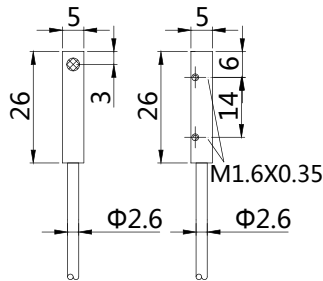


**Features:**

- Q5\*5 mm , Brass,nickel-plated housing;
- 0.8/1.2mm , flush mountable;
- DC 3-wire , switching output;
- Cable



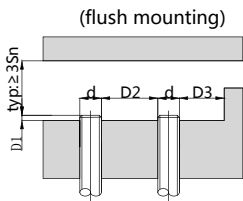
**Dimensioned drawing**



**Model No.**

Sensing range	Sn:0.8 mm	Sn:1.2 mm
NPN N. O	BB-Q550. 8N-C11P2	BB-Q551. 2N-C11P2
NPN N. C	BB-Q550. 8N-C21P2	BB-Q551. 2N-C21P2
PNP N. O	BB-Q550. 8P-C11P2	BB-Q551. 2P-C11P2
PNP N. C	BB-Q550. 8P-C21P2	BB-Q551. 2P-C21P2

**Mounting**

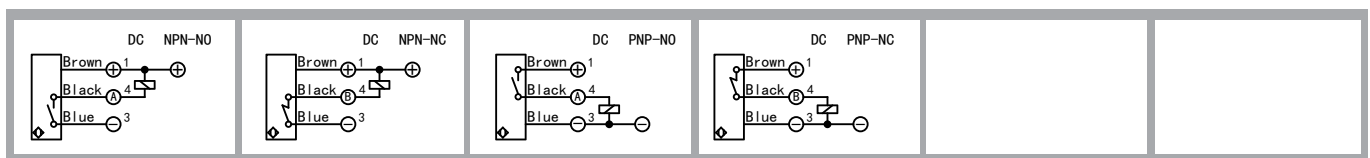


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.15mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



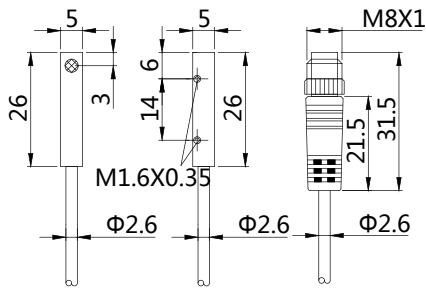


**Features:**

- Q5\*5 mm , Brass,nickel-plated housing;
- 0.8/1.2mm , flush mountable;
- DC 3-wire , switching output;
- Cable & pigtail versions



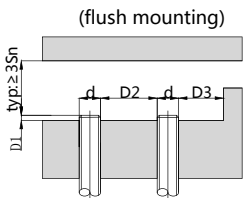
**Dimensioned drawing**



**Model No.**

Sensing range	Sn:0.8 mm	Sn:1.2 mm
NPN N.O	BB-Q550.8N-C11Z8	BB-Q551.2N-C11Z8
NPN N.C	BB-Q550.8N-C21Z8	BB-Q551.2N-C21Z8
PNP N.O	BB-Q550.8P-C11Z8	BB-Q551.2P-C11Z8
PNP N.C	BB-Q550.8P-C21Z8	BB-Q551.2P-C21Z8

**Mounting**

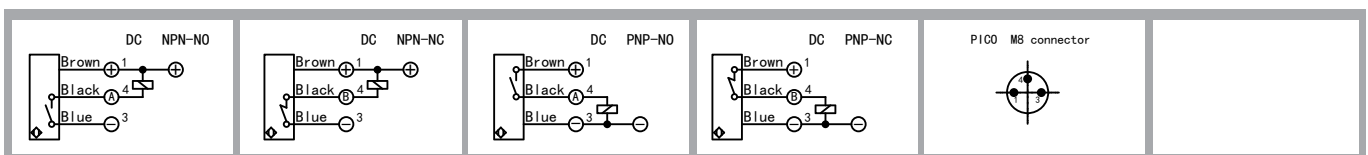


Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	PVC cable/0.3m ; 3*0.15mm <sup>2</sup> With M8 connector
	<b>Accessories</b>	Accessories

**Wiring**



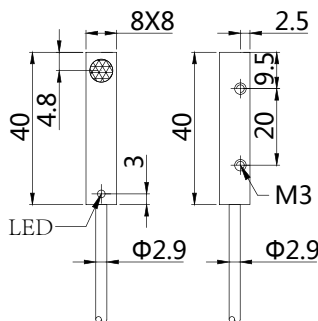


#### Features:

- Q8\*8 mm , Brass,nickel-plated housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Cable

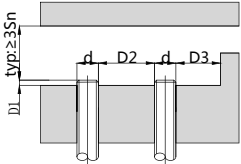


#### Dimensioned drawing



#### Mounting

(flush/quasi-flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

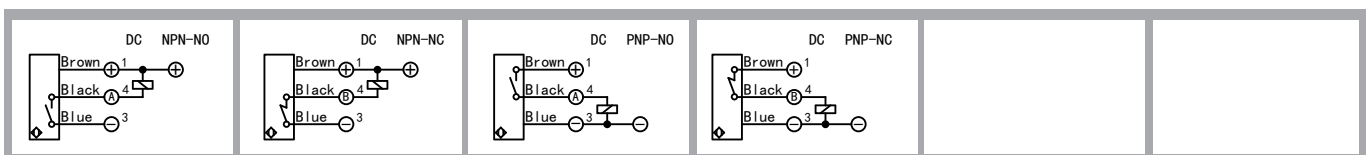
#### Model No.

Sensing range	Sn:2 mm	Sn:3 mm
NPN N. O	BB-Q8802N-C11P2	BB-Q8803N-C11P2
NPN N. C	BB-Q8802N-C21P2	BB-Q8803N-C21P2
PNP N. O	BB-Q8802P-C11P2	BB-Q8803P-C11P2
PNP N. C	BB-Q8802P-C21P2	BB-Q8803P-C21P2

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.18mm²
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring

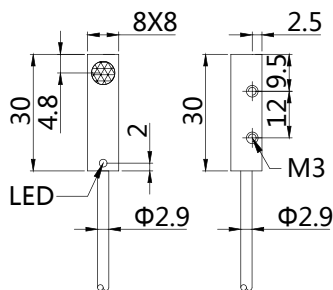


**Features:**

- Q8\*8 mm , Brass,nickel-plated housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Cable



**Dimensioned drawing**

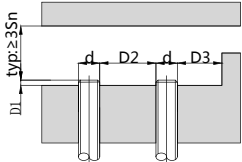


**Model No.**

Sensing range	Sn:2 mm	Sn:3 mm
NPN N. O	BB-Q8802N-C11P2-S	BB-Q8803N-C11P2-S
NPN N. C	BB-Q8802N-C21P2-S	BB-Q8803N-C21P2-S
PNP N. O	BB-Q8802P-C11P2-S	BB-Q8803P-C11P2-S
PNP N. C	BB-Q8802P-C21P2-S	BB-Q8803P-C21P2-S

**Mounting**

(flush/quasi-flush mounting)

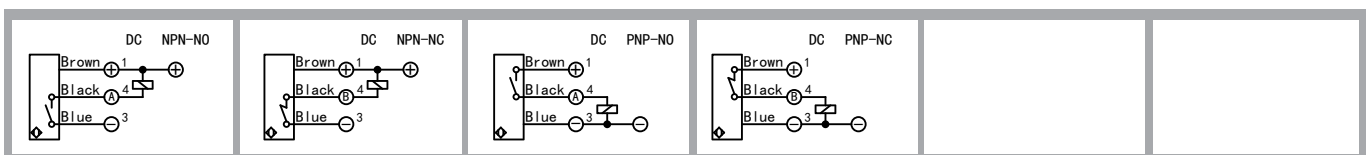


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**

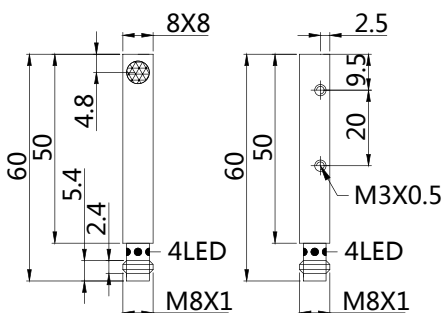


#### Features:

- Q8\*8 mm , Brass,nickel-plated housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Connector versions

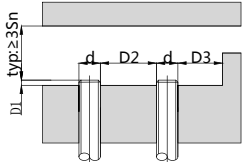


#### Dimensioned drawing



#### Mounting

(flush/quasi-flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

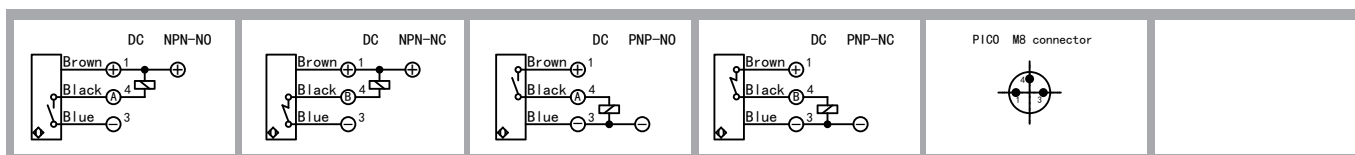
#### Model No.

Sensing range	Sn:2 mm	Sn:3 mm
NPN N. O	BB-Q8802N-C11S8	BB-Q8803N-C11S8
NPN N. C	BB-Q8802N-C21S8	BB-Q8803N-C21S8
PNP N. O	BB-Q8802P-C11S8	BB-Q8803P-C11S8
PNP N. C	BB-Q8802P-C21S8	BB-Q8803P-C21S8

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	M8 connector
<b>Accessories</b>	Accessories	B8-3GV2/B8-3WV2 (to be ordered separately)

#### Wiring



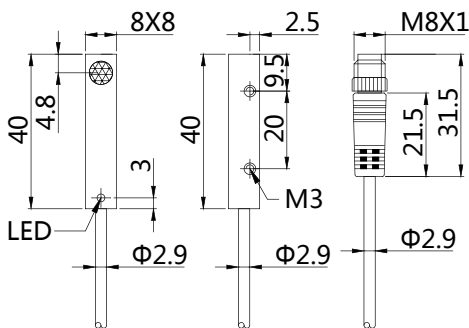


#### Features:

- Q8\*8 mm , Brass,nickel-plated housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Cable & pigtail versions



#### Dimensioned drawing

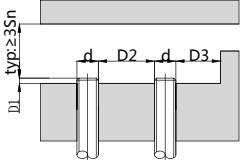


#### Model No.

Sensing range	Sn:2 mm	Sn:3 mm
NPN N. O	BB-Q8802N-C11Z8	BB-Q8803N-C11Z8
NPN N. C	BB-Q8802N-C21Z8	BB-Q8803N-C21Z8
PNP N. O	BB-Q8802P-C11Z8	BB-Q8803P-C11Z8
PNP N. C	BB-Q8802P-C21Z8	BB-Q8803P-C21Z8

#### Mounting

(flush/quasi-flush mounting)

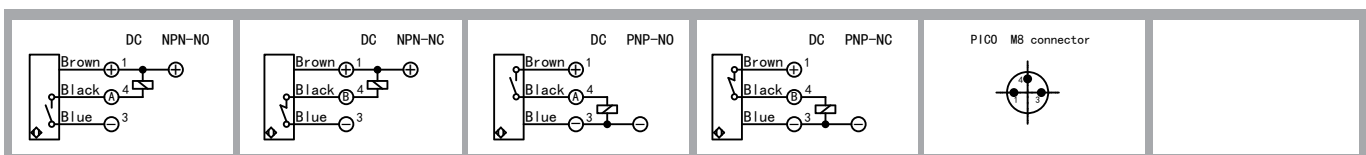


Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakage current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	PVC cable/0.3m ; 3*0.18mm² With M8 connector
	<b>Accessories</b>	Accessories B8-3GV2/B8-3WV2 (to be ordered separately)

#### Wiring



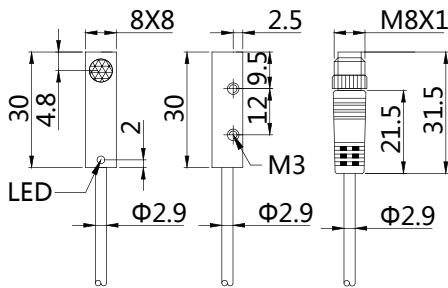


#### Features:

- Q8\*8 mm , Brass,nickel-plated housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Cable & pigtail versions



#### Dimensioned drawing

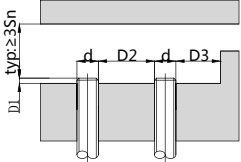


#### Model No.

Sensing range	Sn:2 mm	Sn:3 mm
NPN N. O	BB-Q8802N-C11Z8-S	BB-Q8803N-C11Z8-S
NPN N. C	BB-Q8802N-C21Z8-S	BB-Q8803N-C21Z8-S
PNP N. O	BB-Q8802P-C11Z8-S	BB-Q8803P-C11Z8-S
PNP N. C	BB-Q8802P-C21Z8-S	BB-Q8803P-C21Z8-S

#### Mounting

(flush/quasi-flush mounting)

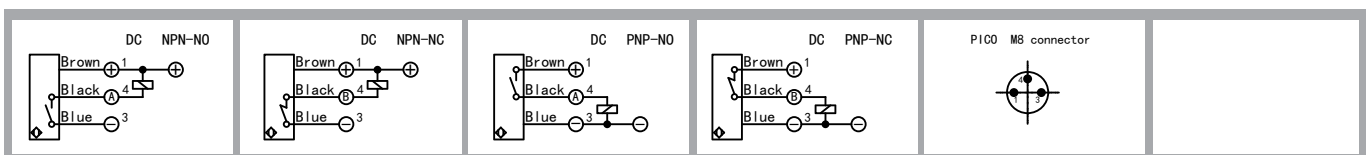


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	PVC cable/0.3m ; 3*0.18mm <sup>2</sup> With M8 connector
	<b>Accessories</b>	Accessories B8-3GV2/B8-3WV2 (to be ordered separately)

#### Wiring

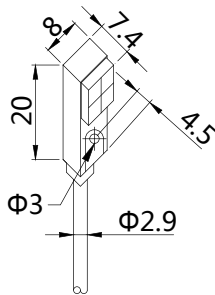


**Features:**

- Q8\*8 mm , Plastic housing;
- 2.5mm , non-flush mountable;
- DC 3-wire , switching output;
- Cable



**Dimensioned drawing**

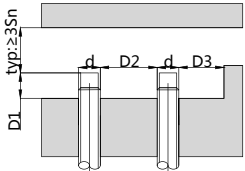


**Model No.**

Sensing range	Sn: 2.5 mm
NPN N. O	<b>BN-Q882. 5N-P11P2</b>
NPN N. C	<b>BN-Q882. 5N-P21P2</b>
PNP N. O	<b>BN-Q882. 5P-P11P2</b>
PNP N. C	<b>BN-Q882. 5P-P21P2</b>

**Mounting**

( non-flush mounting )

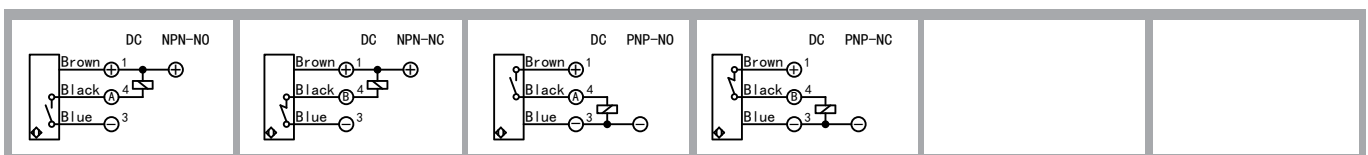


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



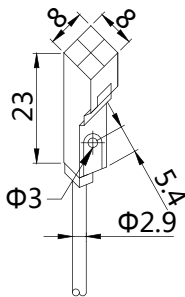


**Features:**

- Q8\*8 mm , Plastic housing;
- 2.5mm , non-flush mountable;
- DC 3-wire , switching output;
- Cable



