68 °C (154.4 °F) at $U_i = 16 \text{ V}$ , $I_i = 76 \text{ mA}$ , $P_i = 242 \text{ mW}$ , T6 : 13 °C (55.4 °F) T5 : 25 °C (77 °F) T4 : 53 °C (127.4 °F) T3 : 53 °C (127.4 °F) T2 : 53 °C (127.4 °F) T1 : 53 °C (127.4 °F)	
for IECEx	at $U_i = 16 \text{ V}$ , $I_i = 25 \text{ mA}$ , $P_i = 34 \text{ mW}$ , T6 : 73 °C (163.4 °F) T5 : 88 °C (190.4 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16 \text{ V}$ , $I_i = 25 \text{ mA}$ , $P_i = 64 \text{ mW}$ , T6 : 66 °C (150.8 °F) T5 : 81 °C (177.8 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16 \text{ V}$ , $I_i = 52 \text{ mA}$ , $P_i = 169 \text{ mW}$ , T6 : 45 °C (113 °F) T5 : 60 °C (140 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 16 \text{ V}$ , $I_i = 76 \text{ mA}$ , $P_i = 242 \text{ mW}$ , T6 : 30 °C (86 °F) T5 : 45 °C (113 °F) T4 : 74 °C (165.2 °F) T3 : 74 °C (165.2 °F) T2 : 74 °C (165.2 °F) T1 : 74 °C (165.2 °F)	

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**Equipment protection level Gb**

Type of protection	intrinsic safety	
CE marking	CE 0102	
<b>Certificates</b>		
Appropriate type	NJ15S+U.-N..	
ATEX certificate	PTB 00 ATEX 2049 X	
ATEX marking	Ⓔ II 1G Ex ia IIC T6...T1 Ga	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
IECEX certificate	IECEX PTB 11.0092X	
IECEX marking	Ex ia IIC T6...T1 Ga	
Standards	IEC 60079-0:2011 , IEC 60079-11:2011	
Appropriate type	NJ15S+U.-N..	
Effective internal inductivity	$C_i$	≤ 180 nF A cable length of 10 m is considered.
Effective internal inductance	$L_i$	≤ 150 μH A cable length of 10 m is considered.
Maximum permissible ambient temperature $T_{amb}$	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 34\text{ mW}$ , T6 : 73 °C (163.4 °F) T5 : 88 °C (190.4 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 64\text{ mW}$ , T6 : 66 °C (150.8 °F) T5 : 81 °C (177.8 °F) T4 : 100 °C (212 °F) T3 : 100 °C (212 °F) T2 : 100 °C (212 °F) T1 : 100 °C (212 °F) at $U_i = 16\text{ V}$ , $I_i = 52\text{ mA}$ , $P_i = 169\text{ mW}$ , T6 : 45 °C (113 °F) T5 : 60 °C (140 °F) T4 : 89 °C (192.2 °F) T3 : 89 °C (192.2 °F) T2 : 89 °C (192.2 °F) T1 : 89 °C (192.2 °F) at $U_i = 16\text{ V}$ , $I_i = 76\text{ mA}$ , $P_i = 242\text{ mW}$ , T6 : 30 °C (86 °F) T5 : 45 °C (113 °F) T4 : 74 °C (165.2 °F) T3 : 74 °C (165.2 °F) T2 : 74 °C (165.2 °F) T1 : 74 °C (165.2 °F)	

**Equipment protection level Da**

Type of protection	intrinsic safety	
CE marking	CE 0102	
<b>Certificates</b>		
Appropriate type	NJ15S+U.-N..	
ATEX certificate	PTB 00 ATEX 2049 X	
ATEX marking	Ⓔ II 1D Ex ia IIIC T135°C Da	
Standards	EN 60079-0:2012+A11:2013 , EN 60079-11:2012	
IECEX certificate	IECEX PTB 11.0092X	
IECEX marking	Ex ia IIIC T135°C Da	
Standards	IEC 60079-0:2011 , IEC 60079-11:2011	
Effective internal inductivity	$C_i$	≤ 180 nF A cable length of 10 m is considered.
Effective internal inductance	$L_i$	≤ 150 μH A cable length of 10 m is considered.
Maximum permissible ambient temperature $T_{amb}$	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 34\text{ mW}$ : 100 °C (212 °F) at $U_i = 16\text{ V}$ , $I_i = 25\text{ mA}$ , $P_i = 64\text{ mW}$ : 100 °C (212 °F) at $U_i = 16\text{ V}$ , $I_i = 52\text{ mA}$ , $P_i = 169\text{ mW}$ : 89 °C (192.2 °F) at $U_i = 16\text{ V}$ , $I_i = 76\text{ mA}$ , $P_i = 242\text{ mW}$ : 74 °C (165.2 °F)	

**Equipment protection level Mb**

Type of protection	intrinsic safety	
<b>Certificates</b>		
Appropriate type	NJ15S+U.-N..	
IECEX certificate	IECEX PTB 11.0092X	
IECEX marking	Ex ia I Mb	
Standards	IEC 60079-0:2011 , IEC 60079-11:2011	
Effective internal inductivity	$C_i$	≤ 180 nF A cable length of 10 m is considered.
Effective internal inductance	$L_i$	≤ 100 μH A cable length of 10 m is considered.



Maximum permissible ambient temperature  $T_{amb}$

Also observe the maximum permissible ambient temperature stated in the general technical data.

Keep to the lower of the two values.

at  $U_i = 16\text{ V}$ ,  $I_i = 25\text{ mA}$ ,  $P_i = 34\text{ mW}$  :  $100\text{ °C}$  ( $212\text{ °F}$ )

at  $U_i = 16\text{ V}$ ,  $I_i = 25\text{ mA}$ ,  $P_i = 64\text{ mW}$  :  $100\text{ °C}$  ( $212\text{ °F}$ )

at  $U_i = 16\text{ V}$ ,  $I_i = 52\text{ mA}$ ,  $P_i = 169\text{ mW}$  :  $89\text{ °C}$  ( $192.2\text{ °F}$ )

at  $U_i = 16\text{ V}$ ,  $I_i = 76\text{ mA}$ ,  $P_i = 242\text{ mW}$  :  $74\text{ °C}$  ( $165.2\text{ °F}$ )