



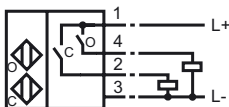
**Model Number**

NBN2-F581-160S6-E8-V1

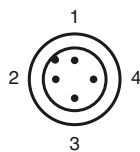
**Features**

- Extremely bright triple luminous band indication
- M12 plug can be rotated 0°, 45°, or 90°
- For use in direct- and alternating-field welding systems
- Completely halogen and silicon free

**Connection**



**Pinout**



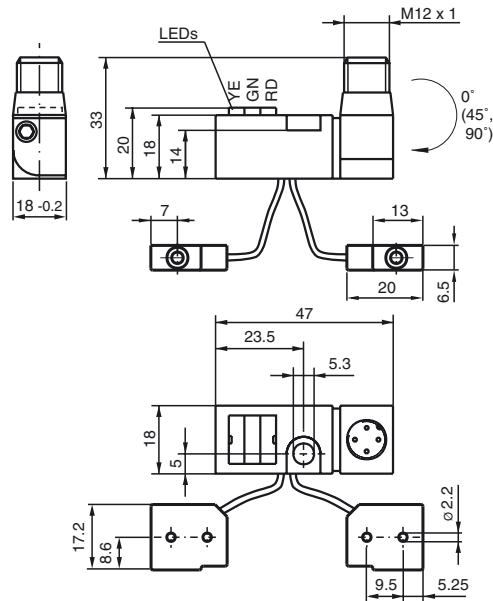
Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

**Accessories**

- V1-G-OR2M-POC**  
Female cordset, M12, 4-pin, TPE cable, welding-bead resistant
- V1-G-2M-PUR H/S**  
Female cordset, M12, 4-pin, irradiated PUR cable
- V1-W-2M-PUR H/S**  
Female cordset, M12, 4-pin, irradiated PUR cable

**Dimensions**



**Technical Data**

**General specifications**

Switching element function	PNP	Dual NO
Rated operating distance	$s_n$	2 mm
Installation	non-flush	
Output polarity	DC	
Assured operating distance	$s_a$	0 ... 1.62 mm
Reduction factor $r_{Al}$	0.45	
Reduction factor $r_{Cu}$	0.35	
Reduction factor $r_{304}$	0.75	

**Nominal ratings**

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 25 Hz
Reverse polarity protection	reverse polarity protected	
Short-circuit protection	pulsing	
Voltage drop	$U_d$	$\leq 3$ V
Operating current	$I_L$	0 ... 100 mA
Off-state current	$I_r$	$\leq 10 \mu A$

No-load supply current	$I_0$	$\leq 15$ mA
Constant magnetic field	B	100 mT
Alternating magnetic field	B	100 mT

**Functional safety related parameters**

MTTF <sub>d</sub>	1445 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

LED POWER	LED, green
Switching state	"Closed" = LED red (S02)/C "Open" = LED yellow (S01)/O

**Ambient conditions**

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

**Mechanical specifications**

Connection type	Device connector M12 x 1, 4-pin
Flexible lead, housing-sensor	(160 ± 5) mm, PUR (halogen-free)
Housing material	amplifier; PBT, PA6 + GD-ZN AL4 oscillators; PBT
Protection degree	IP65

**Compliance with standards and directives**

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

**Approvals and certificates**

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Products with a maximum operating voltage of $\leq 36$ V do not bear a CCC marking because they do not require approval.

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