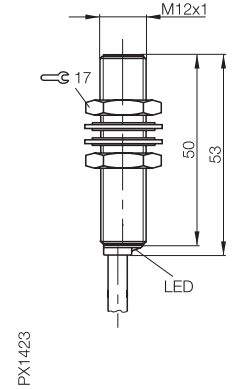
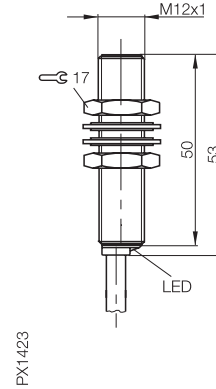
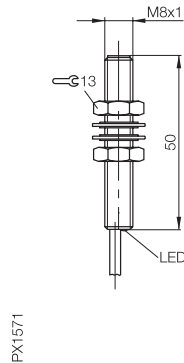
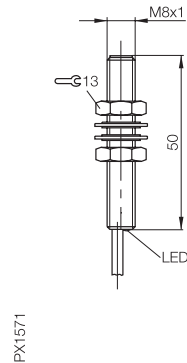


Inductive Proximity switches  
Global Version

Housing size	M8 x 1	M8 x 1	M12 x 1	M12 x 1
Mounting type	Shield A	ShieldB1	Shield A	ShieldB1
Rated operating distance(Sn)	1.5mm	2mm	2mm	4mm
Assured operating distance(Sa)	0...1.2mm	0...1.6mm	0...1.6mm	0...3.2mm



Type number		PNP	N.O. N.C.	Type number		NPN	N.O. N.C.		
BES M08MI-PSC15B				BES M08MI-PSC20B					
BES M08MI-POC15B				BES M12MI-PSC20B					
				BES M12MI-POC20B					
BES M08MI-NSC15B				BES M08MI-NSC20B					
				BES M12MI-NSC20B					
BES M12MI-PSC40B				BES M12MI-PSC40B					
BES M12MI-POC40B				BES M12MI-POC40B					
BES M12MI-NSC40B				BES M12MI-NSC40B					
BES M12MI-NSC40B				BES M12MI-NSC40B					
Rated operational voltage(Ue)	24V DC		24V DC		24V DC		24V DC		
Supply voltage(U <sub>B</sub> )	12...30V DC		12...30V DC		12...30V DC		12...30V DC		
Voltage drop(U <sub>d</sub> )	=<2.5V		=<2.5V		=<2.5V		=<2.5V		
Rated operational current(I <sub>a</sub> )	100mA		200mA		200mA		200mA		
No-load supply current(I <sub>o</sub> )	PNP=<10mA,NPN=<18mA		PNP=<10mA,NPN=<18mA		=<15mA		=<15mA		
Off-state current(I <sub>r</sub> )	=<0.08mA		=<0.08mA		=<0.02mA		=<0.02mA		
Circuit protection	Polarity, Short circuit		Polarity, Short circuit		Polarity, Short circuit		Polarity, Short circuit		
Ambient temperature range(T <sub>a</sub> )	-25...+70degrees C		-25...+70degrees C		-25...+70degrees C		-25...+70degrees C		
Frequency of operation(f)	1000Hz		700Hz		1200Hz		300Hz		
Function indication	Yes		Yes		Yes		Yes		
Protection class per IEC60529	IP67		IP67		IP68 per BWN pr.20		IP68 per BWN pr.20		
Material	Housing	Nickel plated brass		Nickel plated brass		Nickel plated brass		Nickel plated brass	
	Active surface	PA12		PBT		PA12		LCP	
Connection	Cable <sup>1)</sup>		Cable <sup>1)</sup>		Cable <sup>1)</sup>		Cable <sup>1)</sup>		
Cable	Outer sheath	PVC		PVC		PVC		PVC	
	Diameter/core	φ 3mm / 3 x 0.14mm <sup>2</sup>		φ 3mm / 3 x 0.14mm <sup>2</sup>		φ 5mm / 3 x 0.34mm <sup>2</sup>		φ 5mm / 3 x 0.34mm <sup>2</sup>	
	Length	2m		2m		3m		3m	
Remarks									

\*In ordering, please specify cable specification (outer sheath and length) as following example.

Type number – Outer sheath Cable length

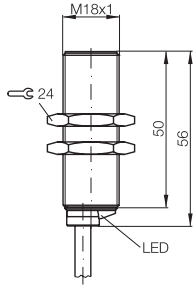
CableOuter sheath PVC = BV  
PU = BP

Cable length 2m = 02

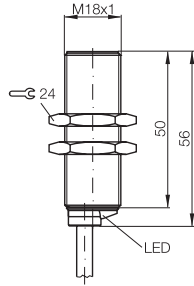
Ordering example (PVC cable 2m)  
BES M08MI-PSC15B-BP02

1)Connector type is also available.

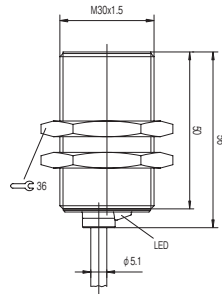
M18 x 1	M18 x 1	M30 x 1.5		
Shield A	ShieldB1	Shield A		
5mm	8mm	10mm		
0...4.1mm	0...6.5mm	0...8.1mm		



PX0268



PX0268



	G		G		G		
BES M18MI-PSC50B	BES M18MI-PSC80B	BES M30MI-PSC10B					
BES M18MI-POC50B		BES M30MI-POC10B					
BES M18MI-NSC50B	BES M18MI-NSC80B	BES M30MI-NSC10B					
		BES M30MI-NOC10B					
24V DC	24V DC	24V DC					
12...30V DC	12...30V DC	12...30V DC					
=<2.5V	=<2.5V	=<2.5V					
200mA	200mA	200mA					
=<15mA	=<15mA	=<10mA					
=<0.02mA	=<0.02mA	=<0.02mA					
Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit					
-25...+70degrees C	-25...+70degrees C	-25...+70degrees C					
700Hz	150Hz	400Hz					
Yes	Yes	Yes					
IP68 per BWN pr.20	IP68 per BWN pr.20	IP68 per BWN pr.20					
Nickel plated brass	Nickel plated brass	Nickel plated brass					
PA12	PA12	PA12					
Cable <sup>1)</sup>	Cable <sup>1)</sup>	Cable <sup>1)</sup>					
PVC	PVC	PVC					
φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>					
3m	3m	3m					

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

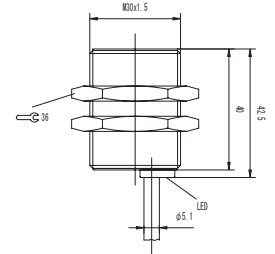
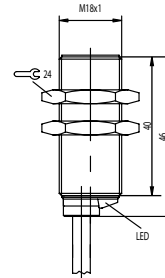
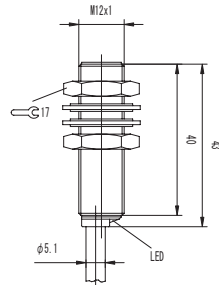
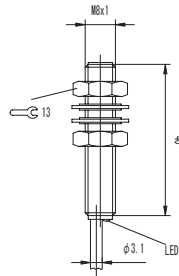
Steel face