**Dimensioned drawing**

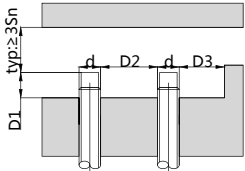


**Model No.**

Sensing range	Sn: 2.5 mm
NPN N. O	BN-Q882. 5N-P11P2-T
NPN N. C	BN-Q882. 5N-P21P2-T
PNP N. O	BN-Q882. 5P-P11P2-T
PNP N. C	BN-Q882. 5P-P21P2-T

**Mounting**

( non-flush mounting )

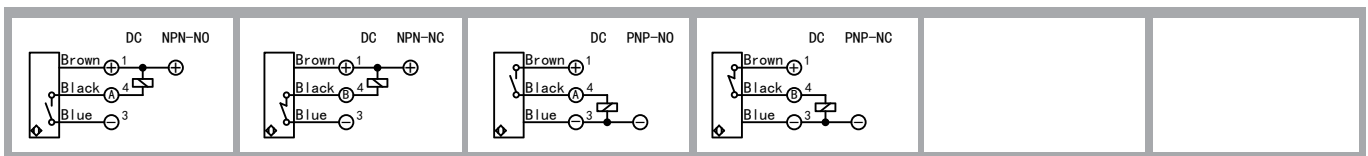


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m;3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

**Wiring**

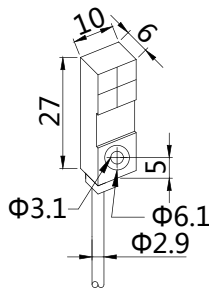


#### Features:

- Q10 Plastic housing;
- 2mm , flush mountable;
- DC 3-wire , switching output;
- Cable

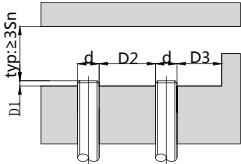


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

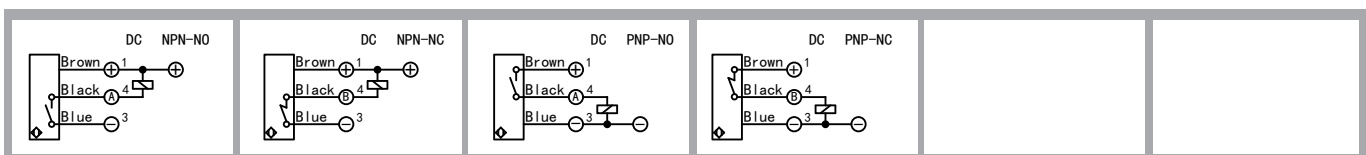
#### Model No.

Sensing range	Sn: 2 mm
NPN N. O	BB-Q1002N-P11P2
NPN N. C	BB-Q1002N-P21P2
PNP N. O	BB-Q1002P-P11P2
PNP N. C	BB-Q1002P-P21P2

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakage current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring

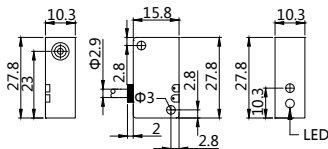


#### Features:

- Q28 Plastic housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- 90° side cable



#### Dimensioned drawing

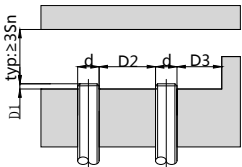


#### Model No.

Sensing range	Sn:2 mm	Sn:3 mm
NPN N. O	BB-Q2802N-P11P2-T	BB-Q2803N-P11P2-T
NPN N. C	BB-Q2802N-P21P2-T	BB-Q2803N-P21P2-T
PNP N. O	BB-Q2802P-P11P2-T	BB-Q2803P-P11P2-T
PNP N. C	BB-Q2802P-P21P2-T	BB-Q2803P-P21P2-T

#### Mounting

(flush/quasi-flush mounting)

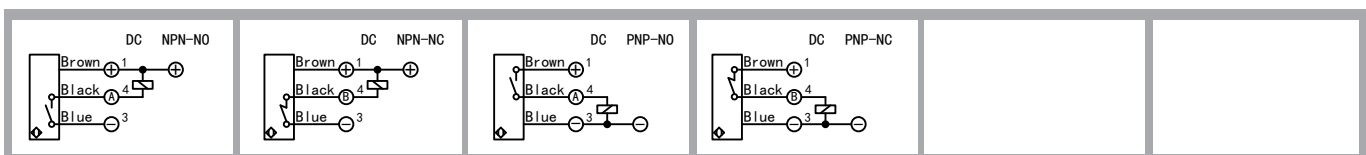


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	3000Hz/2000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m;3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

#### Wiring



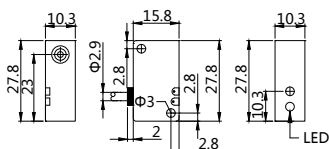


**Features :**

- Q28 Plastic housing;
- 4/6mm , non-flush mountable;
- DC 3-wire , switching output;
- 90° side cable



**Dimensioned drawing**

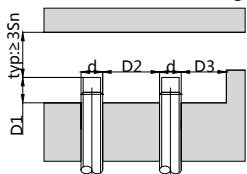


**Model No.**

Sensing range	Sn:4 mm	Sn:6 mm
NPN N. O	<b>BN-Q2804N-P11P2-T</b>	<b>BN-Q2806N-P11P2-T</b>
NPN N. C	<b>BN-Q2804N-P21P2-T</b>	<b>BN-Q2806N-P21P2-T</b>
PNP N. O	<b>BN-Q2804P-P11P2-T</b>	<b>BN-Q2806P-P11P2-T</b>
PNP N. C	<b>BN-Q2804P-P21P2-T</b>	<b>BN-Q2806P-P21P2-T</b>

**Mounting**

( non-flush mounting )

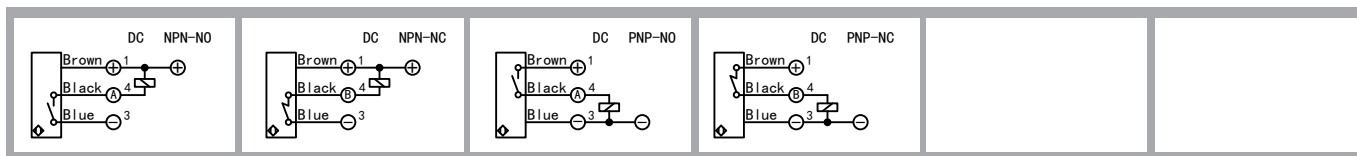


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

**Wiring**

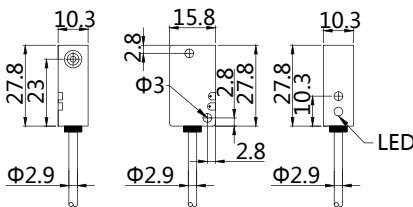


#### Features:

- Q28 Plastic housing;
- 2/3mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Cable



#### Dimensioned drawing

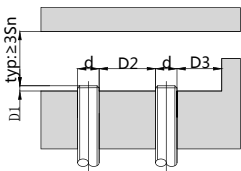


#### Model No.

Sensing range	Sn: 2 mm	Sn: 3 mm
NPN N. O	BB-Q2802N-P11P2	BB-Q2803N-P11P2
NPN N. C	BB-Q2802N-P21P2	BB-Q2803N-P21P2
PNP N. O	BB-Q2802P-P11P2	BB-Q2803P-P11P2
PNP N. C	BB-Q2802P-P21P2	BB-Q2803P-P21P2

#### Mounting

(flush/quasi-flush mounting)

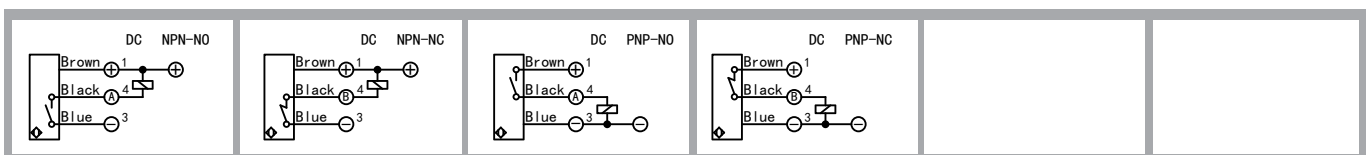


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	3000Hz/2000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m;3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



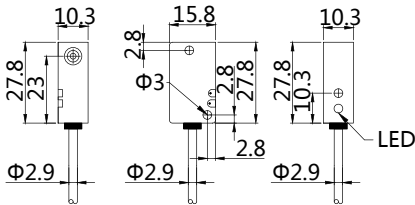


#### Features:

- Q28 Plastic housing;
- 4/6mm , non-flush mountable;
- DC 3-wire , switching output;
- Cable



#### Dimensioned drawing

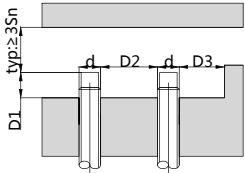


#### Model No.

Sensing range	Sn: 4 mm	Sn: 6 mm
NPN N. O	BN-Q2804N-P11P2	BN-Q2806N-P11P2
NPN N. C	BN-Q2804N-P21P2	BN-Q2806N-P21P2
PNP N. O	BN-Q2804P-P11P2	BN-Q2806P-P11P2
PNP N. C	BN-Q2804P-P21P2	BN-Q2806P-P21P2

#### Mounting

( non-flush mounting )

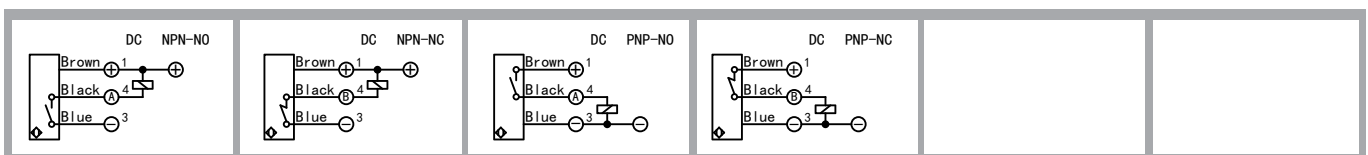


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz/1000Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



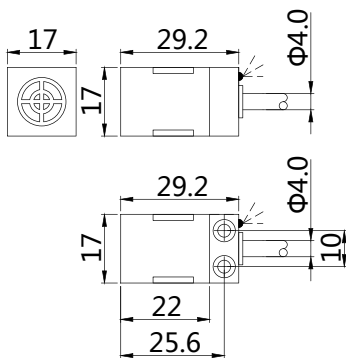


**Features:**

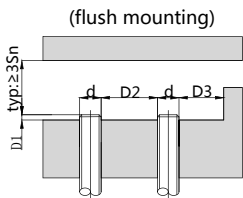
- Q16 Plastic housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Cable



**Dimensioned drawing**



**Mounting**



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

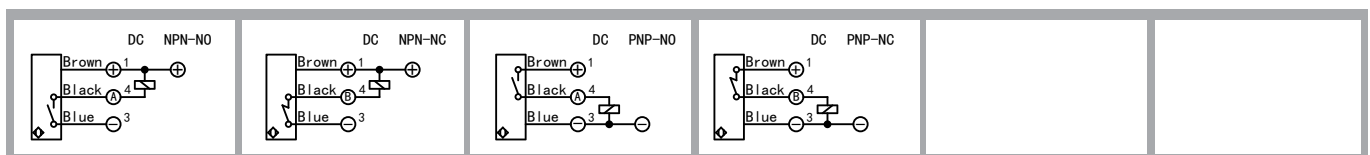
**Model No.**

Sensing range	Sn: 5 mm
NPN N. O	BB-Q1605N-P11P2
NPN N. C	BB-Q1605N-P21P2
PNP N. O	BB-Q1605P-P11P2
PNP N. C	BB-Q1605P-P21P2

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m;3*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



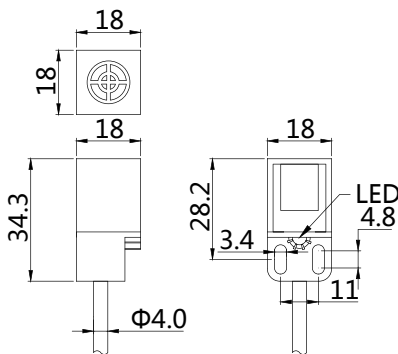


#### Features:

- Q18 Plastic housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Cable

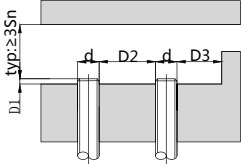


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

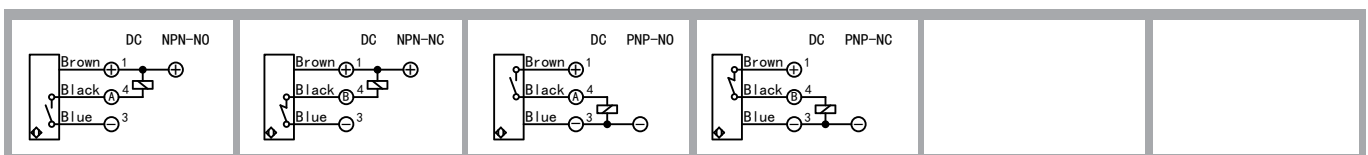
#### Model No.

Sensing range	Sn:5 mm
NPN N. O	BB-Q1805N-P11P2
NPN N. C	BB-Q1805N-P21P2
PNP N. O	BB-Q1805P-P11P2
PNP N. C	BB-Q1805P-P21P2

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakage current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	ABS
	Face material	ABS
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring





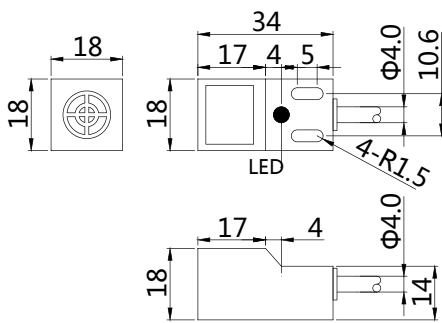


#### Features:

- Q18B Plastic housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Cable

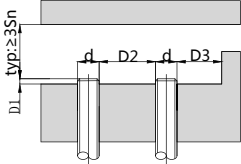


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

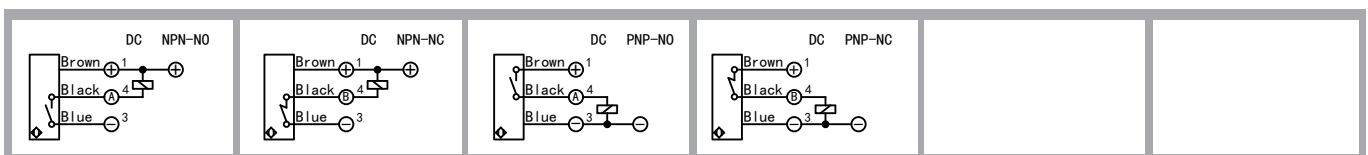
#### Model No.

