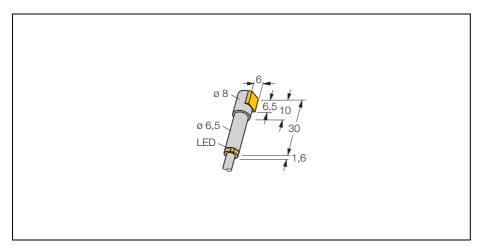
Inductive sensor Bi1,5-HS865-AP6X



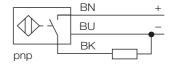


Rated operating distance Sn Mounting condition Assured sensing range Correction factors Repeatability 2 % Temperature drift ± 10 % Hysteresis 3 15 % Ambient temperature Correctional current DC rated operational current No-load current lo Residual current Rated insulation voltage Short-circuit protection Voltage drop at le Wire breakage / Reverse polarity protection Switching frequency Housing Smooth barrel, 6.5 mm Dimensions Housing material Material active face End cap Cable quality Cable cross section: Sta7 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3 1.5 mm flush (0,81 x Sn) mm (0,81 x Sn) mm (10,81	Туре	Bi1,5-HS865-AP6X
Mounting condition Assured sensing range Correction factors St37 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3 Repeatability 2 % Temperature drift ± 10 % Hysteresis 3 15 % Ambient temperature -25+ 70 °C Operating voltage 10 30VDC Residual ripple 10 % U _{ss} DC rated operational current No-load current l ₀ Residual current Rated insulation voltage Nort-circuit protection Voltage drop at l _e Wire breakage / Reverse polarity protection Output function Switching frequency Housing Dimensions Housing material Material active face End cap Cable quality Cable cross section: Vibration 19 Ms ~ 0.2, 5 Mz Visa production Shock resistance Star y Al ~ 0.7, Ms ~ 0.4, Al ~ 0.3 1.8 V Visa production Vess Short-circuit protection Vess Vess Vess Vess Vess Vess Vess Ves	Ident-No.	
Assured sensing range Correction factors St37 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3 Repeatability 2 % Temperature drift ± 10 % Hysteresis 3 15 % Ambient temperature Corated operational current No-load current l ₀ Residual ripple DC rated operational current No-load current No-load current No-load current No-load current No-load current No-load current Short-circuit protection Output function Switching frequency Housing Dimensions Housing Dimensions Housing Date of the face End cap Connection Cable cross section: Vibration resistance Shock resistance (0,81 x Sn) mm St37 = 1, V2A ~ 0.7, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 2 % The stant of the color, Ms ~ 0.4, Al ~ 0.3 3 the color, Ms ~ 0.4, Al ~ 0.3 3 the color, Ms ~ 0.4, Al ~ 0.3 3 the color, Ms ~ 0.4, Al ~ 0.3 3 the color, Ms ~ 0.4, Al ~ 0.3 3 the color, Ms ~ 0.4, Al ~ 0.3 3 the color, Ms ~ 0.4, Al ~ 0.7 4 the stant of the color, Ms ~ 0.4, Al ~ 0.3 4 the stant of the color, Ms ~ 0.4, Al ~ 0.3 4 the stant of the color, Ms ~ 0.4, Al ~ 0.3 5 the color, Ms ~ 0.4, Al ~ 0.3 5 the color, Ms ~ 0.4, Al ~ 0.3 5 the color, Ms ~ 0.4, Al ~ 0.3 5 the color, Ms ~ 0.4, Al ~ 0.3 5 the color, Ms ~ 0.4, Al ~ 0.3 5 the color, Ms ~ 0.4, Al ~ 0.5 5 the color, Ms ~ 0.4, Al ~ 0.5 5 the color, Ms ~ 0.4, Al ~ 0.5 5 the color, Ms ~ 0.4, Al ~ 0.5 5 the color, Ms ~ 0.4, Al ~ 0.5 5 the color, Ms ~ 0.4, Al ~ 0.5 5 the color	Rated operating distance Sn	1.5 mm
Correction factors Repeatability 2 % Temperature drift ± 10 % Hysteresis 3 15 % Ambient temperature Coperating voltage Residual ripple DC rated operational current No-load current I ₀ Residual current No-load current I ₀ Residual current No-load current No-load peration voltage Residual current 15 mA Rated insulation voltage No-toircuit protection Voltage drop at I _e Wire breakage / Reverse polarity protection Output function Switching frequency Switching frequency Smooth barrel, 6.5 mm Dimensions Housing Smooth barrel, 6.5 mm Dimensions Housing material Material active face End cap Connection Cable quality O 4, LiftyY-11Y, PUR, 2 m Cable cross section: Vibration resistance Shock resistance State 10 % 10 % U _{SS} 10 30VDC 10 % U _{SS} 150 mA 15 mA 0.1 mA 0.5 kV yes / cyclic 1.8V yes / complete 3 vire, normally open, pnp 3 kHz Smooth barrel, 6.5 mm plastic, PA12-GF30 plastic, PP cable Cable quality O 4, LiftyY-11Y, PUR, 2 m 3 x 0.25mm ² 55 Hz (1 mm) Shock resistance	Mounting condition	flush