Temperature  
rated

Pressure  
rated

ATEX

Housing size	M8 x 1	M12 x 1	M18 x 1	M30 x 1.5
Mounting type	ShieldB1	ShieldB1	ShieldB1	ShieldB1
Rated operating distance(Sn)	2mm	3mm	7mm	15mm
Assured operating distance(Sa)	0...1.6mm	0...2.4mm	0...5.7mm	0...12.2mm



Type number	N.O.	BES M08MG-GSC20B-BP	BES M12MG-GSC30B-BP	BES M18MG-GSC70B-BP	BES M30MF-GSC15B-BP
Rated operational voltage(Ue)		24V DC	24V DC	24V DC	24V DC
Supply voltage(U <sub>B</sub> )		10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(U <sub>d</sub> )		=<5V	=<4V	=<4V	=<4V
Rated operational current(I <sub>a</sub> )		5...100mA	5...100mA	5...100mA	5...100mA
Off-state current(I <sub>r</sub> )		=<0.6mA	=<0.6mA	=<0.6mA	=<0.6mA
Circuit protection		Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(T <sub>a</sub> )		-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)		1500Hz	1300Hz	600Hz	400Hz
Function indication		Yes	Yes	Yes	Yes
Protection class per IEC60529		IP67	IP67	IP67	IP67
Material	Housing	Nickel-free plated brass	Nickel-free plated brass	Nickel-free plated brass	Nickel-free plated brass
	Active surface	PBT	PA12	PBT	PA12
Connection		Cable <sup>2)</sup>	Cable <sup>2)</sup>	Cable <sup>2)</sup>	Cable <sup>2)</sup>
Cable	Outer sheath	PU	PU	PU	PU
	Diameter/core	φ 3mm / 2 x 0.14mm <sup>2</sup>	φ 5mm / 2 x 0.34mm <sup>2</sup>	φ 5mm / 2 x 0.34mm <sup>2</sup>	φ 5mm / 2 x 0.34mm <sup>2</sup>
	Length	3m,5m	3m,5m	3m,5m	3m,5m
Remarks					

\*In ordering, please specify cable specification (outer sheath and length) as following example.

Type number – Outer sheath Cable length

CableOuter sheath PU = BP

Cable length 3m = 03

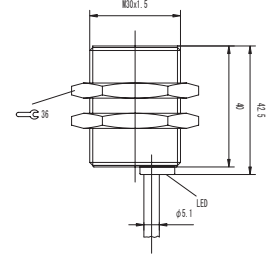
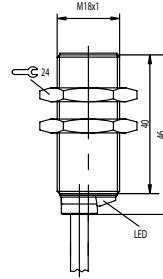
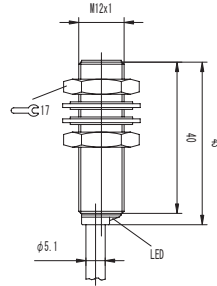
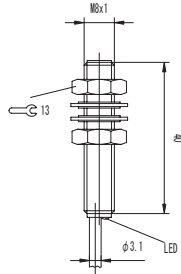
Ordering example (PVC cable 3m)  
BES M08MG-GSC20B-BP03

2)Cable with connector type are also available.

Inductive Proximity switches  
Global Version

DC 2-wire / Non-polarized/Tubular  
M8 / M 12 / M18/M30  
Sn 2/3/7/15mm

Housing size	M8 x 1	M12 x 1	M18 x 1	M30 x 1.5
Mounting type	ShieldB1	ShieldB1	ShieldB1	ShieldB1
Rated operating distance	2mm	3mm	7mm	15mm
Assured operating distance	0...1.6mm	0...2.4mm	0...5.7mm	0...12.2mm



Type number	N.O.		G	
BES M08MG-USC20B-BV	G		G	
BES M12MG-USC30B-BV	G		G	
BES M18MG-USC70B-BV	G		G	
BES M30MF-USC15B-BP	G		G	
Rated operational voltage(Ue)	24V DC	24V DC	24V DC	24V DC
Supply voltage(Ua)	10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(Ud)	=<5V	=<5V	=<5V	=<5V
Rated operational current(Ia)	5...100mA	5...100mA	5...100mA	5...100mA
Off-state current(Ir)	=<0.6mA	=<0.6mA	=<0.6mA	=<0.6mA
Circuit protection	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(Ta)	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)	1500Hz	1300Hz	600Hz	400Hz
Function indication	Yes	Yes	Yes	Yes
Protection class per IEC60529	IP67	IP67	IP67	IP67
Material	Housing: Nickel-free plated brass	Housing: Nickel-free plated brass	Housing: Nickel-free plated brass	Housing: Nickel-free plated brass
	Active surface: PBT	Active surface: PA12	Active surface: PBT	Active surface: PA12
Connection	Cable <sup>1)</sup>	Cable <sup>1)</sup>	Cable <sup>1)</sup>	Cable <sup>1)</sup>
Cable	Outer sheath: PVC	Outer sheath: PVC	Outer sheath: PVC	Outer sheath: PU
	Diameter/core: $\phi$ 3mm / 2 x 0.14mm <sup>2</sup>	Diameter/core: $\phi$ 5mm / 2 x 0.34mm <sup>2</sup>	Diameter/core: $\phi$ 5mm / 2 x 0.34mm <sup>2</sup>	Diameter/core: $\phi$ 5mm / 2 x 0.34mm <sup>2</sup>
	Length: 3m	Length: 3m	Length: 3m	Length: 3m
Remarks				

Global Version

Standard

Extended distance

Aluminum chip non-detectable

Multi metal

Weld immune

Weld splatter resistance

Steel face

Temperature rated

Pressure rated

ATEX

\*In ordering, please specify cable specification (outer sheath and length) as following example.

Type number — Outer sheath — Cable length

Cable Outer sheath PVC = BV

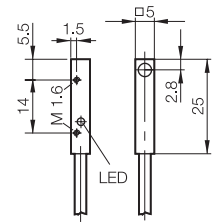
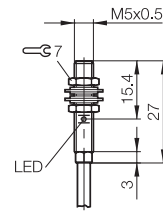
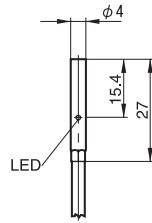
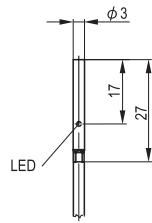
Cable length 3m = 03

Ordering example (PVC cable 3m)  
BES M08MG-USC20B-BV03

1)Connector type is also available.