Sensing range	Sn: 5 mm
NPN N. O	BB-Q18B05N-P11P2
NPN N. C	BB-Q18B05N-P21P2
PNP N. O	BB-Q18B05P-P11P2
PNP N. C	BB-Q18B05P-P21P2

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	ABS
	Face material	ABS
<b>Electrical connection</b>	Connectors	PVC cable/2m;3*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



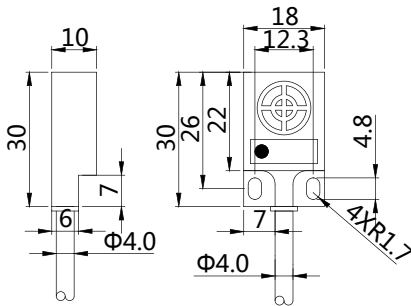


#### Features:

- Q18C Plastic housing;
- 4mm , flush mountable;
- DC 3-wire , switching output;
- Cable



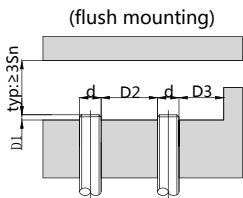
#### Dimensioned drawing



#### Model No.

Sensing range	Sn: 4 mm
NPN N. O	BB-Q18C04N-P11P2
NPN N. C	BB-Q18C04N-P21P2
PNP N. O	BB-Q18C04P-P11P2
PNP N. C	BB-Q18C04P-P21P2

#### Mounting

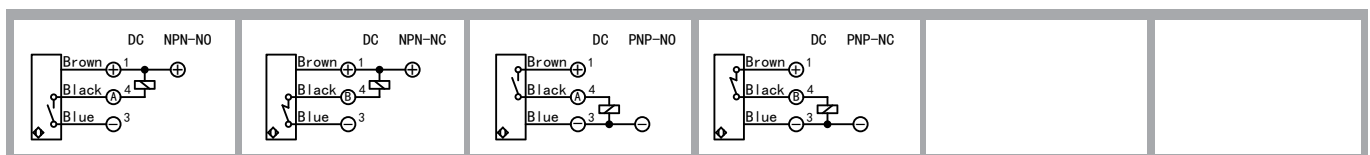


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	ABS
	Face material	ABS
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



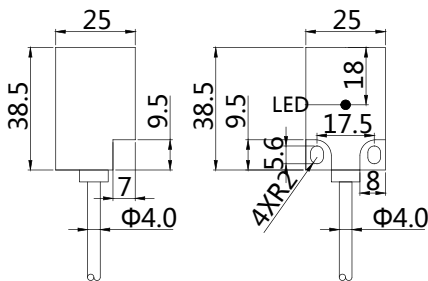


#### Features:

- Q25 Plastic housing;
- 10mm , non-flush mountable;
- DC 3-wire , switching output;
- Cable



#### Dimensioned drawing

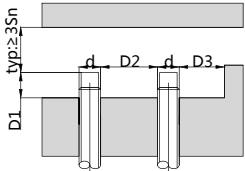


#### Model No.

Sensing range	Sn:10 mm
NPN N. O	BN-Q2510N-P11P2
NPN N. C	BN-Q2510N-P21P2
PNP N. O	BN-Q2510P-P11P2
PNP N. C	BN-Q2510P-P21P2

#### Mounting

( non-flush mounting )

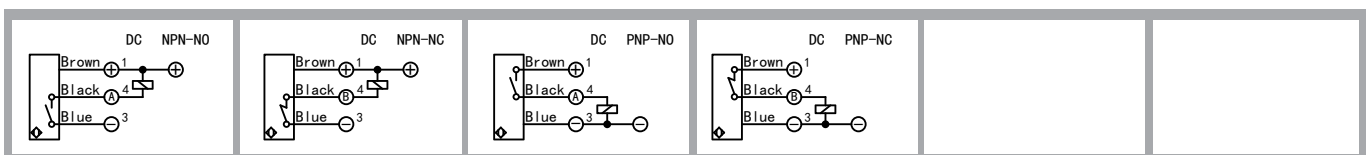


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	ABS
	Face material	ABS
<b>Electrical connection</b>	Connectors	PVC cable/2m;3*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



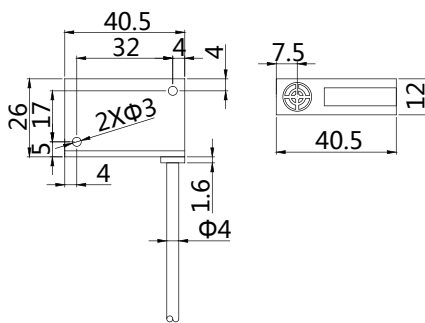


**Features:**

- Q25T Plastic housing;
- 2/4mm , flush/non-flush mountable;
- DC 3-wire , switching output;
- Cable



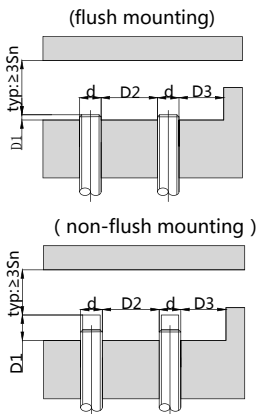
**Dimensioned drawing**



**Model No.**

Sensing range	Sn: 2 mm	Sn: 4 mm
NPN N. O	BB-Q25T02N-P11P2	BN-Q25T04N-P11P2
NPN N. C	BB-Q25T02N-P21P2	BN-Q25T04N-P21P2
PNP N. O	BB-Q25T02P-P11P2	BN-Q25T04P-P11P2
PNP N. C	BB-Q25T02P-P21P2	BN-Q25T04P-P21P2

**Mounting**

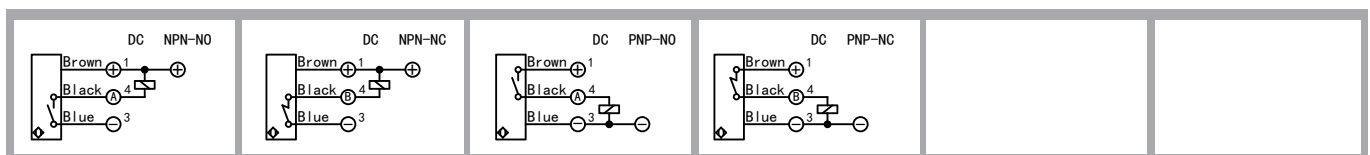


Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	2000Hz
	Voltage drop	≤2.0V
	Leakage current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 3*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



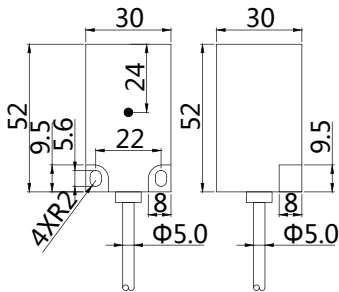


#### Features:

- Q30 Plastic housing;
- 15mm , non-flush mountable;
- DC 3-wire , switching output;
- Cable

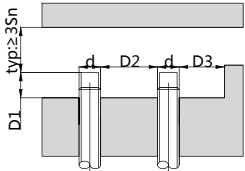


#### Dimensioned drawing



#### Mounting

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

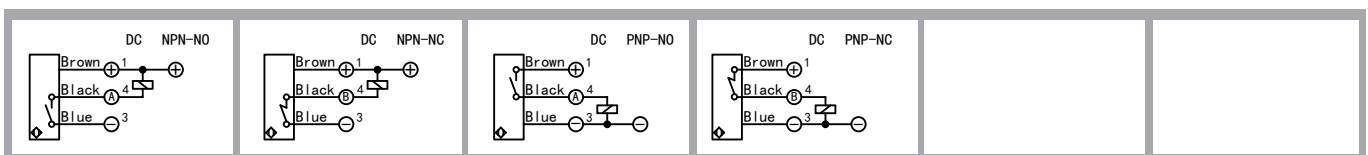
#### Model No.

Sensing range	Sn: 15 mm
NPN N. O	BN-Q3015N-P11P2
NPN N. C	BN-Q3015N-P21P2
PNP N. O	BN-Q3015P-P11P2
PNP N. C	BN-Q3015P-P21P2

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Polarity reversal protection	Yes
	Ambient temperature	-25...70°C
<b>Mechanical data</b>	Ingress protection	IP67
	Housing material	PBT
<b>Electrical connection</b>	Face material	PBT
	Connectors	PVC cable/2m;3*0.35mm²
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

#### Wiring



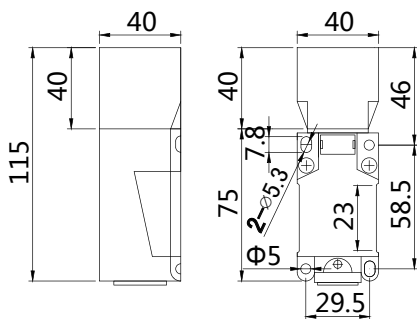


#### Features:

- Q40 Plastic housing;
- 15/20/30mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Terminal compartment

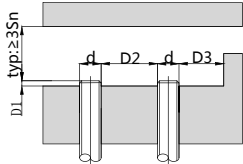


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm	Sn: 20 mm
NPN N. O	BB-Q4015N-P11T	BB-Q4020N-P11T
NPN N. C	BB-Q4015N-P21T	BB-Q4020N-P21T
PNP N. O	BB-Q4015P-P11T	BB-Q4020P-P11T
PNP N. C	BB-Q4015P-P21T	BB-Q4020P-P21T

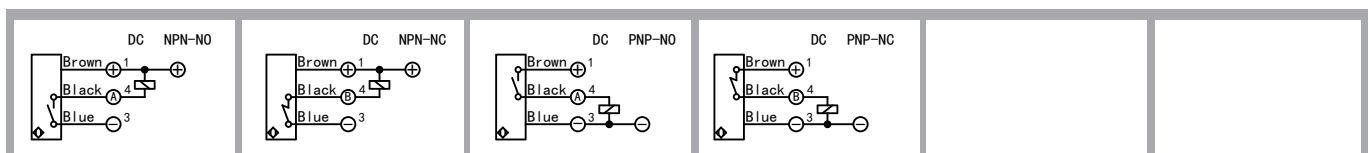
  

Sensing range	Sn: 30 mm
NPN N. O	BB-Q4030N-P11T
NPN N. C	BB-Q4030N-P21T
PNP N. O	BB-Q4030P-P11T
PNP N. C	BB-Q4030P-P21T

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	300Hz/300Hz/100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



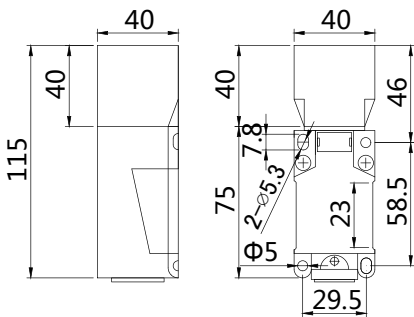


#### Features:

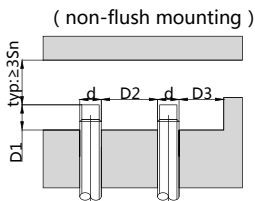
- Q40 Plastic housing;
- 20/30/40mm , non-flush mountable;
- DC 3-wire , switching output;
- Terminal compartment



#### Dimensioned drawing



#### Mounting



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

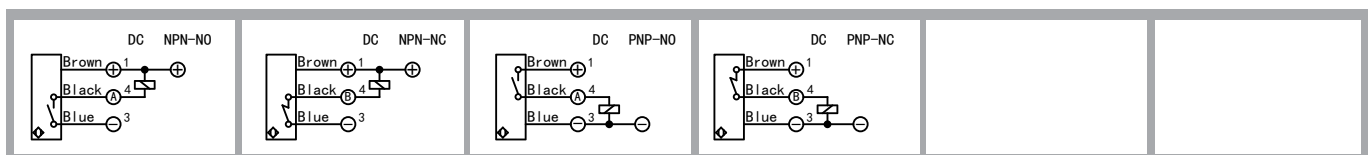
#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
NPN N. O	<b>BN-Q4020N-P11T</b>	<b>BN-Q4030N-P11T</b>
NPN N. C	<b>BN-Q4020N-P21T</b>	<b>BN-Q4030N-P21T</b>
PNP N. O	<b>BN-Q4020P-P11T</b>	<b>BN-Q4030P-P11T</b>
PNP N. C	<b>BN-Q4020P-P21T</b>	<b>BN-Q4030P-P21T</b>
Sensing range	Sn:40 mm	
NPN N. O	<b>BN-Q4040N-P11T</b>	
NPN N. C	<b>BN-Q4040N-P21T</b>	
PNP N. O	<b>BN-Q4040P-P11T</b>	
PNP N. C	<b>BN-Q4040P-P21T</b>	

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	300Hz/300Hz/100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



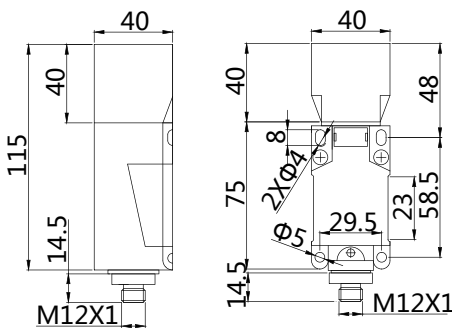


#### Features:

- Q40 Plastic housing;
- 15/20/30mm , flush/quasi-flush mountable;
- DC 3-wire , switching output;
- Connector versions

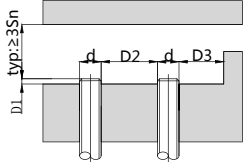


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn:15 mm	Sn:20 mm
NPN N.O	BB-Q4015N-P11S12	BB-Q4020N-P11S12
NPN N.C	BB-Q4015N-P21S12	BB-Q4020N-P21S12
PNP N.O	BB-Q4015P-P11S12	BB-Q4020P-P11S12
PNP N.C	BB-Q4015P-P21S12	BB-Q4020P-P21S12

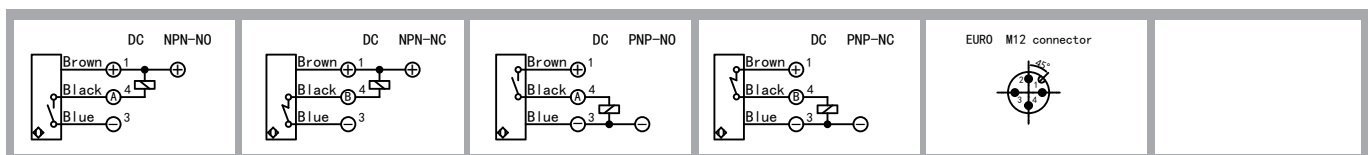
  

Sensing range	Sn:30 mm
NPN N.O	BB-Q4030N-P11S12
NPN N.C	BB-Q4030N-P21S12
PNP N.O	BB-Q4030P-P11S12
PNP N.C	BB-Q4030P-P21S12

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	300Hz/300Hz/100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2 (to be ordered separately)

#### Wiring





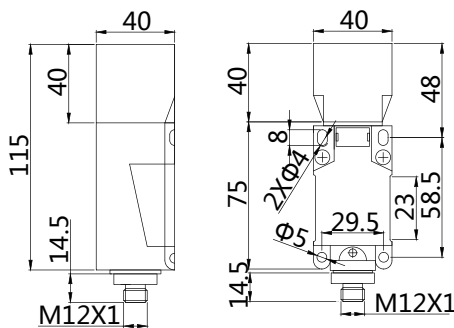


#### Features:

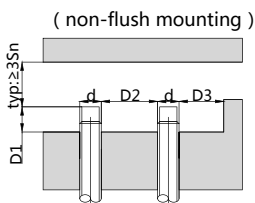
- Q40 Plastic housing;
- 20/30/40mm , non-flush mountable;
- DC 3-wire , switching output;
- Connector versions



#### Dimensioned drawing



#### Mounting



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

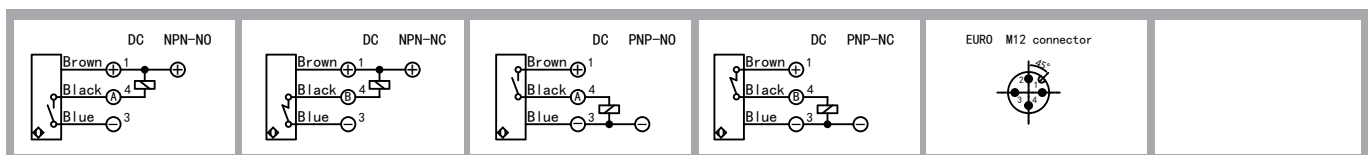
#### Model No.