Repeatability 2 % Temperature drift ± 10 % Hysteresis 3 15 % Ambient temperature -25+ 70 °C Operating voltage 10 30VDC Residual ripple 10 % U _{ss} DC rated operational current 150 mA No-load current I ₀ 15 mA Residual current 0.1 mA Reted insulation voltage 0.5 kV Short-circuit protection 18W Wire breakage / Reverse polarity protection 29-wire, normally open, pnp 3 kHz Housing 25 mm Housing material metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP Connection 29-kD (LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Shock resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Assured sensing range	(0,81 x Sn) mm
Temperature drift ± 10 % Hysteresis 3 15 % Ambient temperature -25+ 70 °C Operating voltage 10 30VDC Residual ripple 150 mA No-load current I ₀ 15 mA Residual current 0.1 mA Residual current 0.5 kV Short-circuit protection yes / cyclic Voltage drop at I _e 1.8V Wire breakage / Reverse polarity protection 3-wire, normally open, pnp Switching frequency 3 kHz Housing smooth barrel, 6.5 mm Dimensions metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP Connection cable 04, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Shock resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Correction factors	$St37 = 1$, $V2A \sim 0.7$, $Ms \sim 0.4$, $AI \sim 0.3$
Ambient temperature -25+ 70 °C Operating voltage Residual ripple DC rated operational current No-load current I ₀ Residual current Rated insulation voltage Short-circuit protection Voltage drop at I _e Vire breakage / Reverse polarity protection Output function Switching frequency Housing Dimensions Housing material Material active face End cap Cable quality Cable cross section: Vibration resistance Shock resistance -25+ 70 °C 10 30VDC 10 3	Repeatability	2 %
Ambient temperature -25+ 70 °C Operating voltage Residual ripple DC rated operational current No-load current I ₀ Residual current No-load current I ₀ Residual current Rated insulation voltage Short-circuit protection Voltage drop at I _e Wire breakage / Reverse polarity protection Output function Switching frequency Housing Dimensions Housing material Material active face End cap Connection Cable quality Cable cross section: Vibration to Woltage No 30VDC 10 % U _{ss} 150 mA 15 mA 0.1 mA 0.5 kV yes / cyclic 1.8V yes / complete 3wire, normally open, pnp 3 kHz Wire breakage / Reverse polarity protection 3-wire, normally open, pnp 3 kHz Housing Dimensions 32 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable Cap Connection Cable quality Q 4, LifYY-11Y, PUR, 2 m 3 x 0.25mm² Vibration resistance Shock resistance 30g (11 ms)	Temperature drift	± 10 %
Operating voltage 10 30VDC Residual ripple 10 % U _{ss} DC rated operational current 150 mA No-load current I ₀ 15 mA Residual current 0.1 mA Rated insulation voltage 0.5 kV Short-circuit protection yes / cyclic Voltage drop at I _e 1.8V Wire breakage / Reverse polarity protection yes / complete Output function 3-wire, normally open, pnp Switching frequency 3 kHz Housing smooth barrel, 6.5 mm Dimensions 32 mm Housing material metal, CuZn, chrome-plated Material active face plastic, PA12-GF30 End cap plastic, PP Connection cable Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Hysteresis	3 15 %