## Inductive Proximity switches Standard sensors

Housing size	φ 3	φ 4	M5 x 0.5	□ 5
Mounting type	ShieldB1	ShieldB1	ShieldB1	Shield A
Rated operating distance(Sn)	1mm	1.5mm	1.5mm	0.8mm
Assured operating distance(Sa)	0...0.8mm	0...1.2mm	0...1.2mm	0...0.6mm



PX0706

PX0707a

PX0712

			Ⓒ	Ⓒ	Ⓒ	Ⓒ
Type number	PNP	N.O. N.C.	BES516-3044-G-E4-C-PU	BES516-3007-G-E4-C-PU BES516-3017-G-E4-C-PU	BES516-3005-G-E4-C-PU BES516-3022-G-E4-C-PU	BES516-3040-I02-C-PU BES516-3042-I02-C-PU
Type number	NPN	N.O. N.C.	BES516-3046-G-E4-L-PU	BES516-3008-G-E4-C-PU BES516-3018-G-E4-C-PU	BES516-3006-G-E4-C-PU BES516-3023-G-E4-C-PU	BES516-3041-I02-C-PU
Rated operational voltage(Ue)			24V DC	12...24V DC	12...24V DC	12...24V DC
Supply voltage(U <sub>B</sub> )			10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(U <sub>d</sub> )			PNP=<2.5V,NPN=<1.5V	=<3V	=<3V	=<1V
Rated operational current(I <sub>a</sub> )			100mA	100mA	100mA	150mA
No-load supply current(I <sub>o</sub> )			=<12mA	=<12mA	=<12mA	=<10mA
Off-state current(I <sub>r</sub> )			=<0.08mA	=<0.08mA	=<0.08mA	=<0.05mA
Circuit protection			Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(T <sub>a</sub> )			PNP:-25...+70degrees	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			2000Hz	1800Hz	1800Hz	1000Hz
Function indication			Yes	Yes	Yes	Yes
Protection class per IEC60529			IP67	IP67	IP67	IP65
Material	Housing		Stainless steel	Stainless steel	Stainless steel	Al
	Active surface		POM	POM	POM	POM
Connection			Cable	Cable <sup>3)</sup>	Cable <sup>3)</sup>	Cable <sup>1)</sup>
Cable	Outer sheath		PU	PU	PU	PU
	Diameter/core		φ 2.3mm / 3 x 0.09mm <sup>2</sup>	φ 3mm / 3 x 0.14mm <sup>2</sup>	φ 3mm / 3 x 0.14mm <sup>2</sup>	φ 3mm / 3 x 0.14mm <sup>2</sup>
	Length		2m,5m	2m,5m	2m,5m	2m,5m
Remarks						

\*In ordering, please specify cable specification (outer sheath and length) as following example.

Type number — Outer sheath Cable length

CableOuter sheath PVC = blank  
PU = PU

Cable length 3m = 03

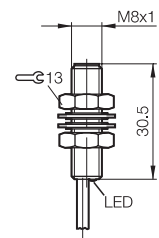
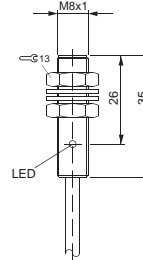
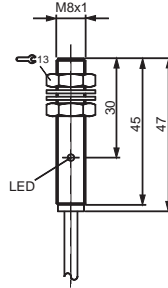
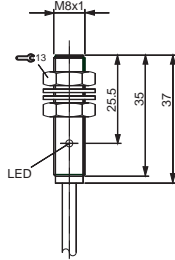
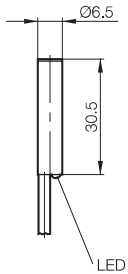
Ordering example (PVC cable 3m)  
BES516-3007-G-E4-C-PU03

1 Connector type is also available.

3 Connector type and cable with connector type are also available.

DC 3-wire  
 $\phi$  3/  $\phi$  4/H5/  $\square$  5  
/  $\phi$  6.5/M8  
Sn 1/1.5/2mm

$\phi$ 6.5	M8 x 1	M8 x 1	M8 x 1	M8 x 1
ShieldB1	Shield A	Shield A	Shield A	ShieldB1
2mm	1.5mm	1.5mm	2mm	2mm
0...1.2mm	0...1.2mm	0...1.2mm	0...1.6mm	0...1.6mm



PX0134

G	J	J	J	G
BES516-371-G-E4-C	BES516-324-E3R	BES516-324-E5R		BES516-324-G-E4-C
BES516-3021-G-E4-C	BES516-377-E3R	BES516-377-E5R		BES516-377-G-E4-C
BES516-372-G-E4-C	BES516-343-E3R	BES516-343-E5R	BL3-0802N	BES516-343-G-E4-C
	BES516-378-E3R	BES516-378-E5R		BES516-378-G-E4-C
12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC
10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC
=<2.5V	=<1.5V	=<1.5V	=<2.5V	=<2.5V
200mA	200mA	200mA	200mA	200mA
=<25mA	=<13mA	=<13mA	=<20mA	=<25mA
=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA
Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
1000Hz	1000Hz	1000Hz	1000Hz	1000Hz
Yes	Yes	Yes	Yes	Yes
IP67	IP67	IP67	IP67	IP67
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	Poly Propylene	Poly Propylene	Poly Propylene	PBT
Cable	Cable	Cable	Cable	Cable <sup>3)</sup>
PVC	PVC	PVC	PVC	PVC
$\phi$ 3mm / 3 x 0.14mm <sup>2</sup>	$\phi$ 4mm / 3 x 0.14mm <sup>2</sup>	$\phi$ 4mm / 3 x 0.14mm <sup>2</sup>	$\phi$ 4mm / 3 x 0.14mm <sup>2</sup>	$\phi$ 4mm / 3 x 0.14mm <sup>2</sup>
2m	2m,3m,5m	2m,3m,5m	2m,3m,5m	2m

Global Version

Standard

Extended distance

Aluminum chip non-detectable

Multi metal

Weld immune

Weld splatter resistance

Steel face

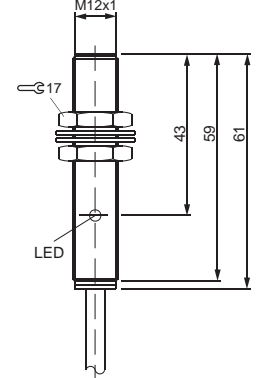
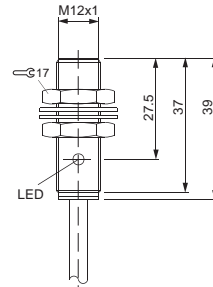
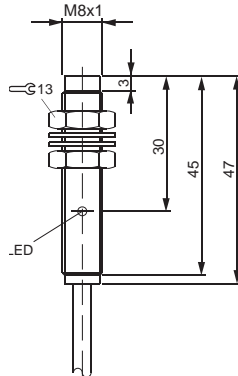
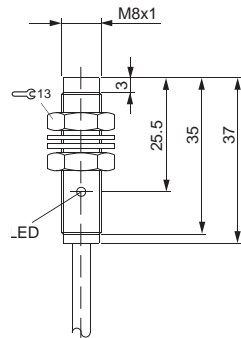
Temperature rated

Pressure rated

ATEX

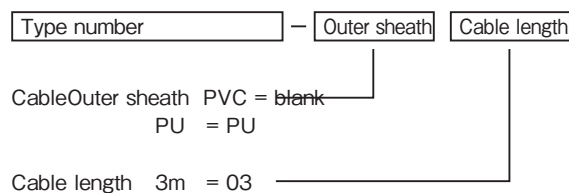
## Inductive Proximity switches Standard sensors

Housing size	M8 x 1	M8 x 1	M12 x 1	M12 x 1
Mounting type	Non-shield A	Non-shield A	Shield A	Shield A
Rated operating distance(Sn)	2.5mm	2.5mm	2mm	2mm
Assured operating distance(Sa)	0...2mm	0...2mm	0...1.6mm	0...1.6mm