Sensing range	Sn: 20 mm	Sn: 30 mm
NPN N. O	BN-Q4020N-P11S12	BN-Q4030N-P11S12
NPN N. C	BN-Q4020N-P21S12	BN-Q4030N-P21S12
PNP N. O	BN-Q4020P-P11S12	BN-Q4030P-P11S12
PNP N. C	BN-Q4020P-P21S12	BN-Q4030P-P21S12
Sensing range	Sn: 40 mm	
NPN N. O	BN-Q4040N-P11S12	
NPN N. C	BN-Q4040N-P21S12	
PNP N. O	BN-Q4040P-P11S12	
PNP N. C	BN-Q4040P-P21S12	

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	300Hz/300Hz/100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2 (to be ordered separately)

#### Wiring

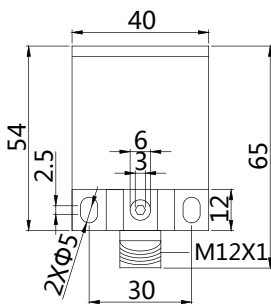


#### Features:

- Q40S Plastic housing;
- 20/40mm , flush/non-flush mountable;
- DC 3-wire , switching output;
- Connector versions



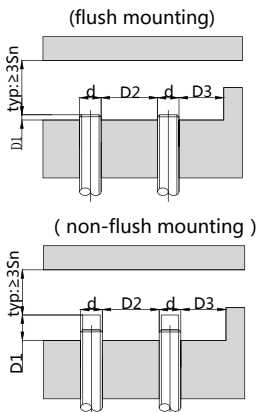
#### Dimensioned drawing



#### Model No.

Sensing range	Sn:20 mm	Sn:40 mm
NPN N. O	BB-Q4020N-P11S12-S	BN-Q4040N-P11S12-S
NPN N. C	BB-Q4020N-P21S12-S	BN-Q4040N-P21S12-S
PNP N. O	BB-Q4020P-P11S12-S	BN-Q4040P-P11S12-S
PNP N. C	BB-Q4020P-P21S12-S	BN-Q4040P-P21S12-S

#### Mounting

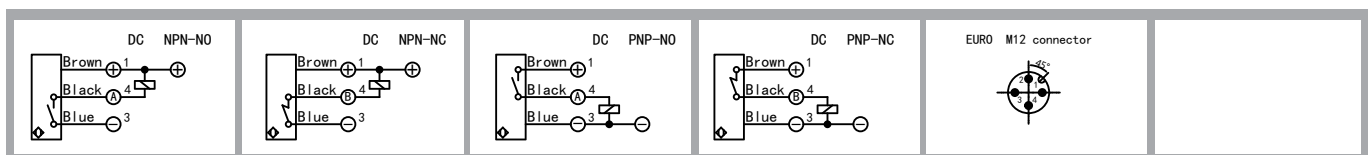


Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	300Hz/100Hz
	Voltage drop	≤2.0V
	Leakage current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
	(to be ordered separately)	

#### Wiring



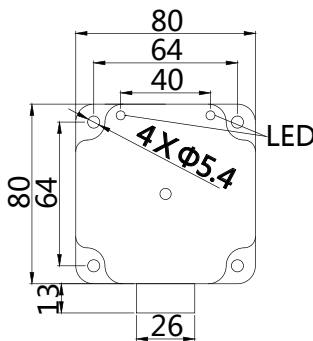


#### Features:

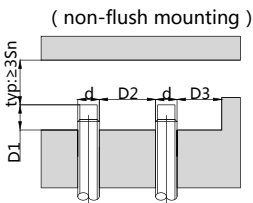
- Q80 Plastic housing;
- 50mm , non-flush mountable;
- DC 3-wire , switching output;
- Terminal compartment



#### Dimensioned drawing



#### Mounting



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

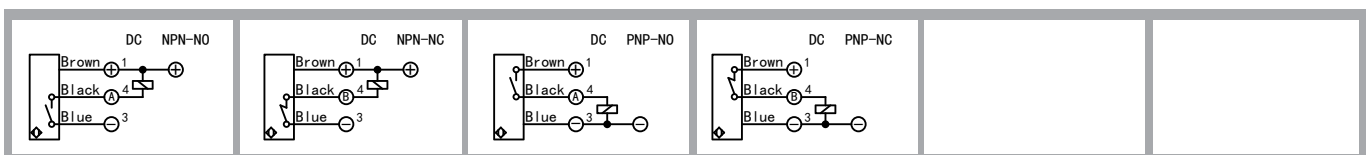
#### Model No.

Sensing range	Sn: 50 mm
NPN N. O	BN-Q8050N-P11T
NPN N. C	BN-Q8050N-P21T
PNP N. O	BN-Q8050P-P11T
PNP N. C	BN-Q8050P-P21T

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Polarity reversal protection	Yes
	Ambient temperature	-25...70°C
<b>Mechanical data</b>	Ingress protection	IP67
	Housing material	PBT
<b>Electrical connection</b>	Face material	PBT
	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

#### Wiring



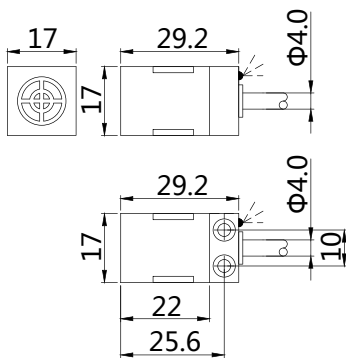


**Features:**

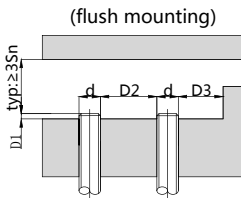
- Q16 Plastic housing;
- 4mm , flush mountable;
- DC 2-wire , switching output;
- Cable



**Dimensioned drawing**



**Mounting**



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Model No.**

Sensing range	Sn:4 mm
N.O	BB-Q1604C-P13P2
N.C	BB-Q1604C-P23P2

**Technical data**

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	1000Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	ABS
	Face material	ABS
<b>Electrical connection</b>	Connectors	PVC cable/2m;2*0.35mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO

(to be ordered separately)

**Wiring**



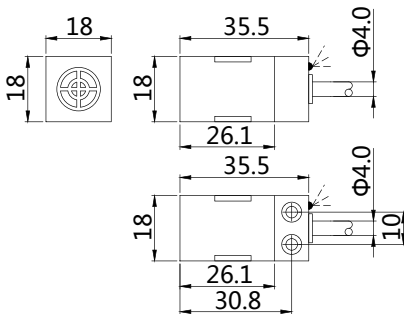


**Features:**

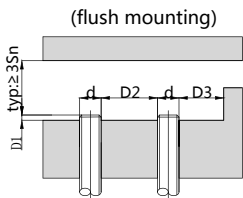
- Q18 Plastic housing;
- 4mm , flush mountable;
- DC 2-wire , switching output;
- Cable



**Dimensioned drawing**



**Mounting**



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Model No.**

Sensing range	Sn: 4 mm
N.O	BB-Q1804C-P13P2
N.C	BB-Q1804C-P23P2

**Technical data**

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	1000Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	ABS
	Face material	ABS
<b>Electrical connection</b>	Connectors	PVC cable/2m;2*0.35mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO (to be ordered separately)

**Wiring**



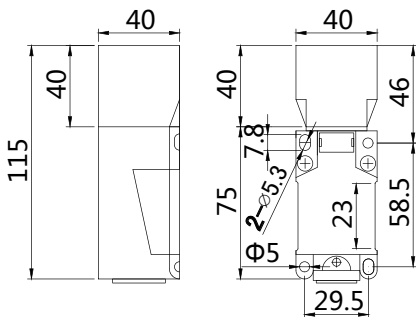


#### Features:

- Q40 Plastic housing;
- 15mm , flush mountable;
- DC 2-wire , switching output;
- Terminal compartment



#### Dimensioned drawing

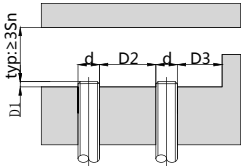


#### Model No.

Sensing range	Sn: 15 mm
N.O	BB-Q4015C-P13T
N.C	BB-Q4015C-P23T

#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	150Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO

(to be ordered separately)

#### Wiring



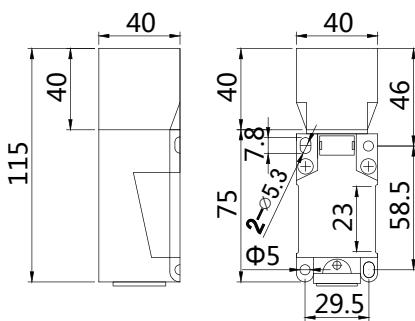


#### Features:

- Q40 Plastic housing;
- 20/30mm , non-flush mountable;
- DC 2-wire , switching output;
- Terminal compartment

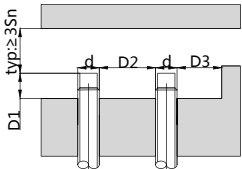


#### Dimensioned drawing



#### Mounting

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
N.O	BN-Q4020C-P13T	BN-Q4030C-P13T
N.C	BN-Q4020C-P23T	BN-Q4030C-P23T

#### Technical data

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	100Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO

(to be ordered separately)

#### Wiring



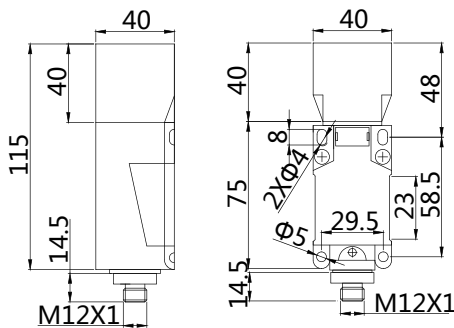


#### Features:

- Q40 Plastic housing;
- 15mm , flush mountable;
- DC 2-wire , switching output;
- Connector versions

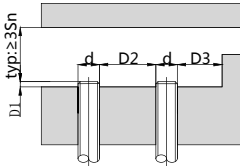


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm
N. O	BB-Q4015C-P13S12
N. C	BB-Q4015C-P23S12

#### Technical data

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	150Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Polarity reversal protection	Yes
	Ambient temperature	-25...70°C
<b>Mechanical data</b>	Ingress protection	IP67
	Housing material	PBT
<b>Electrical connection</b>	Face material	PBT
	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2 (to be ordered separately)

#### Wiring





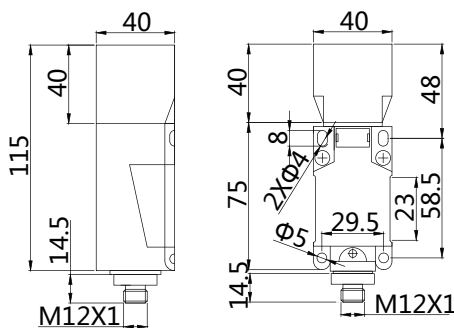


#### Features:

- Q40 Plastic housing;
- 20/30mm , non-flush mountable;
- DC 2-wire , switching output;
- Connector versions

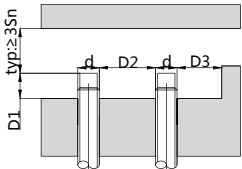


#### Dimensioned drawing



#### Mounting

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
N. O	<b>BN-Q4020C-P13S12</b>	<b>BN-Q4030C-P13S12</b>
N. C	<b>BN-Q4020C-P23S12</b>	<b>BN-Q4030C-P23S12</b>

#### Technical data

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	100Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
	(to be ordered separately)	

#### Wiring

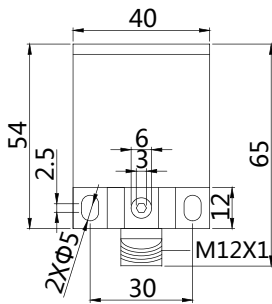


**Features:**

- Q40S Plastic housing;
- 15mm , flush mountable;
- DC 2-wire , switching output;
- Connector versions



**Dimensioned drawing**

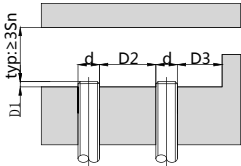


**Model No.**

Sensing range	<b>Sn: 15 mm</b>
N. O	<b>BB-Q4015C-P13S12-S</b>
N. C	<b>BB-Q4015C-P23S12-S</b>

**Mounting**

(flush mounting)



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	150Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Polarity reversal protection	Yes
	Ambient temperature	-25...70°C
<b>Mechanical data</b>	Ingress protection	IP67
	Housing material	PBT
<b>Electrical connection</b>	Face material	PBT
	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
	(to be ordered separately)	

**Wiring**

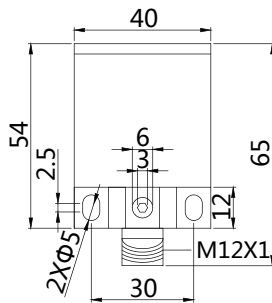


**Features:**

- Q40S Plastic housing;
- 20/30mm , non-flush mountable;
- DC 2-wire , switching output;
- Connector versions

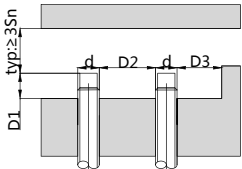


**Dimensioned drawing**



**Mounting**

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

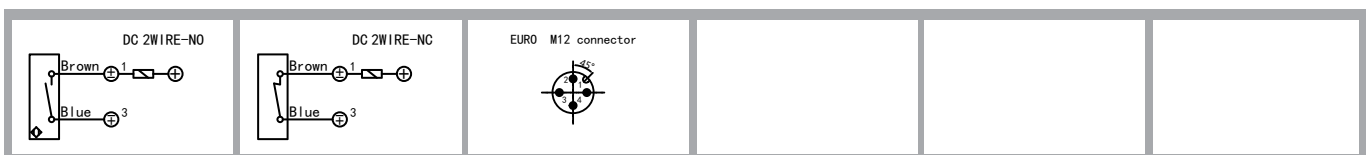
**Model No.**

Sensing range	Sn:20 mm	Sn:30 mm
N. O	<b>BN-Q4020C-P13S12-S</b>	<b>BN-Q4030C-P13S12-S</b>
N. C	<b>BN-Q4020C-P23S12-S</b>	<b>BN-Q4030C-P23S12-S</b>

**Technical data**

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	100Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Polarity reversal protection	Yes
	Ambient temperature	-25...70°C
<b>Mechanical data</b>	Ingress protection	IP67
	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2 (to be ordered separately)

**Wiring**



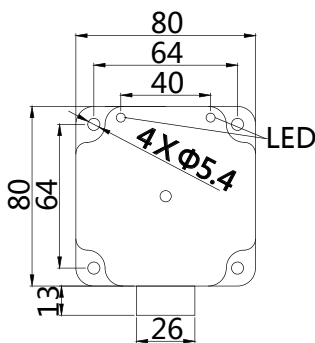


**Features:**

- Q80 Plastic housing;
- 50mm , non-flush mountable;
- DC 2-wire , switching output;
- Terminal compartment

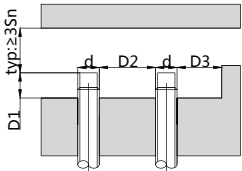


**Dimensioned drawing**



**Mounting**

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Model No.**

Sensing range	Sn : 50 mm
N. O	BN-Q8050C-P13T
N. C	BN-Q8050C-P23T

**Technical data**

<b>Electrical data</b>	Operating voltage	10-60V DC
	Switching frequency	100Hz
	Voltage drop	≤4.5V
	Load current	200mA
	Leakge current	≤0.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO

(to be ordered separately)

**Wiring**



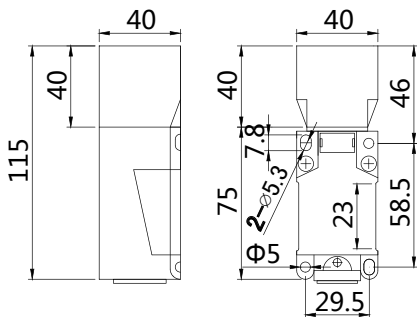


#### Features:

- Q40 Plastic housing;
- 15mm , flush mountable;
- DC 4-wire , switching output;
- Terminal compartment

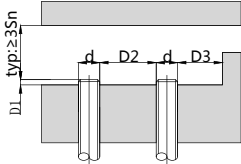


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

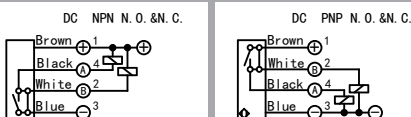
#### Model No.