Residual ripple DC rated operational current No-load current I ₀ Residual current No-load current I ₀ Residual current O.1 mA Residual current O.5 kV Short-circuit protection Voltage drop at I _e Wire breakage / Reverse polarity protection Output function Switching frequency Housing Simooth barrel, 6.5 mm Dimensions Housing material Material active face End cap Connection Cable quality Cable cross section: Voltage drop at I _e 1.8V yes / complete 1.8V yes / complete 3-wire, normally open, pnp 3 kHz Housing metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable cross section: 3 x 0.25mm ² Vibration resistance Shock resistance 30g (11 ms)	Ambient temperature	-25+ 70 °C
DC rated operational current No-load current I ₀ Residual current O.1 mA O.5 kV Short-circuit protection Voltage drop at I _e Wire breakage / Reverse polarity protection Switching frequency Housing Dimensions Housing material Material active face End cap Cable quality Cable cross section: Discrete di	Operating voltage	10 30VDC
No-load current I ₀ Residual current O.1 mA O.5 kV Short-circuit protection Voltage drop at I _e Wire breakage / Reverse polarity protection Output function Switching frequency Housing Dimensions Housing material Material active face End cap Connection Cable quality Cable cross section: Voltage drop at I _e O.5 kV yes / cyclic 1.8V yes / complete 3-wire, normally open, pnp 3 kHz Smooth barrel, 6.5 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: Vibration resistance Shock resistance Solution	Residual ripple	10 % U _{ss}
Residual current Rated insulation voltage Short-circuit protection Voltage drop at I _e Wire breakage / Reverse polarity protection Output function Switching frequency Wishing Switching material Material active face End cap Connection Cable quality Cable cross section: Shock resistance O.1 mA 0.5 kV yes / cyclic 1.8V yes / complete 3-wire, normally open, pnp 3 kHz Smooth barrel, 6.5 mm 32 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable 4, LifYY-11Y, PUR, 2 m 3 x 0.25mm² 55 Hz (1 mm) Shock resistance 30g (11 ms)	DC rated operational current	150 mA
Rated insulation voltage Short-circuit protection Voltage drop at I _e Voltage drop at I _e Output function Switching frequency Wire breakage / Reverse polarity protection Output function Switching frequency Switching frequency Wind barrel, 6.5 mm Simonth barrel, 6.5 mm Simonth barrel, 6.5 mm Dimensions Housing material Material active face End cap Connection Cable quality Cable quality Cable cross section: Wibration resistance Shock resistance O.5 kV yes / cyclic 1.8V yes / complete Short pan and pan	No-load current I ₀	15 mA
Short-circuit protection Voltage drop at le Wire breakage / Reverse polarity protection Output function Switching frequency Wine breakage / Reverse polarity protection Output function Swire, normally open, pnp Switching frequency Smooth barrel, 6.5 mm Smooth barrel, 6.5 mm Summ Housing material Material active face End cap Connection Cable quality Cable quality Cable cross section: Shock resistance Shock resistance Sylvation resistance yes / cyclic 1.8V yes / complete 9	Residual current	0.1 mA
Voltage drop at I _e Wire breakage / Reverse polarity protection Output function Switching frequency Smooth barrel, 6.5 mm Dimensions Housing material Material active face End cap Connection Cable quality Cable cross section: Vibration resistance 1.8V yes / complete 3-wire, normally open, pnp 3 kHz smooth barrel, 6.5 mm 32 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable 4, LifYY-11Y, PUR, 2 m 3 x 0.25mm² 55 Hz (1 mm) Shock resistance	Rated insulation voltage	0.5 kV