Type number			PNP			
	N.O.	BES516-383-E3R	BES516-383-E3R	BES516-383-E5R	BES516-325-E3R	BES516-325-E5R
	N.C.				BES516-370-E3R	BES516-370-E5R
	N.O.+N.C.					
Type number			NPN			
	N.O.	BES516-384-E3R	BES516-384-E3R	BES516-384-E5R	BES516-329-E3R	BES516-329-E5R
	N.C.				BES516-375-E3R	BES516-375-E5R
	N.O.+N.C.					
Rated operational voltage(Ue)			12...24V DC	12...24V DC	12...24V DC	12...24V DC
Supply voltage(U <sub>B</sub> )			10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(U <sub>d</sub> )			≤<1.5V	≤<1.5V	≤<1.5V	≤<3.5V
Rated operational current(I <sub>a</sub> )			200mA	200mA	200mA	130mA
No-load supply current(I <sub>o</sub> )			≤<13mA	≤<13mA	≤<13mA	≤<20mA
Off-state current(I <sub>r</sub> )			≤<0.08mA	≤<0.08mA	≤<0.08mA	≤<0.08mA
Circuit protection			Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(T <sub>a</sub> )			-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			1000Hz	1000Hz	1000Hz	1000Hz
Function indication			Yes	Yes	Yes	Yes
Protection class per IEC60529			IP67	IP67	IP67	IP67
Material	Housing	Stainless steel	Stainless steel	Stainless steel	Nickel plated brass	Nickel plated brass
	Active surface	Poly Propylene	Poly Propylene	Poly Propylene	Poly Propylene	Poly Propylene
Connection			Cable	Cable	Cable	Cable
Cable	Outer sheath	PVC	PVC	PVC	PVC	PVC
	Diameter/core	φ 4mm / 3 x 0.14mm <sup>2</sup>	φ 4mm / 3 x 0.14mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>
	Length	2m,3m,5m	2m,3m,5m	2m,3m,5m	2m,3m,5m	2m,3m,5m
Remarks						

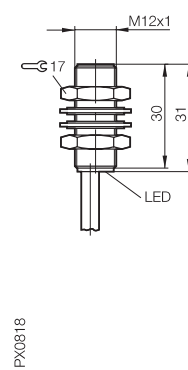
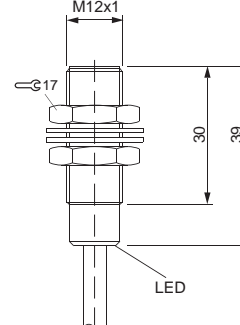
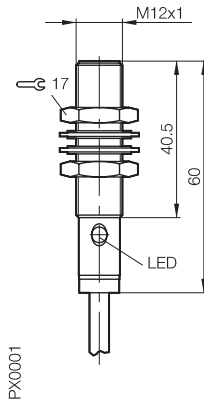
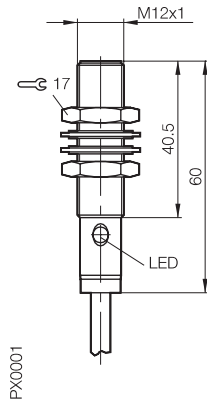
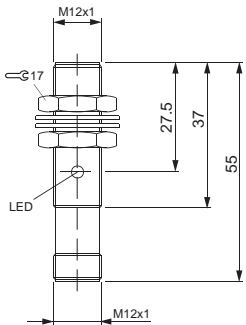
\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 3m)  
BES516-383-E3R-03

DC 3-wire/Tubular  
M8/M12  
Sn 2/2.5/4mm

M12 x 1 Shield A 2mm 0...1.6mm	M12 x 1 Shield A 2mm 0...1.6mm	M12 x 1 Shield A 2mm 0...1.6mm	M12 x 1 Shield A 4mm <sup>(*)</sup> (3.5mm) 0...3.2mm <sup>(*)</sup> (0...2.8mm)	M12 x 1 ShieldB1 4mm 0...3.2mm
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(J)		(G)		(G)		(J)		(G)	
BC5-1202P			BES516-325-BO-C				BES516-325-G-E4Y		
BC5-1202P1		BES516-113-BO-C	BES516-370-BO-C				BES516-370-G-E4Y		
BC5-1202N			BES516-329-BO-C		BL3-1204N		BES516-329-G-E4Y		
BC5-1202N1		BES516-118-BO-C	BES516-375-BO-C				BES516-375-G-E4Y		
12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC
10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC
=<1.5V	=<2.5V	=<1.5V	=<1.5V	=<2.5V	=<1.5V	=<2.5V	=<3.5V	=<1.5V	=<3.5V
200mA	200mA	200mA	200mA	200mA	200mA	200mA	130mA	200mA	130mA
=<13mA	=<32mA	=<8mA	=<13mA	=<8mA	=<13mA	=<13mA	=<25mA	=<13mA	=<25mA
=<0.08mA	=<0.08mA	=<0.01mA	=<0.08mA	=<0.01mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA
Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
300Hz	800Hz	3000Hz	3000Hz	400Hz	400Hz	400Hz	PNP:600Hz,NPN:400Hz	300Hz	PNP:600Hz,NPN:400Hz
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IP67	IP68 per BWN pr.20	IP68 per BWN pr.20	IP68 per BWN pr.20	IP67	IP67	IP67	IP68 per BWN pr.20	IP67	IP68 per BWN pr.20
Nickel plated brass	Stainless steel	Stainless steel	Stainless steel	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass
Poly Propylene	PA12	PA12	PA12	Poly Propylene	Poly Propylene	Poly Propylene	PA12	Poly Propylene	PA12
connector/M12	Cable	Cable	Cable	Cable	Cable	Cable	Cable <sup>1)</sup>	Cable	Cable <sup>1)</sup>
	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC
	φ 5mm / 4 x 0.25mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>
	3m,5m	3m	3m	2m,3m,5m	2m,3m,5m	2m,3m,5m	3m	3m	3m
Pin assignment of NO & NC 1 = +, 3 = -, 4 = output				(*)The distance in flush mounted. The distance in ( ) is non-flush.					