Sensing range	Sn: 15 mm
NPN N. O.+N. C	<b>BB-Q4015N-P31T</b>
PNP N. O.+N. C	<b>BB-Q4015P-P31T</b>

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	150Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



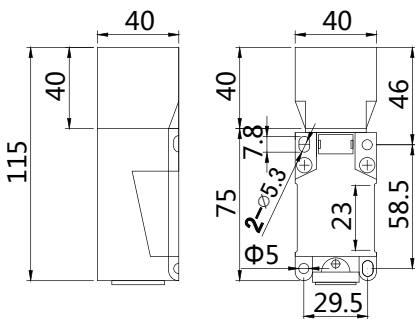


#### Features:

- Q40 Plastic housing;
- 20/30mm , non-flush mountable;
- DC 4-wire , switching output;
- Terminal compartment



#### Dimensioned drawing

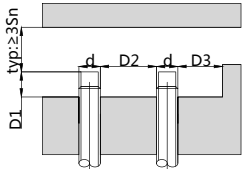


#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
NPN N. O.+N. C	<b>BN-Q4020N-P31T</b>	<b>BN-Q4030N-P31T</b>
PNP N. O.+N. C	<b>BN-Q4020P-P31T</b>	<b>BN-Q4030P-P31T</b>

#### Mounting

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



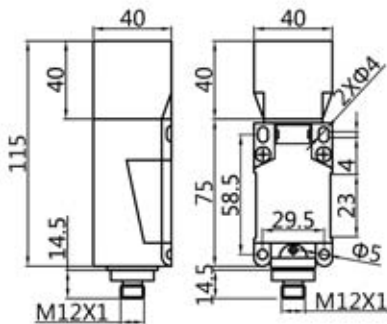


#### Features:

- Q40 Plastic housing;
- 15mm , flush mountable;
- DC 4-wire , switching output;
- Terminal compartment

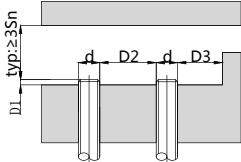


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm
NPN N. O.+N. C	<b>BB-Q4015N-P31S12</b>
PNP N. O.+N. C	<b>BB-Q4015P-P31S12</b>

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	150Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
		(to be ordered separately)

#### Wiring



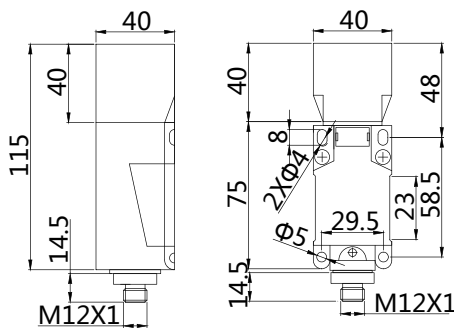


#### Features:

- Q40 Plastic housing;
- 20/30mm , non-flush mountable;
- DC 4-wire , switching output;
- Connector versions



#### Dimensioned drawing

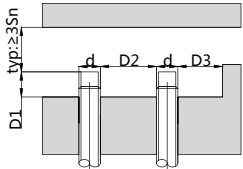


#### Model No.

Sensing range	Sn: 20 mm	Sn: 30 mm
NPN N. O.+N. C	<b>BN-Q4020N-P31S12</b>	<b>BN-Q4030N-P31S12</b>
PNP N. O.+N. C	<b>BN-Q4020P-P31S12</b>	<b>BN-Q4030P-P31S12</b>

#### Mounting

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	150Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
		(to be ordered separately)

#### Wiring



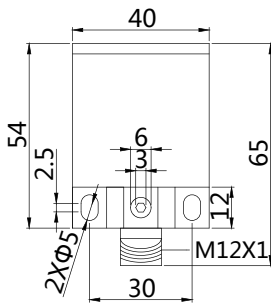


#### Features:

- Q40S Plastic housing;
- 15mm , flush mountable;
- DC 4-wire , switching output;
- Connector versions

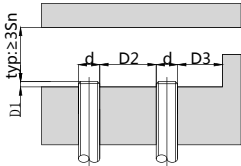


#### Dimensioned drawing



#### Mounting

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm
NPN N. O.+N. C	<b>BB-Q4015N-P31S12-S</b>
PNP N. O.+N. C	<b>BB-Q4015P-P31S12-S</b>

#### Technical data

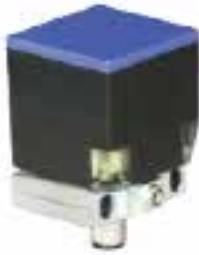
<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	150Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
		(to be ordered separately)

#### Wiring

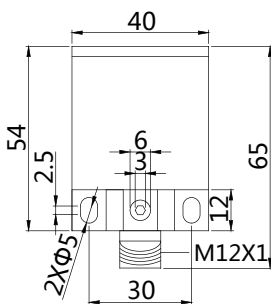


**Features :**

- Q40S Plastic housing;
- 20/30mm , non-flush mountable;
- DC 4-wire , switching output;
- Connector versions



**Dimensioned drawing**

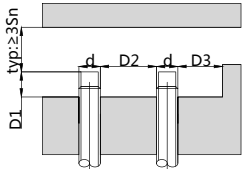


**Model No.**

Sensing range	Sn: 20 mm	Sn: 30 mm
NPN N. O.+N. C	<b>BN-Q4020N-P31S12-S</b>	<b>BN-Q4030N-P31S12-S</b>
PNP N. O.+N. C	<b>BN-Q4020P-P31S12-S</b>	<b>BN-Q4030P-P31S12-S</b>

**Mounting**

( non-flush mounting )

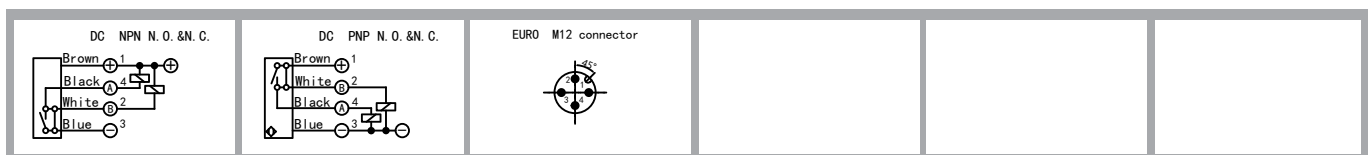


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2 (to be ordered separately)

**Wiring**



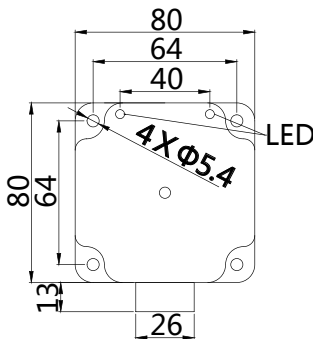


**Features :**

- Q80 Plastic housing;
- 50mm , non-flush mountable;
- DC 4-wire , switching output;
- Terminal compartment

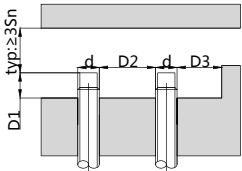


**Dimensioned drawing**



**Mounting**

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Model No.**

Sensing range	Sn : 50 mm
NPN N. O.+N. C	<b>BN-Q8050N-P31T</b>
PNP N. O.+N. C	<b>BN-Q8050P-P31T</b>

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	100Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
<b>Environment</b>	Polarity reversal protection	Yes
	Ambient temperature	-25...70°C
<b>Mechanical data</b>	Ingress protection	IP67
	Housing material	PBT
<b>Electrical connection</b>	Face material	PBT
	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

**Wiring**



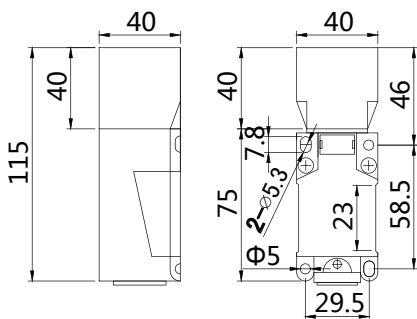


#### Features:

- Q40 Plastic housing;
- 15mm , flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Terminal compartment



#### Dimensioned drawing

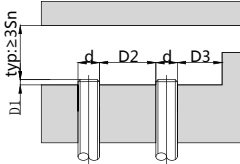


#### Model No.

Sensing range	Sn: 15 mm
N. O	BB-Q4015A-P14T
N. C	BB-Q4015A-P24T
N. O+N. C	BB-Q4015A-P34T
N. O	BB-Q4015U-P15T
N. C	BB-Q4015U-P25T

#### Mounting

(flush mounting)

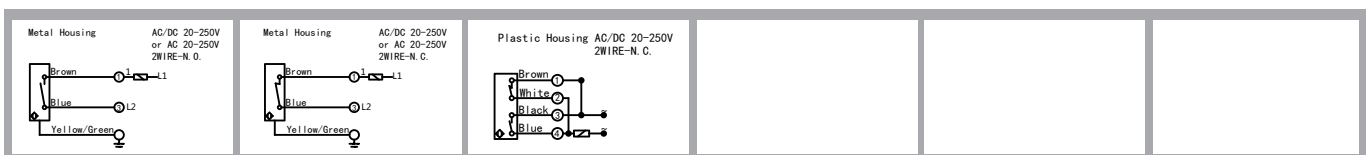


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
		Polarity reversal protection
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



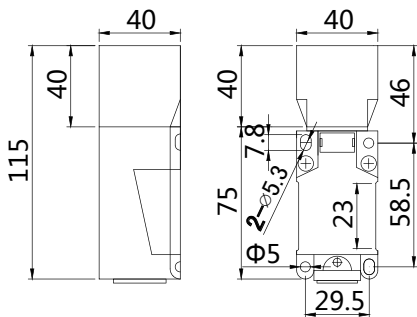


#### Features:

- Q40 Plastic housing;
- 20/30mm , non-flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Terminal compartment

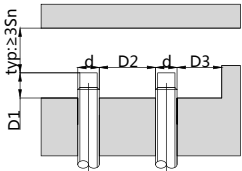


#### Dimensioned drawing



#### Mounting

( non-flush mounting )



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

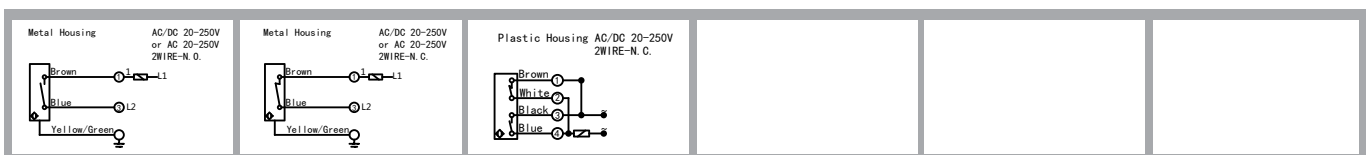
#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
N. O	BN-Q4020A-P14T	BN-Q4030A-P14T
N. C	BN-Q4020A-P24T	BN-Q4030A-P24T
N. O+N. C	BN-Q4020A-P34T	BN-Q4030A-P34T
N. O	BN-Q4020U-P15T	BN-Q4030U-P15T
N. C	BN-Q4020U-P25T	BN-Q4030U-P25T

#### Technical data

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



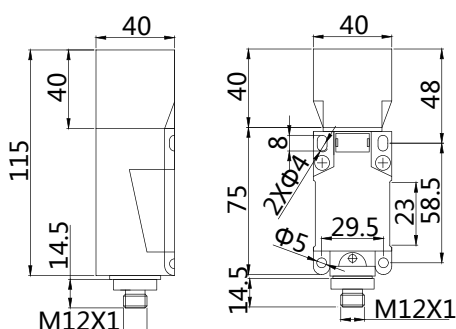


#### Features:

- Q40 Plastic housing;
- 15mm , flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Connector versions



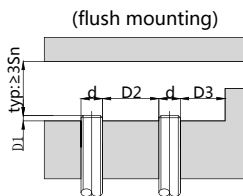
#### Dimensioned drawing



#### Model No.

Sensing range	Sn : 15 mm
N. O	BB-Q4015A-P14S12
N. C	BB-Q4015A-P24S12
N. O+N. C	BB-Q4015A-P34S12
N. O	BB-Q4015U-P15S12
N. C	BB-Q4015U-P25S12

#### Mounting

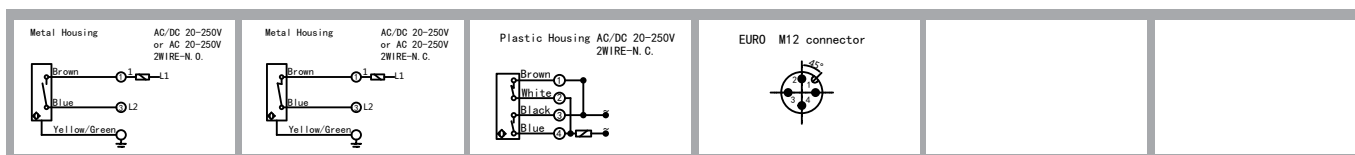


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
		(to be ordered separately)

#### Wiring



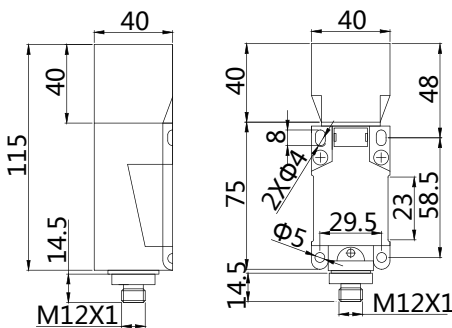


#### Features:

- Q40 Plastic housing;
- 20/30mm , non-flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Connector versions



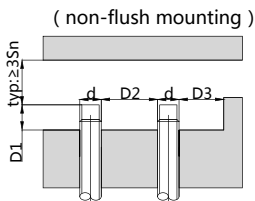
#### Dimensioned drawing



#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
N. O	BN-Q4020A-P14S12	BN-Q4030A-P14S12
N. C	BN-Q4020A-P24S12	BN-Q4030A-P24S12
N. O+N. C	BN-Q4020A-P34S12	BN-Q4030A-P34S12
N. O	BN-Q4020U-P15S12	BN-Q4030U-P15S12
N. C	BN-Q4020U-P25S12	BN-Q4030U-P25S12

#### Mounting

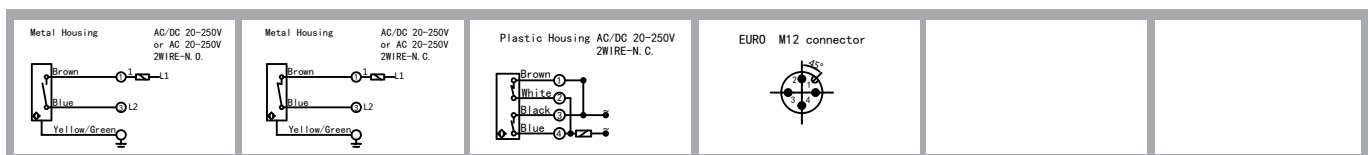


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
		(to be ordered separately)

#### Wiring

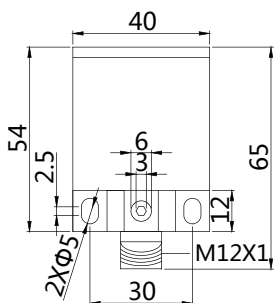


**Features:**

- Q40S Plastic housing;
- 15mm , flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Connector versions