Wire breakage / Reverse polarity protection Output function Switching frequency ### Application Wire preakage / Reverse polarity protection 3-wire, normally open, pnp 3 kHz ### Application	Short-circuit protection	yes / cyclic
Output function Switching frequency 3 -wire, normally open, pnp 3 kHz Housing Smooth barrel, 6.5 mm 32 mm Housing material Material active face End cap Connection Cable quality Cable cross section: Vibration resistance 3-wire, normally open, pnp 3 kHz Smooth barrel, 6.5 mm 32 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable 4, LifYY-11Y, PUR, 2 m 3 x 0.25mm ² 55 Hz (1 mm) Shock resistance 30g (11 ms)	Voltage drop at I _e	1.8V
Output function Switching frequency 3 -wire, normally open, pnp 3 kHz Housing Smooth barrel, 6.5 mm 32 mm Housing material Material active face End cap Connection Cable quality Cable cross section: Vibration resistance 3-wire, normally open, pnp 3 kHz Smooth barrel, 6.5 mm 32 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable 4, LifYY-11Y, PUR, 2 m 3 x 0.25mm ² 55 Hz (1 mm) Shock resistance 30g (11 ms)	Wire breakage / Reverse polarity protection	ves / complete
Housing Smooth barrel, 6.5 mm Jimensions Smooth barrel, 6.5 mm 32 mm Housing material Material active face End cap Connection Cable quality Cable cross section: Wibration resistance Shock resistance Smooth barrel, 6.5 mm again metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable cable 4, LifYY-11Y, PUR, 2 m 3 x 0.25mm² 55 Hz (1 mm) 30g (11 ms)	Output function	•
Dimensions 32 mm Housing material Material active face End cap Connection Cable quality Cable cross section: Vibration resistance Diastic, PA12-GF30 plastic, PP cable plastic, PP cable plastic, PP cable 32 mm metal, CuZn, chrome-plated plastic, PA12-GF30 plastic, PP cable cable 34, LifYY-11Y, PUR, 2 m 35 Hz (1 mm) 30g (11 ms)	Switching frequency	
Housing material metal, CuZn, chrome-plated Material active face plastic, PA12-GF30 End cap plastic, PP Connection cable Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Housing	smooth barrel, 6.5 mm
Material active face plastic, PA12-GF30 End cap plastic, PP Connection cable Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Dimensions	32 mm
End cap plastic, PP Connection cable Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Housing material	metal, CuZn, chrome-plated
Connection cable Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm² Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Material active face	plastic, PA12-GF30
Cable quality Ø 4, LifYY-11Y, PUR, 2 m Cable cross section: 3 x 0.25mm ² Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	End cap	plastic, PP
Cable cross section:3 x 0.25mm²Vibration resistance55 Hz (1 mm)Shock resistance30g (11 ms)	Connection	cable
Vibration resistance 55 Hz (1 mm) Shock resistance 30g (11 ms)	Cable quality	Ø 4, LifYY-11Y, PUR, 2 m
Shock resistance 30g (11 ms)	Cable cross section:	3 x 0.25mm ²
Shock resistance 30g (11 ms)	Vibration resistance	55 Hz (1 mm)
Degree of protection IP67	Shock resistance	
	Degree of protection	IP67

LED yellow

- smooth barrel, 6.5 mm diameter
- side active face
- Chrome-plated brass
- 3-wire DC, 10...30 VDC
- normally open, pnp output
- cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and non-contact detection of metal objects. For this purpose they use a high-frequency electro-magnetic AC field that interacts with the target. Conserning inductive sensors, this field is generated by an LC resonant circuit with a ferrite core coil.

Display switch state