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

Temperature  
rated

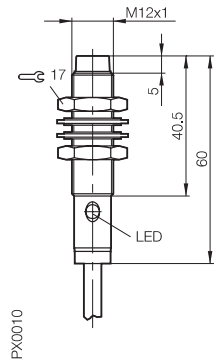
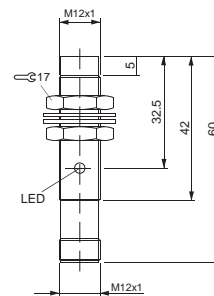
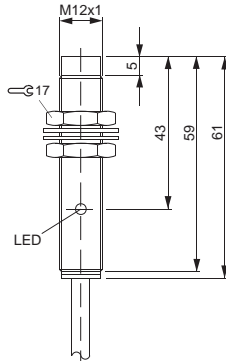
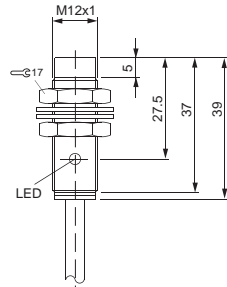
Pressure  
rated

ATEX



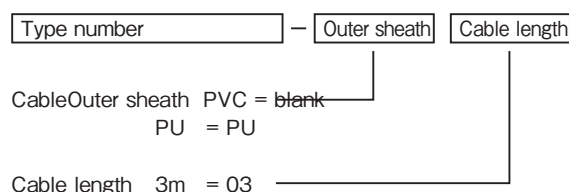
## Inductive Proximity switches Standard sensors

Housing size	M12 x 1	M12 x 1	M12 x 1	M12 x 1
Mounting type	Non-shield A	Non-shield A	Non-shield A	Non-shield A
Rated operating distance(Sn)	4mm	4mm	4mm	4mm
Assured operating distance(Sa)	0...3.2mm	0...3.2mm	0...3.2mm	0...3.2mm



			J	J	J	G
Type number	PNP	N.O. N.C. N.O.+N.C.	BES516-356-E3R	BES516-356-E5R	BC5-1204P	BES516-356-BO-C BES516-3019-BO-C
Type number	NPN	N.O. N.C. N.O.+N.C.	BES516-357-E3R	BES516-357-E5R	BC5-1204N	BES516-357-BO-C BES516-3030-BO-C
Rated operational voltage(Ue)			12...24V DC	12...24V DC	12...24V DC	24V DC
Supply voltage(U <sub>B</sub> )			10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(U <sub>d</sub> )			≤1.5V	≤3.5V	≤3.5V	≤1.5V
Rated operational current(I <sub>a</sub> )			200mA	130mA	200mA	200mA
No-load supply current(I <sub>o</sub> )			≤13mA	≤20mA	≤13/2mA	≤8mA
Off-state current(I <sub>r</sub> )			≤0.08mA	≤0.08mA	≤0.08mA	≤0.01mA
Circuit protection			Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(T <sub>a</sub> )			-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			400Hz	400Hz	400Hz	1500Hz
Function indication			Yes	Yes	Yes	Yes
Protection class per IEC60529			IP67	IP67	IP67	IP68 per BWN pr.20
Material	Housing		Nickel plated brass	Nickel plated brass	Nickel plated brass	Stainless steel
	Active surface		Poly Propylene	Poly Propylene	Poly Propylene	PA12
Connection			Cable	Cable	connector/M12	Cable
Cable	Outer sheath		PVC	PVC		PVC or PUR
	Diameter/core		φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>		φ 5mm / 3 x 0.34mm <sup>2</sup>
	Length		2m,3m,5m	2m,3m,5m		3m
Remarks					Pin assignment of NO & NC 1 = +, 3 = -, 4 = output	

\*In ordering, please specify cable specification (outer sheath and length) as following example.

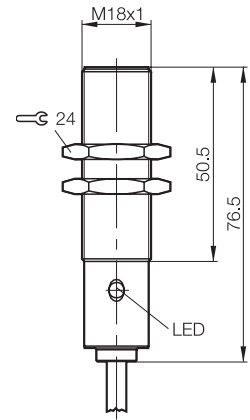
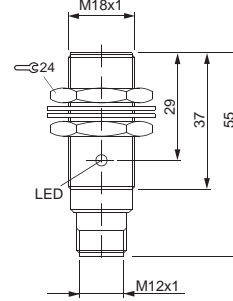
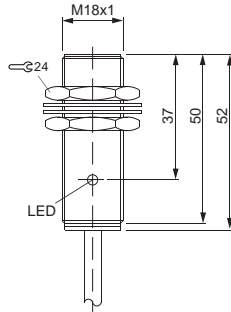
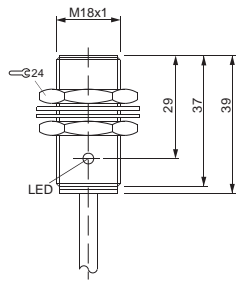
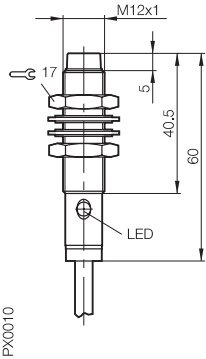


Ordering example (PVC cable 3m)  
BES516-356-E3R-03

DC 3-wire/Tubular  
M8/M12  
Sn 4/5mm

Proximity  
switches  
Inductive

M12 x 1 Non-shield A 4mm 0...3.2mm	M18 x 1 Shield A 5mm 0...4mm	M18 x 1 Shield A 5mm 0...4mm	M18 x 1 Shield A 5mm 0...4mm	M18 x 1 Shield A 5mm 0...4.1mm
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PX0010

	G	J	J	J	G
	BES516-131-B0-C	BES516-326-E3R BES516-367-E3R	BES516-326-E5R BES516-367-E5R	BC5-1805P BC5-1805P1	BES516-105-B0-C
	BES516-122-B0-C	BES516-355-E3R BES516-366-E3R	BES516-355-E5R BES516-366-E5R	BC5-1805N BC5-1805N1	BES516-111-B0-C
12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC
10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC
=<2.5V	=<3.5V	=<3.5V	=<3.5V	=<3.5V	=<2.5V
200mA	130mA	130mA	130mA	130mA	200mA
=<32mA	=<20mA	=<20mA	=<20mA	=<20mA	=<30mA
=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA
Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
400Hz	500Hz	500Hz	300Hz	500Hz	500Hz
Yes	Yes	Yes	Yes	Yes	Yes
IP68 per BWN pr.20	IP67	IP67	IP67	IP67	IP67
Stainless steel	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass
PA12	Poly Propylene	Poly Propylene	Poly Propylene	Poly Propylene	PA12
Cable	Cable	Cable	Cable	connector/M12	Cable
PVC or PUR	PVC	PVC	PVC		PVC or PUR
φ 5mm / 4 x 0.25mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>			φ 5mm / 4 x 0.25mm <sup>2</sup>
3m	2m,3m,5m	2m,3m,5m			3m
				Pin assignment of NO & NC 1 = +, 3 = -, 4 = output	

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

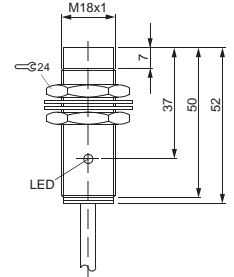
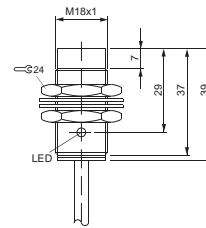
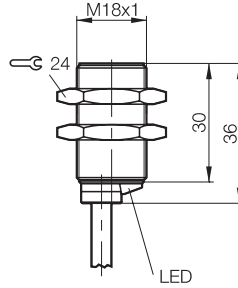
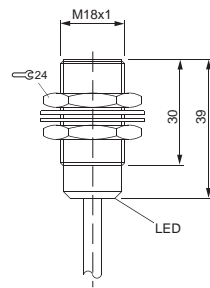
Temperature  
rated