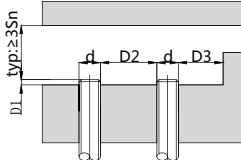


**Dimensioned drawing**



**Mounting**

(flush mounting)



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

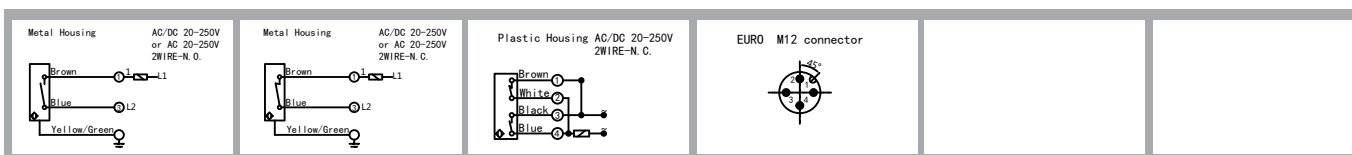
**Model No.**

Sensing range	Sn : 15 mm
N. O	BB-Q4015A-P14S12-S
N. C	BB-Q4015A-P24S12-S
N. O+N. C	BB-Q4015A-P34S12-S
N. O	BB-Q4015U-P15S12-S
N. C	BB-Q4015U-P25S12-S

**Technical data**

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
	(to be ordered separately)	

**Wiring**



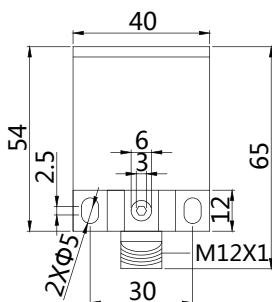


#### Features:

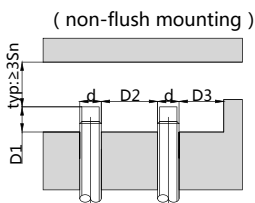
- Q40S Plastic housing;
- 20/30mm , non-flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Connector versions



#### Dimensioned drawing



#### Mounting



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

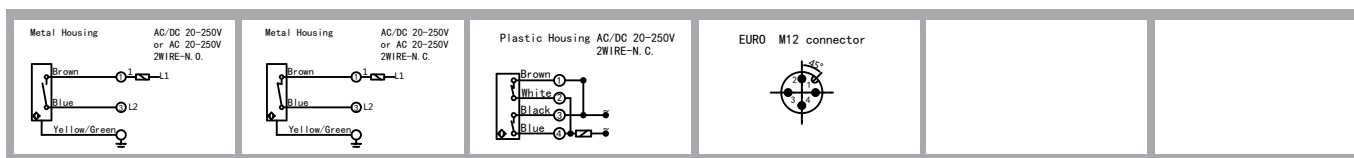
#### Model No.

Sensing range	Sn:20 mm	Sn:30 mm
N. O	BN-Q4020A-P14S12-S	BN-Q4030A-P14S12-S
N. C	BN-Q4020A-P24S12-S	BN-Q4030A-P24S12-S
N. O+N. C	BN-Q4020A-P34S12-S	BN-Q4030A-P34S12-S
N. O	BN-Q4020U-P15S12-S	BN-Q4030U-P15S12-S
N. C	BN-Q4020U-P25S12-S	BN-Q4030U-P25S12-S

#### Technical data

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
	(to be ordered separately)	

#### Wiring

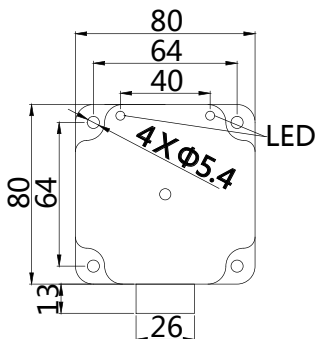


#### Features:

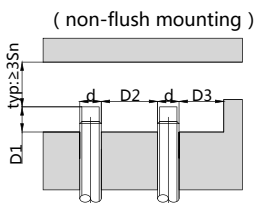
- Q80 Plastic housing;
- 50mm , non-flush mountable;
- AC 2-wire , AC/DC 2-wire , switching output;
- Momentary current:5A(20ms)/2.2A(20ms)
- Terminal compartment



#### Dimensioned drawing



#### Mounting



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn:50 mm
N. O	BN-Q8050A-P14T
N. C	BN-Q8050A-P24T
N. O+N. C	BN-Q8050A-P34T
N. O	BN-Q8050U-P15T
N. C	BN-Q8050U-P25T

#### Technical data

<b>Electrical data</b>	Operating voltage	20-250V AC/20-250V AC/DC
	Switching frequency	25Hz/25Hz AC;40Hz DC
	Voltage drop	≤8V AC/≤10V AC,8V DC
	Load current	Max.load:400mA;min.Load:5mA
		Max.load:200mA;min.Load:5mA
	Leakge current	≤1.8mA/≤2.5mA
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	PBT
	Face material	PBT
<b>Electrical connection</b>	Connectors	Terminal up to 2.5mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
	(to be ordered separately)	

#### Wiring





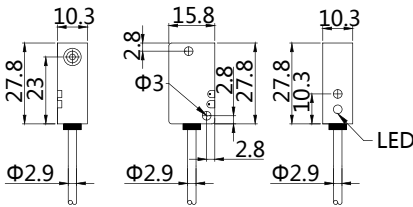


**Features :**

- Q28 Plastic housing;
- 2mm , flush mountable;
- NAMUR DC 2-wire , switching output;
- Cable



**Dimensioned drawing**

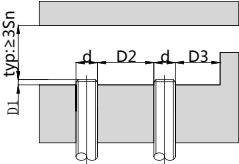


**Model No.**

Sensing range	Sn:2 mm
N. 0	BB-Q2802NA-P10P2

**Mounting**

(flush/quasi-flush mounting)

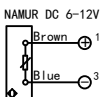


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	6-12V DC
	Switching frequency	2000Hz
	Leakge current	>2.2mA(OFF), <1.1mA(ON)
	Hysteresis	<15%(Sr)
	Repeatability	<2.0%(Sr)
	Power-up delay	≤10ms
	Temperature drift	<10%(Sr)
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	PBT
<b>Electrical connection</b>	Connectors	PVC cable/2m ; 2*0.25mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO (to be ordered separately)

**Wiring**

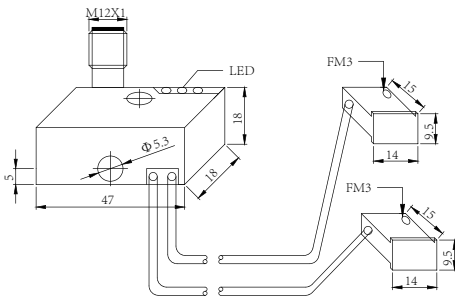


**Features :**

- Q45 Plastic housing;
- With 2\*NO contact,switching output;
- 2mm,non-flush montable;
- DC 4-wire,10...30V DC;
- Connector version



**Dimensioned drawing**



**Remarks:**

Please note,non-flush mounting of this sensor isobligatory  
The following conditions allow semi-flush mounting  
N1=0 mm and S1=1 mm or  
N1=1 mm and S1=0 mm  
These values apply for mounting in aluminium  
N1=0 mm and S1=5 mm or  
N1=5 mm and S1=0 mm  
These values apply for mounting in St37

**Model No.**

Sensing range	<b>Sn: 2 mm</b>
NPN	<b>BN-Q4502N-P41S12</b>
PNP	<b>BN-Q4502P-P41S12</b>

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	1000Hz/500Hz
	Voltage drop	≤2.0V
	Leakge current	<0.01mA
	Load current	100mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...70°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	POM
<b>Electrical connection</b>	Connectors	M12 connector
<b>Accessories</b>	Accessories	B12-4GV2/B12-4WV2
		(to be ordered separately)

**Wiring**



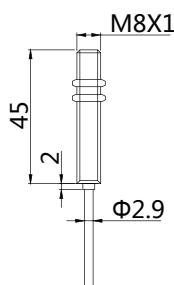


#### Features:

- M8\*1 mm , Stainless steel housing;
- 2mm , flush mountable;
- DC 3-wire , switching output;
- Withstand low-temperatures(-40...85°C);
- Cable



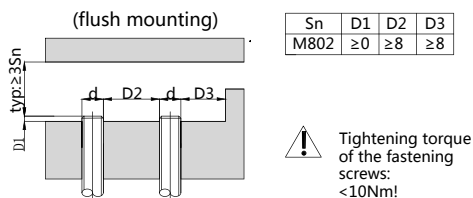
#### Dimensioned drawing



#### Model No.

Sensing range	Sn: 2 mm
NPN N. O	BLB-M802N-V11U2
NPN N. C	BLB-M802N-V21U2
PNP N. O	BLB-M802P-V11U2
PNP N. C	BLB-M802P-V21U2

#### Mounting

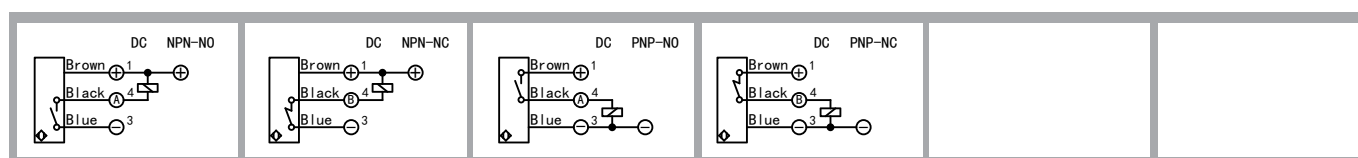


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	3000Hz
	Voltage drop	≤1.5V
	Leakage current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-40...85°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	POM
<b>Electrical connection</b>	Connectors	PUR cable/2m ; 3*0.18mm²
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



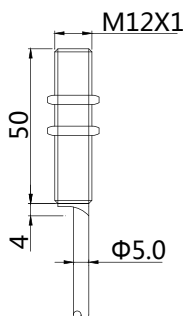


**Features:**

- M12\*1 mm , Brass,nickel-plated housing;
- 4mm , flush mountable;
- DC 3-wire , switching output;
- Withstand low-temperatures(-40...85°C);
- Cable



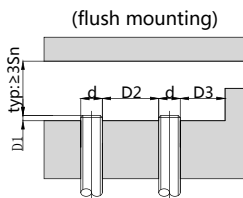
**Dimensioned drawing**



**Model No.**

Sensing range	Sn:4 mm
NPN N. O	BLB-M1204N-C11U2
NPN N. C	BLB-M1204N-C21U2
PNP N. O	BLB-M1204P-C11U2
PNP N. C	BLB-M1204P-C21U2

**Mounting**



Sn	D1	D2	D3
M1204	≥1	≥12	≥12

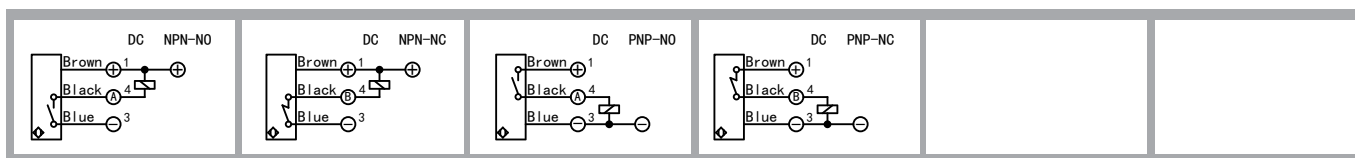
⚠ Tightening torque of the fastening screws: <10Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	3000Hz
	Voltage drop	≤1.5V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-40...85°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	PBT
<b>Electrical connection</b>	Connectors	PUR cable/2m ; 3*0.35mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



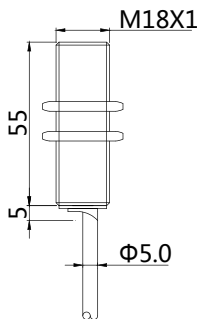


**Features:**

- M18\*1 mm , Brass,nickel-plated housing;
- 8mm , flush mountable;
- DC 3-wire , switching output;
- Withstand low-temperatures(-40...85°C);
- Cable



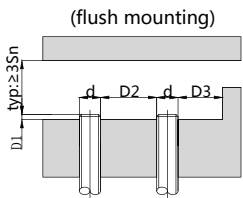
**Dimensioned drawing**



**Model No.**

Sensing range	Sn: 8 mm
NPN N. O	BLB-M1808N-C11U2
NPN N. C	BLB-M1808N-C21U2
PNP N. O	BLB-M1808P-C11U2
PNP N. C	BLB-M1808P-C21U2

**Mounting**



Sn	D1	D2	D3
M1808	≥2.5	≥18	≥18

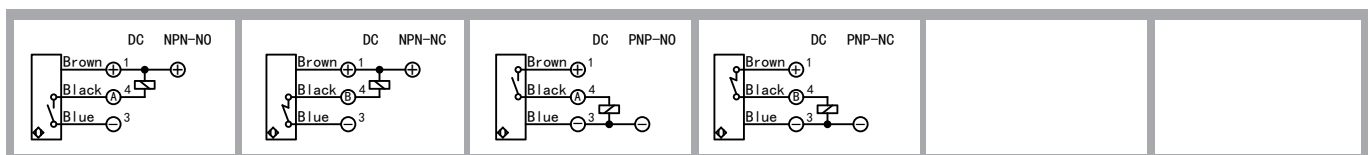
⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	3000Hz
	Voltage drop	≤1.5V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-40...85°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	PBT
<b>Electrical connection</b>	Connectors	PUR cable/2m ; 3*0.35mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**





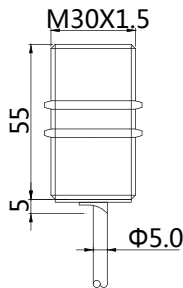


#### Features:

- M30\*1.5 mm , Brass,nickel-plated housing;
- 10mm , flush mountable;
- DC 3-wire , switching output;
- Withstand low-temperatures(-40...85°C);
- Cable

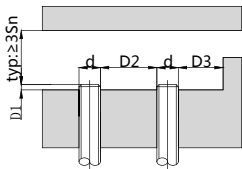


#### Dimensioned drawing



#### Mounting

(flush mounting)



Sn	D1	D2	D3
M3010	≥0	≥30	≥30

⚠ Tightening torque of the fastening screws: <40Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

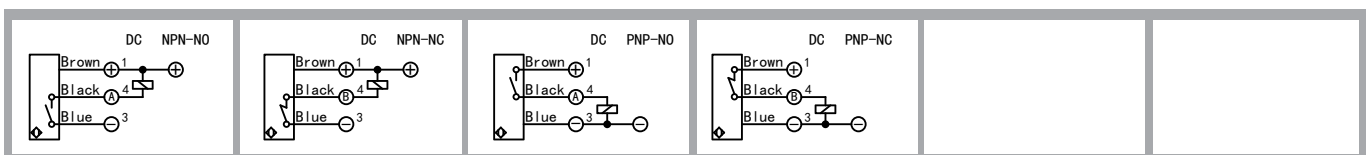
#### Model No.