Pressure  
rated

ATEX

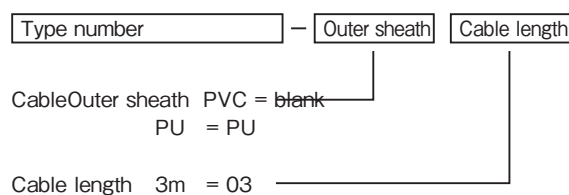
## Inductive Proximity switches Standard sensors

Housing size	M18 x 1	M18 x 1	M18 x 1	M18 x 1
Mounting type	Shield A	ShieldB1	Non-shield A	Non-shield A
Rated operating distance(Sn)	8mm (*) (7mm)	8mm	8mm	8mm
Assured operating distance(Sa)	0...6.4mm (*) (0...5.6mm)	0...6.5mm	0...6.4mm	0...6.4mm



			J	G	J	J
Type number	PNP	N.O. N.C. N.O.+N.C.		BES516-326-G-E4Y BES516-367-G-E4Y	BES516-360-E3R	BES516-360-E5R
Type number	NPN	N.O. N.C. N.O.+N.C.	BL3-1808N	BES516-355-G-E4Y BES516-366-G-E4Y	BES516-361-E3R	BES516-361-E5R
Rated operational voltage(Ue)	12...24V DC					
Supply voltage(U <sub>B</sub> )	10...30V DC					
Voltage drop(U <sub>d</sub> )	=<2.5V					
Rated operational current(I <sub>a</sub> )	200mA					
No-load supply current(I <sub>o</sub> )	=<20mA					
Off-state current(I <sub>r</sub> )	=<0.08mA					
Circuit protection	Polarity, Short circuit					
Ambient temperature range(T <sub>a</sub> )	-25...+70degrees C					
Frequency of operation(f)	200Hz					
Function indication	Yes					
Protection class per IEC60529	IP67					
Material	Housing	Nickel plated brass				
	Active surface	Poly Propylene				
Connection	Cable					
Cable	Outer sheath	PVC				
	Diameter/core	φ 5mm / 3 x 0.3mm <sup>2</sup>				
	Length	2m,3m,5m				
Remarks	(*)The distance in flush mounted. The distance in ( ) is non-flush.					

\*In ordering, please specify cable specification (outer sheath and length) as following example.

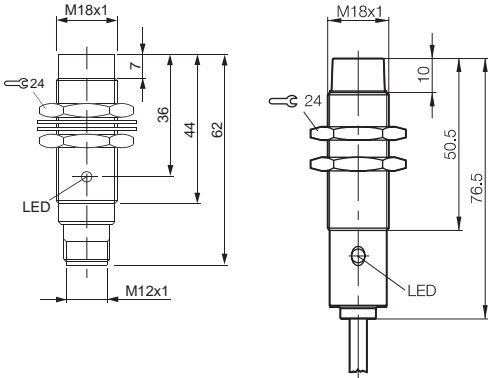


Ordering example (PVC cable 3m)  
BL3-1808N-03

1)Connector type is also available.

DC 3-wire/Tubular  
M18  
Sn 8mm

M18 x 1	M18 x 1			
Non-shield A	Non-shield A			
8mm	8mm			
0...6.4mm	0...6.5mm			



	ⓐ	ⓐ		
BC5-1808P				
	BES516-123-BO-C			
BC5-1808N				
	BES516-124-BO-C			
12...24V DC	12...24V DC			
10...30V DC	10...30V DC			
=<3.5V	=<2.5V			
130mA	200mA			
=<20mA	=<30mA			
=<0.08mA	=<0.08mA			
Polarity, Short circuit	Polarity, Short circuit			
-25...+70degrees C	-25...+70degrees C			
200Hz	200Hz			
Yes	Yes			
IP67	IP67			
Nickel plated brass	Nickel plated brass			
Poly Propylene connector/M12	PA12 Cable <sup>1)</sup>			
	PVC			
	φ 5mm / 4 x 0.25mm <sup>2</sup>			
	3m			

Global Version

Standard

Extended distance

Aluminum chip non-detectable

Multi metal

Weld immune

Weld splatter resistance

Steel face

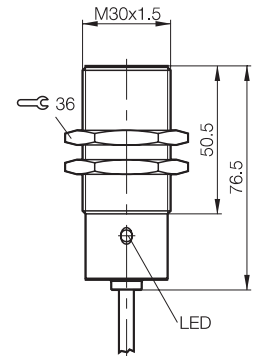
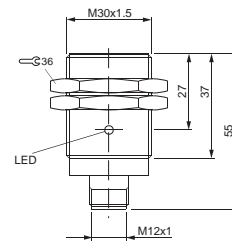
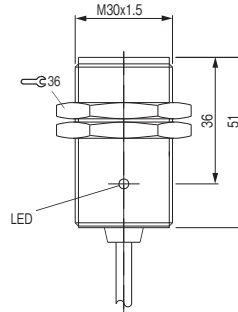
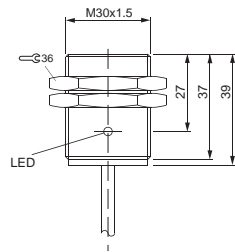
Temperature rated

Pressure rated

ATEX

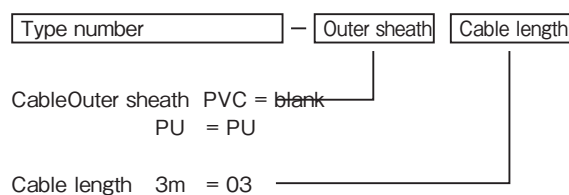
## Inductive Proximity switches Standard sensors

Housing size	M30 x 1.5	M30 x 1.5	M30 x 1.5	M30 x 1.5
Mounting type	Shield A	Shield A	Shield A	Shield A
Rated operating distance(Sn)	10mm	10mm	10mm	10mm
Assured operating distance(Sa)	0...8mm	0...8mm	0...8mm	0...8.1 mm



Type number	PNP	N.O. N.C. N.O.+N.C.	BES516-327-E3R	BES516-327-E5R	BC5-3010P	BES516-114-B0-C
Type number	NPN	N.O. N.C. N.O.+N.C.	BES516-359-E3R	BES516-359-E5R	BC5-3010N	BES516-120-B0-C
Rated operational voltage(Ue)	12...24V DC					
Supply voltage(U <sub>B</sub> )	10...30V DC					
Voltage drop(U <sub>d</sub> )	=<3.5V					
Rated operational current(I <sub>a</sub> )	130mA					
No-load supply current(I <sub>o</sub> )	=<20mA					
Off-state current(I <sub>r</sub> )	=<0.08mA					
Circuit protection	Polarity, Short circuit					
Ambient temperature range(T <sub>a</sub> )	-25...+70degrees C					
Frequency of operation(f)	300Hz					
Function indication	Yes					
Protection class per IEC60529	IP67					
Material	Housing	Nickel plated brass				
	Active surface	Poly Propylene				
Connection	Cable					
Cable	Outer sheath	PVC				
	Diameter/core	φ 5mm / 3 x 0.3mm <sup>2</sup>				
	Length	2m,3m,5m				
Remarks						

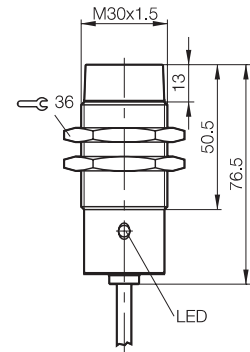
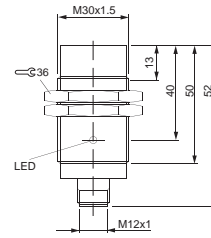
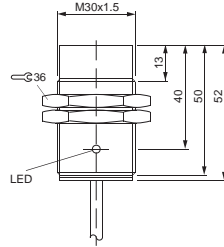
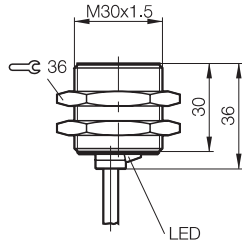
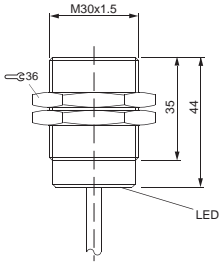
\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 3m)  
BES516-327-E3R-03

1)Connector type is also available.

M30 x 1.5 Shield A	M30 x 1.5 ShieldB1	M30 x 1.5 Non-shield A	M30 x 1.5 Non-shield A	M30 x 1.5 Non-shield A
15mm <sup>(*)</sup> (12mm)	15mm	15mm	15mm	15mm
0...11.5mm <sup>(*)</sup> (0...9.6mm)	0...12.2mm	0...12mm	0...12mm	0...12.2mm



	(J)	(G)	(J)	(J)	(G)
		BES516-327-G-E4-Y BES516-3028-G-E4-Y			BES516-125-B0-C
BL3-3015N		BES516-359-G-E4-Y	BES516-363-E3R	BC5-3015N	BES516-126-B0-C
12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC
10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC
=<2.5V	=<3.5V	=<3.5V	=<3.5V	=<3.5V	=<2.5V
200mA	130mA	130mA	130mA	130mA	200mA
=<20mA	=<25mA	=<20mA	=<20mA	=<20mA	=<30mA
=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA	=<0.08mA
Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
100Hz	100Hz	100Hz	100Hz	100Hz	100Hz
Yes	Yes	Yes	Yes	Yes	Yes
IP67	IP68 per BWN pr.20	IP67	IP67	IP67	IP67
Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass
Poly Propylene	PA12	Poly Propylene	Poly Propylene	Poly Propylene	PA12
Cable	Cable <sup>1)</sup>	Cable	connector/M12	Cable	Cable
PVC	PVC	PVC		PVC	PVC
φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.34mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>		φ 5mm / 4 x 0.25mm <sup>2</sup>	
2m,3m,5m	3m	2m,3m,5m		3m	
(*) The distance in flush mounted. The distance in ( ) is non-flush.					

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

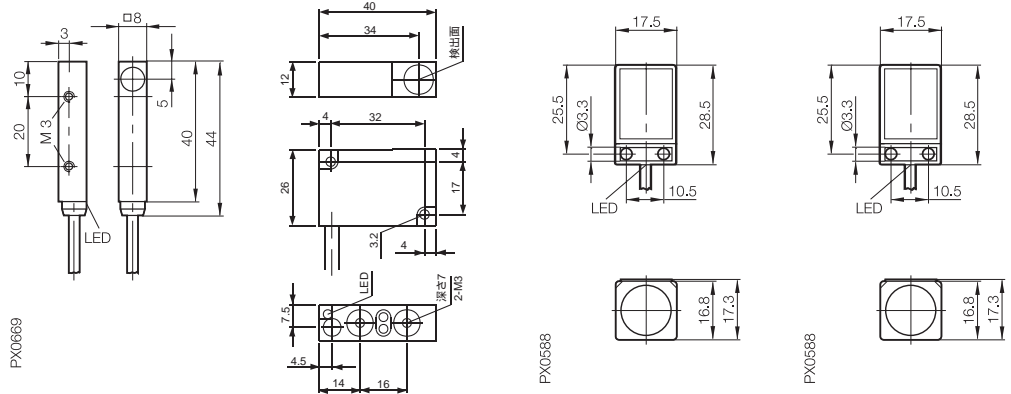
Temperature  
rated

Pressure  
rated

ATEX

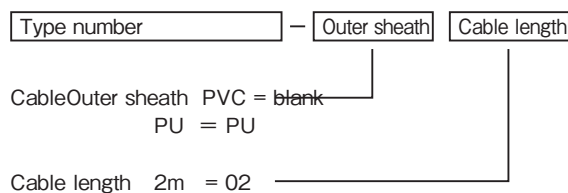
Inductive Proximity switches  
Standard sensors

Housing size	□ 8	Q12	Q16	Q16
Mounting type	Shield A	Shield A	Shield A	Non-shield A
Rated operating distance(Sn)	2mm	2mm	3mm	5mm
Assured operating distance(Sa)	0...1.6mm	0...1.6mm	0...2.4mm	0...4mm



			Ⓒ	Ⓙ	Ⓚ	Ⓛ	
Type number	PNP	N.O. N.C. N.O.+N.C.	BES Q08ZC-PSC20B BES Q08ZC-POC20B	BES517-Q1202P	BES517-Q1603P BES517-Q1603P1	BES517-Q1605P BES517-Q1605P1	
Type number	NPN	N.O. N.C. N.O.+N.C.	BES Q08ZC-NSC20B BES Q08ZC-NOC20B	BES517-Q1202N	BES517-Q1603N BES517-Q1603N1	BES517-Q1605N BES517-Q1605N1	
Rated operational voltage(Ue)	12...24V DC						
Supply voltage(U <sub>B</sub> )	10...30V DC						
Voltage drop(U <sub>d</sub> )	=<2.5V						
Rated operational current(I <sub>a</sub> )	200mA						
No-load supply current(I <sub>o</sub> )	=<20mA						
Off-state current(I <sub>r</sub> )	=<0.08mA						
Circuit protection	Polarity, Short circuit						
Ambient temperature range(T <sub>a</sub> )	-25...+70degrees C						
Frequency of operation(f)	1000Hz						
Function indication	Yes						
Protection class per IEC60529	IP65						
Material	Housing	GD-Zn nickel plated					
	Active surface	PA12					
Connection	Cable						
Cable	Outer sheath	PVC					
	Diameter/core	φ 3mm / 3 x 0.14mm <sup>2</sup>					
	Length	2m					
Remarks							

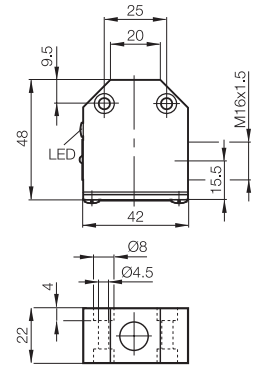
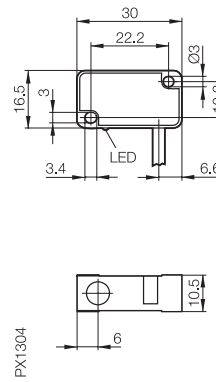
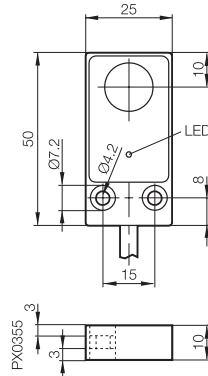
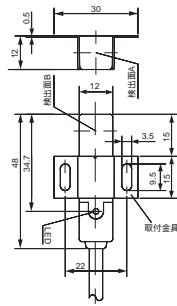
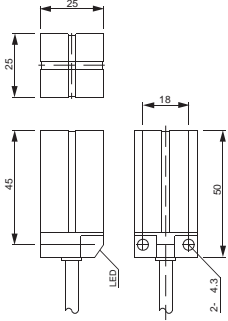
\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 2m)  
BES Q08ZC-PSC20B-PU02