Sensing range	Sn:10 mm
NPN N. O	BLB-M3010N-C11U2
NPN N. C	BLB-M3010N-C21U2
PNP N. O	BLB-M3010P-C11U2
PNP N. C	BLB-M3010P-C21U2

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	300Hz
	Voltage drop	≤1.5V
	Leakage current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-40...85°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	PBT
<b>Electrical connection</b>	Connectors	PUR cable/2m ; 3*0.35mm²
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



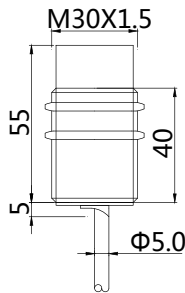


**Features:**

- M30\*1.5 mm , Brass,nickel-plated housing;
- 15mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand low-temperatures(-40...85°C);
- Cable



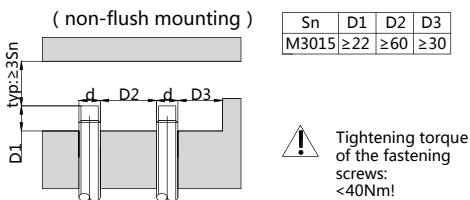
**Dimensioned drawing**



**Model No.**

Sensing range	Sn: 15 mm
NPN N. O	BLN-M3015N-C11U2
NPN N. C	BLN-M3015N-C21U2
PNP N. O	BLN-M3015P-C11U2
PNP N. C	BLN-M3015P-C21U2

**Mounting**

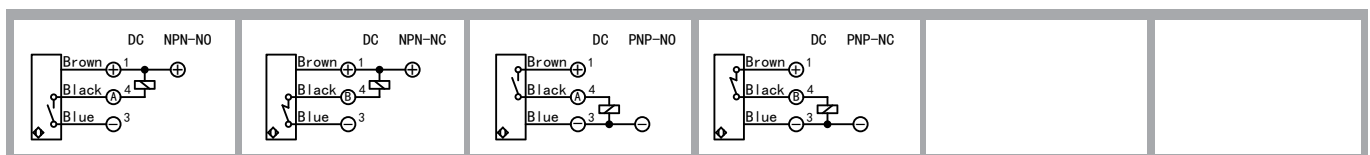


Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	150Hz
	Voltage drop	≤1.5V
	Leakge current	<0.01mA
	Load current	200mA
	No load current	≤10mA(24V)
	Hysteresis	<15%(Sr)
	Repeatability	<1.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
<b>Environment</b>	Ambient temperature	-40...85°C
	Ingress protection	IP67
<b>Mechanical data</b>	Housing material	Brass,nickel-plated
	Face material	PBT
<b>Electrical connection</b>	Connectors	PUR cable/2m ; 3*0.35mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



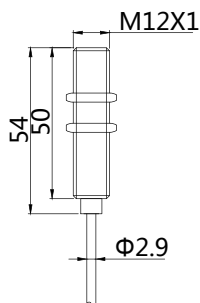


**Features:**

- M12\*1 mm , Metal housing;
- 2mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...120°C);
- Cable



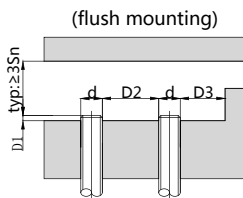
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 2 mm</b>
NPN	<b>BHB-M1202N-V11F2-120</b>
PNP	<b>BHB-M1202P-V11F2-120</b>

**Mounting**



Sn	D1	D2	D3
M1202	≥0	≥12	≥12

⚠ Tightening torque of the fastening screws: <10Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data	Operating voltage	10-30V DC
	Switching frequency	500Hz/120°C
	Voltage drop	≤1.8V
	Leakge current	<0.01mA
	Load current	100mA/24V DC
	No load current	≤10mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...120°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	PTFE cable/2m ; 3*0.18mm <sup>2</sup>
Accessories	Accessories	NO
		(to be ordered separately)

**Wiring**



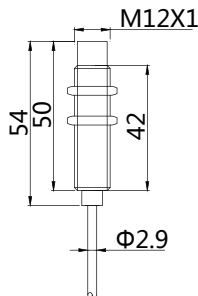


**Features:**

- M12\*1 mm , Metal housing;
- 4mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...120°C);
- Cable



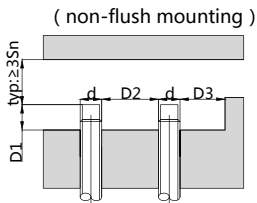
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 4 mm</b>
NPN	<b>BHN-M1204N-V11F2-120</b>
PNP	<b>BHN-M1204P-V11F2-120</b>

**Mounting**



Sn	D1	D2	D3
M1204	≥9	≥24	≥12

⚠ Tightening torque of the fastening screws: <10Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz/120°C
	Voltage drop	≤1.8V
	Leakge current	<0.01mA
	Load current	100mA/24V DC
	No load current	≤10mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...120°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	PTFE cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



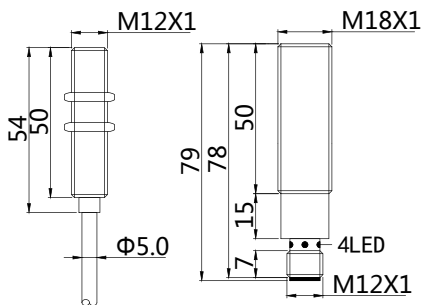


**Features:**

- M12\*1 mm , Metal housing;
- 3mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...150°C);
- Cable & Connector versions



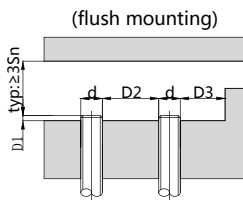
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 3 mm</b>
NPN	<b>BHB-M1203N-V11F3-Z12-150EXT</b>
PNP	<b>BHB-M1203P-V11F3-Z12-150EXT</b>

**Mounting**



Sn	D1	D2	D3
M1203	≥0	≥12	≥12

⚠ Tightening torque of the fastening screws: <10Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data		
Operating voltage	10-30V DC	
Switching frequency	500Hz/150°C	
Voltage drop	≤1.8V	
Leakge current	<0.01mA	
amplifier	External	
No load current	≤25mA	
Hysteresis	3-15%(Sr)	
Repeatability	<3.0%(Sr)	
Temperature drift	<10%(Sr)	
Short circuit protection	Yes	
Overload protection	Yes	
Polarity reversal protection	Yes	
Environment		
Ambient temperature	-25...150°C	
Ingress protection	IP66	
Mechanical data		
Housing material	Stainless steel	
Face material	PTFE	
Electrical connection		
Connectors	PTFE cable/3m ; 3*0.35mm <sup>2</sup>	
	S12 connetor	
Accessories		
Accessories	NO	
	(to be ordered separately)	

**Wiring**



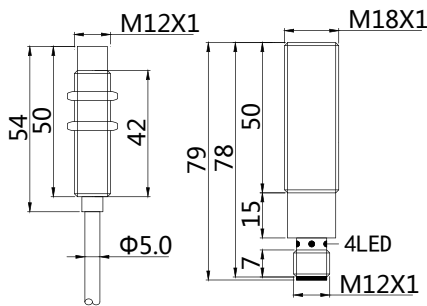


**Features:**

- M12\*1 mm , Metal housing;
- 4mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...150°C);
- Cable & Connector versions



**Dimensioned drawing**

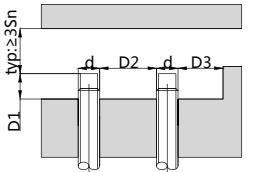


**Model No.**

Sensing range	<b>Sn: 4 mm</b>
NPN	<b>BHN-M1204N-V11F3-Z12-150EXT</b>
PNP	<b>BHN-M1204P-V11F3-Z12-150EXT</b>

**Mounting**

( non-flush mounting )



Sn	D1	D2	D3
M1204	≥9	≥24	≥12

⚠ Tightening torque of the fastening screws: <10Nm!

Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz/150°C
	Voltage drop	≤1.8V
	Leakge current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...150°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	PTFE cable/3m ; 3*0.35mm <sup>2</sup>
		S12 connector
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



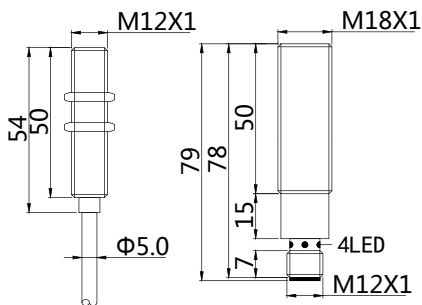


**Features:**

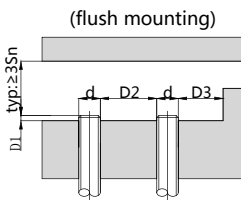
- M12\*1 mm , Metal housing;
- 2mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...220°C);
- Cable & Connector versions



**Dimensioned drawing**



**Mounting**



Sn	D1	D2	D3
M1202	≥0	≥12	≥12

⚠ Tightening torque of the fastening screws: <10Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Model No.**

Sensing range	Sn: 2 mm
NPN	BHB-M1202N-V11A3-Z12-220EXT
PNP	BHB-M1202P-V11A3-Z12-220EXT

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz/220°C
	Voltage drop	≤1.8V
	Leakge current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...220°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connetor
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



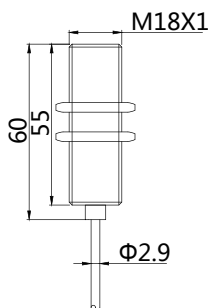


**Features:**

- M18\*1 mm , Metal housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...120°C);
- Cable



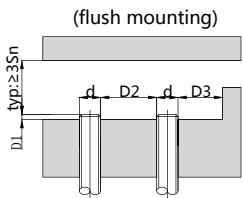
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 5 mm</b>
NPN	<b>BHB-M1805N-V11F2-120</b>
PNP	<b>BHB-M1805P-V11F2-120</b>

**Mounting**



Sn	D1	D2	D3
M1805	≥0	≥18	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data	Operating voltage	10-30V DC
	Switching frequency	800Hz/120°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	Load current	100mA/24V DC
	No load current	≤10mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...120°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	PTFE cable/2m ; 3*0.18mm <sup>2</sup>
Accessories	Accessories	NO
		(to be ordered separately)

**Wiring**





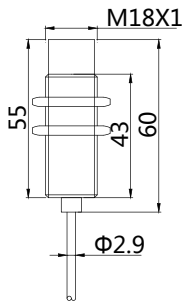


**Features:**

- M18\*1 mm , Metal housing;
- 8mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...120°C);
- Cable



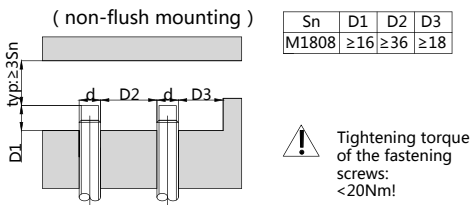
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 8 mm</b>
NPN	<b>BHN-M1808N-V11F2-120</b>
PNP	<b>BHN-M1808P-V11F2-120</b>

**Mounting**



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data	Operating voltage	10-30V DC
	Switching frequency	800Hz/120°C
	Voltage drop	$\leq 1.8\text{V}$
	Leakage current	$< 0.01\text{mA}$
	Load current	100mA/24V DC
	No load current	$\leq 10\text{mA}$
	Hysteresis	3-15%(Sr)
	Repeatability	$< 3.0\%$ (Sr)
	Temperature drift	$< 10\%$ (Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...120°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	PTFE cable/2m ; 3*0.18mm <sup>2</sup>
Accessories	Accessories	NO
		(to be ordered separately)

**Wiring**



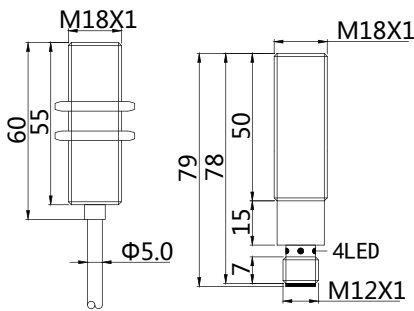


**Features:**

- M18\*1 mm , Metal housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...150°C);
- Cable & Connector versions



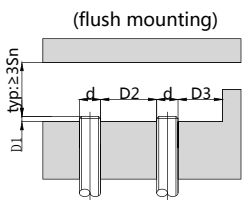
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 5 mm</b>
NPN	<b>BHB-M1805N-V11F3-Z12-150EXT</b>
PNP	<b>BHB-M1805P-V11F3-Z12-150EXT</b>

**Mounting**



Sn	D1	D2	D3
M1805	≥0	≥18	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data	Operating voltage	10-30V DC
	Switching frequency	800Hz/150°C
	Voltage drop	≤1.8V
	Leakge current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...150°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	PTFE cable/3m ; 3*0.35mm <sup>2</sup>
		S12 connector
Accessories	Accessories	NO
		(to be ordered separately)

**Wiring**



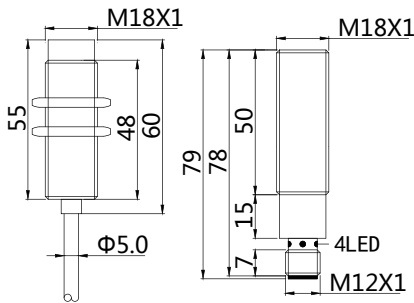


**Features:**

- M18\*1 mm , Metal housing;
- 8mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...150°C);
- Cable & Connector versions



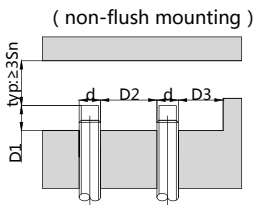
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 8 mm</b>
NPN	<b>BHN-M1808N-V11F3-Z12-150EXT</b>
PNP	<b>BHN-M1808P-V11F3-Z12-150EXT</b>

**Mounting**



Sn	D1	D2	D3
M1808	≥16	≥36	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	800Hz/150°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...150°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	PTFE cable/3m ; 3*0.35mm <sup>2</sup> S12 connector
	Accessories	Accessories NO (to be ordered separately)

**Wiring**



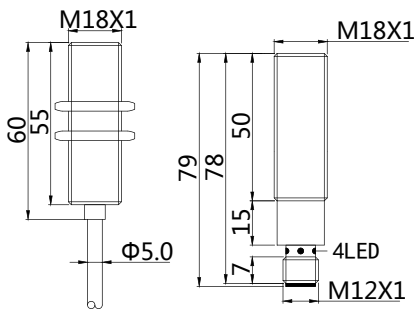


**Features:**

- M18\*1 mm , Metal housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...180°C);
- Cable & Connector versions



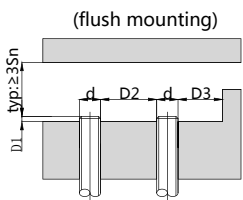
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 5 mm</b>
NPN	<b>BHB-M1805N-V11A3-Z12-180EXT</b>
PNP	<b>BHB-M1805P-V11A3-Z12-180EXT</b>

**Mounting**



Sn	D1	D2	D3
M1805	≥0	≥18	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data	Operating voltage	10-30V DC
	Switching frequency	800Hz/180°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...180°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
Accessories	Accessories	NO
		(to be ordered separately)

**Wiring**



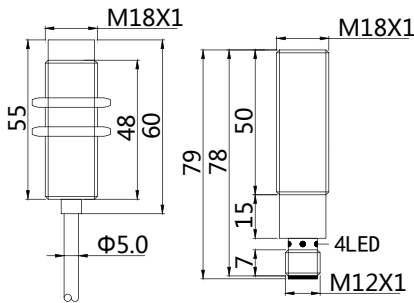


**Features:**

- M18\*1 mm , Metal housing;
- 8mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...180°C);
- Cable & Connector versions



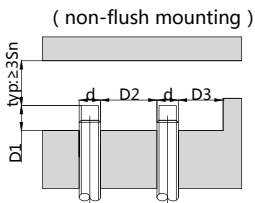
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 8 mm</b>
NPN	<b>BHN-M1808N-V11A3-Z12-180EXT</b>
PNP	<b>BHN-M1808P-V11A3-Z12-180EXT</b>

**Mounting**



Sn	D1	D2	D3
M1808	≥16	≥36	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	800Hz/180°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...180°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



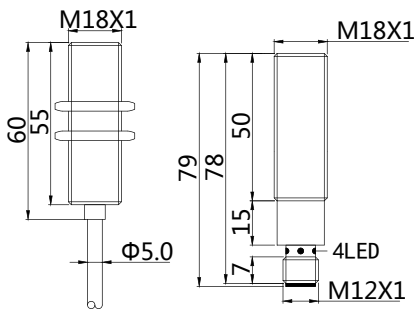


**Features:**

- M18\*1 mm , Metal housing;
- 5mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...230°C);
- Cable & Connector versions



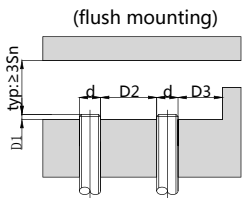
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 5 mm</b>
NPN	<b>BHB-M1805N-V11A3-Z12-230EXT</b>
PNP	<b>BHB-M1805P-V11A3-Z12-230EXT</b>

**Mounting**



Sn	D1	D2	D3
M1805	≥0	≥18	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

Electrical data	Operating voltage	10-30V DC
	Switching frequency	500Hz/230°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...230°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
Accessories	Accessories	NO
		(to be ordered separately)

**Wiring**



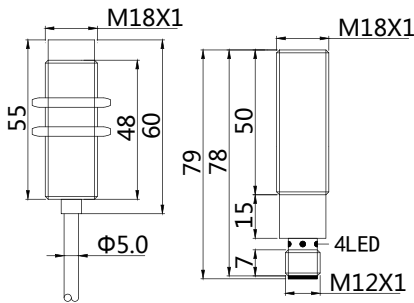


**Features:**

- M18\*1 mm , Metal housing;
- 8mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...230°C);
- Cable & Connector versions



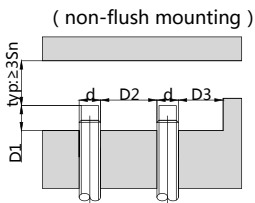
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 8 mm</b>
NPN	<b>BHN-M1808N-V11A3-Z12-230EXT</b>
PNP	<b>BHN-M1808P-V11A3-Z12-230EXT</b>

**Mounting**



Sn	D1	D2	D3
M1808	≥16	≥36	≥18

⚠ Tightening torque of the fastening screws: <20Nm!

Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	500Hz/230°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...230°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup> S12 connector
	<b>Accessories</b>	Accessories NO (to be ordered separately)

**Wiring**



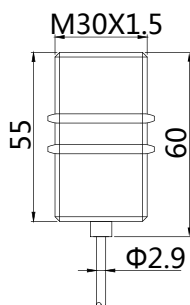


#### Features:

- M30\*1.5 mm , Metal housing;
- 10mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...120°C);
- Cable



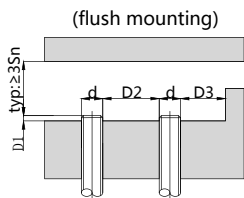
#### Dimensioned drawing



#### Model No.

Sensing range	<b>Sn: 10 mm</b>
NPN	<b>BHB-M3010N-V11F2-120</b>
PNP	<b>BHB-M3010P-V11F2-120</b>

#### Mounting



Sn	D1	D2	D3
M3010	≥0	≥30	≥30

⚠ Tightening torque of the fastening screws: <40Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Technical data

Electrical data	Operating voltage	10-30V DC
	Switching frequency	200Hz/120°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	Load current	150mA/24V DC
	No load current	≤10mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...120°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	PTFE cable/2m ; 3*0.18mm²
Accessories	Accessories	NO
		(to be ordered separately)

#### Wiring





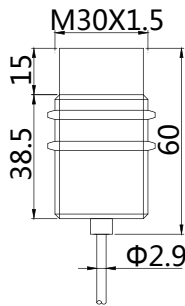


**Features:**

- M30\*1.5 mm , Metal housing;
- 15mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...120°C);
- Cable



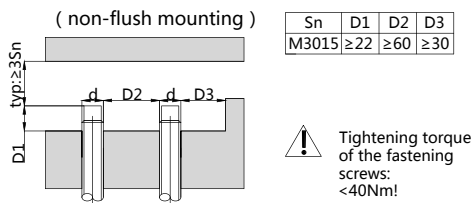
**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 15 mm</b>
NPN	<b>BHN-M3015N-V11F2-120</b>
PNP	<b>BHN-M3015P-V11F2-120</b>

**Mounting**



Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	200Hz/120°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	Load current	150mA/24V DC
	No load current	≤10mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...120°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	PTFE cable/2m ; 3*0.18mm <sup>2</sup>
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

**Wiring**



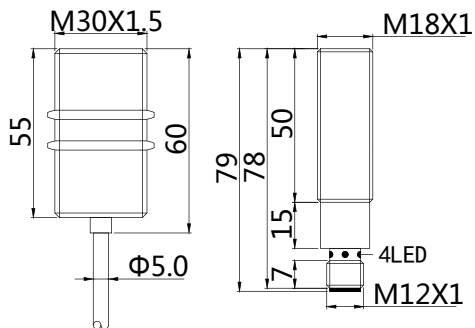


#### Features:

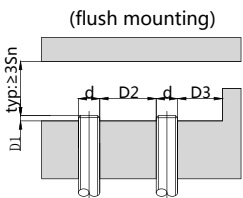
- M30\*1.5 mm , Metal housing;
- 10mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...150°C);
- Cable & Connector versions



#### Dimensioned drawing



#### Mounting



Sn	D1	D2	D3
M3010	≥0	≥30	≥30

⚠ Tightening torque of the fastening screws: <40Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 10 mm
NPN	BHB-M3010N-V11F3-Z12-150EXT
PNP	BHB-M3010P-V11F3-Z12-150EXT

#### Technical data

Electrical data	Operating voltage	10-30V DC
	Switching frequency	200Hz/150°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...150°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	PTFE cable/3m ; 3*0.35mm²
		S12 connector
Accessories	Accessories	NO
		(to be ordered separately)

#### Wiring



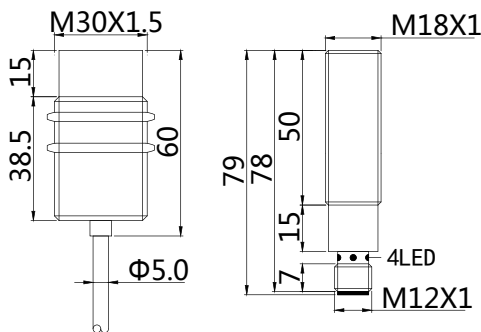


#### Features:

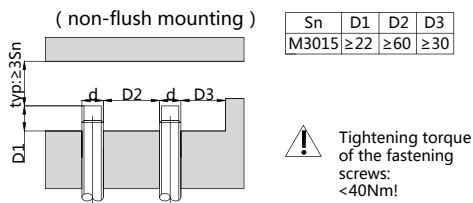
- M30\*1.5 mm , Metal housing;
- 15mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...150°C);
- Cable & Connector versions



#### Dimensioned drawing



#### Mounting



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm
NPN	BHN-M3015N-V11F3-Z12-150EXT
PNP	BHN-M3015P-V11F3-Z12-150EXT

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	200Hz/150°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...150°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	PTFE cable/3m ; 3*0.35mm <sup>2</sup>
		S12 connector
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



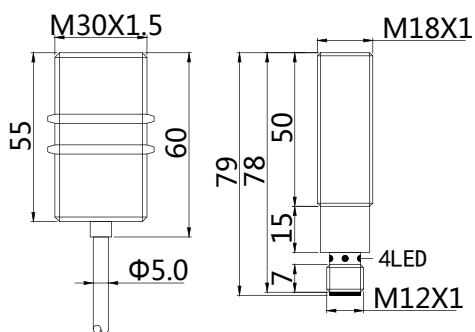


#### Features:

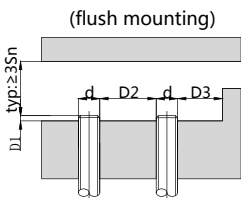
- M30\*1.5 mm , Metal housing;
- 10mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...180°C);
- Cable & Connector versions



#### Dimensioned drawing



#### Mounting



Sn	D1	D2	D3
M3010	≥0	≥30	≥30

⚠ Tightening torque of the fastening screws: <40Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 10 mm
NPN	BHB-M3010N-V11A3-Z12-180EXT
PNP	BHB-M3010P-V11A3-Z12-180EXT

#### Technical data

Electrical data	Operating voltage	10-30V DC
	Switching frequency	200Hz/180°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...180°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
Accessories	Accessories	NO
		(to be ordered separately)

#### Wiring



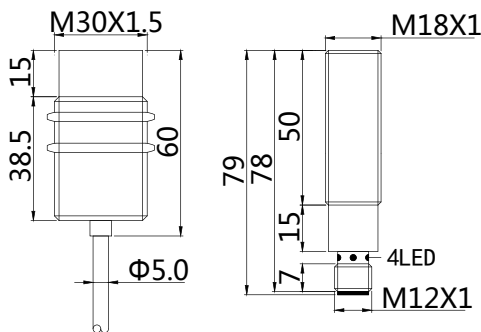


#### Features:

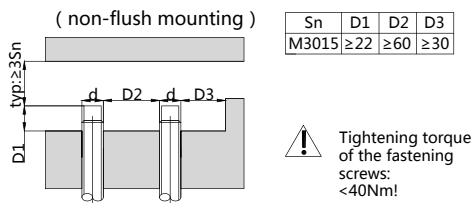
- M30\*1.5 mm , Metal housing;
- 15mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...180°C);
- Cable & Connector versions



#### Dimensioned drawing



#### Mounting



Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm
NPN	BHN-M3015N-V11A3-Z12-180EXT
PNP	BHN-M3015P-V11A3-Z12-180EXT

#### Technical data

Electrical data	Operating voltage	10-30V DC
	Switching frequency	200Hz/180°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment		
	Ambient temperature	-25...180°C
	Ingress protection	IP66
Mechanical data		
	Housing material	Stainless steel
	Face material	PTFE
Electrical connection		
	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
Accessories		
	Accessories	NO
		(to be ordered separately)

#### Wiring



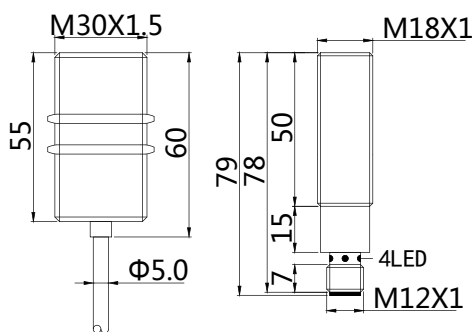


#### Features:

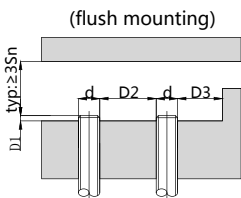
- M30\*1.5 mm , Metal housing;
- 10mm , flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...230°C);
- Cable & Connector versions



#### Dimensioned drawing



#### Mounting



Sn	D1	D2	D3
M3010	≥0	≥30	≥30

⚠ Tightening torque of the fastening screws: <40Nm!

Correction Factor	
Nav-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 10 mm
NPN	BHB-M3010N-V11A3-Z12-230EXT
PNP	BHB-M3010P-V11A3-Z12-230EXT

#### Technical data

Electrical data	Operating voltage	10-30V DC
	Switching frequency	200Hz/230°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
	Overload protection	Yes
	Polarity reversal protection	Yes
Environment	Ambient temperature	-25...230°C
	Ingress protection	IP66
Mechanical data	Housing material	Stainless steel
	Face material	PTFE
Electrical connection	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
Accessories	Accessories	NO
		(to be ordered separately)

#### Wiring



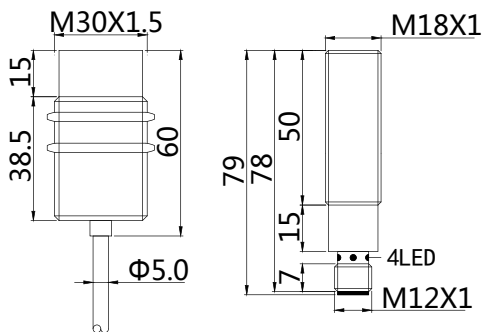


#### Features:

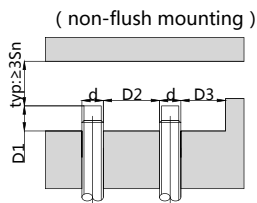
- M30\*1.5 mm , Metal housing;
- 15mm , non-flush mountable;
- DC 3-wire , switching output;
- Withstand High-temperatures(-25...230°C);
- Cable & Connector versions



#### Dimensioned drawing



#### Mounting



Sn	D1	D2	D3
M3015	≥22	≥60	≥30

⚠ Tightening torque of the fastening screws: <40Nm!

Correction Factor	
Non-ferrous metal	Factor
Fe360	1
Aluminum	0.35~0.45
Brass	0.35~0.5
Copper	0.25~0.45
Stainless steel	0.6~1.0
Cast Iron	0.93~1.05
Nickel	0.65~0.75

#### Model No.

Sensing range	Sn: 15 mm
NPN	BHN-M3015N-V11A3-Z12-230EXT
PNP	BHN-M3015P-V11A3-Z12-230EXT

#### Technical data

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	200Hz/230°C
	Voltage drop	≤1.8V
	Leakage current	<0.01mA
	amplifier	External
	No load current	≤25mA
	Hysteresis	3-15%(Sr)
	Repeatability	<3.0%(Sr)
	Temperature drift	<10%(Sr)
	Short circuit protection	Yes
Overload protection	Yes	
Polarity reversal protection	Yes	
<b>Environment</b>	Ambient temperature	-25...230°C
	Ingress protection	IP66
<b>Mechanical data</b>	Housing material	Stainless steel
	Face material	PTFE
<b>Electrical connection</b>	Connectors	KFF46PH cable/3m ; 3*0.26mm <sup>2</sup>
		S12 connector
<b>Accessories</b>	Accessories	NO
		(to be ordered separately)

#### Wiring



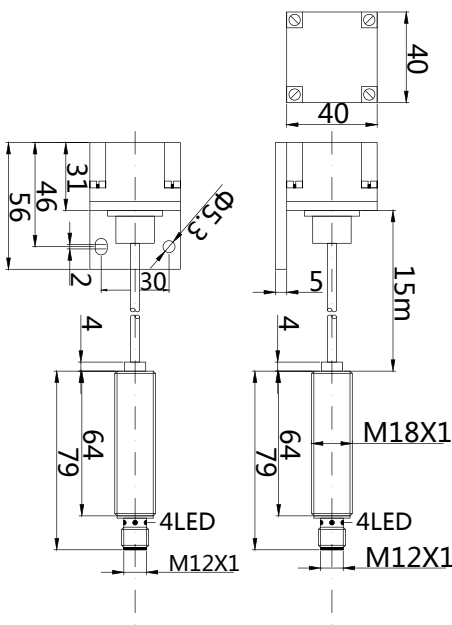


**Features :**

- Stainless steel housing, 25mm, flush mountable;
- The sensor element' s temperature range 0...250°C;
- Between sensor and amplifier' s 3m cable, Metallic shield;
- Applicable to conveying chain;
- Move minimum bending radius of 15cm



**Dimensioned drawing**



**Model No.**

Sensing range	<b>Sn: 25 mm</b>
PNP N. O	<b>BHN-Q4025P-F11A3-Z12-250EXT</b>
PNP N. C	<b>BHN-Q4025P-F21A3-Z12-250EXT</b>

**Technical data**

<b>Electrical data</b>	Operating voltage	10-30V DC
	Switching frequency	0...20Hz
	Hysteresis	0.3...5 typical value 2%
	Voltage drop	≤3V
	Load current	0...200mA
	No load current	≤25mA
<b>Environment</b>	Reliable operating range	0...20mm
	Ambient temperature	0...250°C ( 273...523K )
	Ingress protection	Amplifier IP67, Sensor IP40
<b>Mechanical data</b>	Short-circuit protection	Pulse
	Switching operating indicator	Yellow LED indicator light
	Attenuation coefficient $r_{AI}$	0.5
	Attenuation coefficient $r_{CU}$	0.5
	Attenuation coefficient $r_{V2A}$	0.6...1
	Setting angle	AI
	Housing material	Stainless steel ( amplifier' s housing ) , PTFE/AI/V2A
	Face material	PTFE
<b>Electrical connection</b>	connectors	KFF46PH cable/3m , 3*0.26mm S12 connector

**Wiring**