DC 3-wire/Block style housing  
 □ 8/Q12/Q16/Q25/RQ12/M0/NO/H2  
 Sn 2/3/4/5/10mm

Q25	RQ12	M0	NO	H2
Non-shield A	Non-shield A	Shield A	Shield A	Shield A
10mm	4mm	5mm	2mm	5mm
0...8mm	0...3.2mm	0...4mm	0...1.6mm	0...4mm



Q25		RQ12		M0		NO		H2	
BES517-Q2510P	BES517-RQ1204P A/B	BES516-347 MO-Z	BES517-398-NO-C	BES516-346-H2-L					
		BES516-133 MO-X	BES517-351-NO-C	BES516-341-H2-L					
BES517-Q2510N	BES517-RQ1204N A/B	BES516-345 MO-Z	BES517-399-NO-C	BES516-344-H2-L					
BES517-Q2510N1	BES517-RQ1204N1 A/B		BES517-352-NO-C	BES516-340-H2-L					
12...24V DC	12...24V DC	12...24V DC	12...24V DC	12...24V DC					
10...30V DC	10...30V DC	10...30V DC	10...30V DC	10...30V DC					
≤3.5V	≤1.5V	≤1.5V	≤2V	≤3.5V					
130mA	200mA	100mA	200mA	130mA					
≤20mA	≤20mA	≤20mA	≤10mA	≤25mA					
≤0.08mA	≤0.08mA	≤0.08mA	≤0.08mA	≤0.08mA					
Polarity reversal	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity reversal					
-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C					
500Hz	400Hz	500Hz	2500Hz	500Hz					
Yes	Yes	Yes(No for 133MO-X)	Yes	Yes					
IP67	IP67	IP67	IP65	IP67					
ABS	PBT(with glass)	GD-AI	PBT	PBT					
ABS	PBT(with glass)	PBT	PBT	PBT					
Cable	Cable	Cable	Cable	Terminal/2.5mm <sup>2</sup>					
PVC	PVC	PVC or PUR	PVC						
φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm / 3 x 0.3mm <sup>2</sup>	φ 5mm/3x0.3mm <sup>2</sup> /4x0.25mm <sup>2</sup>	φ 3mm / 3 x 0.14mm <sup>2</sup>						
2m,3m,5m	2m,3m,5m	3m,5m	3m						
	Mount cuff attached when delivery.								

Global Version

Standard

Extended distance

Aluminum chip non-detectable

Multi metal

Weld immune

Weld splatter resistance

Steel face

Temperature rated

Pressure rated

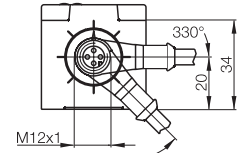
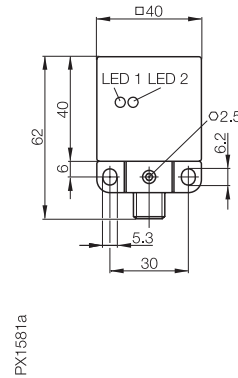
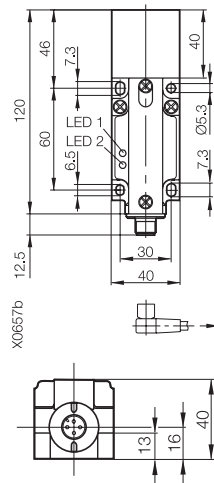
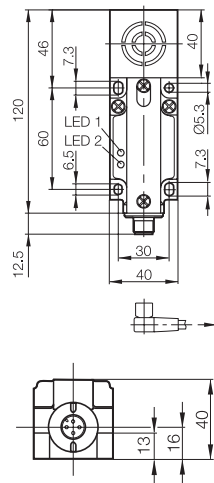
ATEX



# Inductive Proximity switches

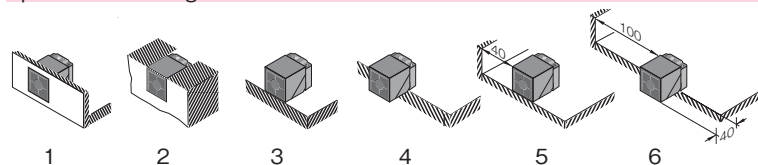
## Standard sensors

Housing size	40 x 40 x 120	40 x 40 x 120	40 x 40 x 62	
Mounting type	Shield A	Non-shield	Non-shield	Non-shield
Rated operating distance(Sn)	20mm	40mm	25mm	30mm
Assured operating distance(Sa)	0...16.2mm	0...32.4mm	0...20.3mm	0...24.3mm

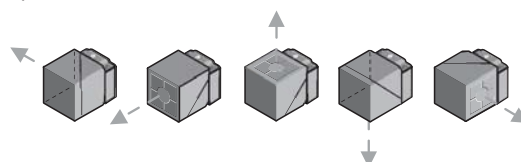


Type number	PNP	N.O. N.C. N.O.+N.C.	BES517-132-M6-H-S4	BES517-132-M7-H-S4	BES Q40KFU-PAC30F-S04G
Type number	NPN	N.O. N.C. N.O.+N.C.	BES517-134-M6-H-S4	BES517-134-M7-H-S4	BES Q40KFU-NAC25F-S04G
Rated operational voltage(Ue)	12...24V DC				
Supply voltage(U <sub>B</sub> )	10...55V DC				
Voltage drop(U <sub>d</sub> )	=<2.5V				
Rated operational current(I <sub>a</sub> )	200mA				
No-load supply current(I <sub>o</sub> )	=<20mA				
Off-state current(I <sub>r</sub> )	=<0.08mA				
Circuit protection	Polarity, Short circuit				
Ambient temperature range(T <sub>a</sub> )	-25...+70degrees C				
Frequency of operation(f)	50Hz				
LED indication	Function, Power				
Protection class per IEC60529	IP67				
Material	Housing	PBT			
	Active surface	PBT			
Connection	connector/M12				
Mounting option	Fig.1....6 are available.				
Remarks	Active surface is oriented in five directions.				

### Options of mounting in steel

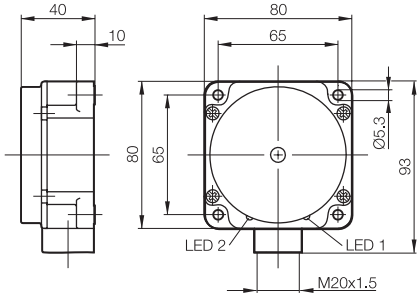


### Options of active surface



DC 3-wire  
Block style housing  
Sn 20/25/30/40/50mm

80 x 80 x 40				
Non-shield A	Non-shield A			
50mm	50mm <sup>(*)</sup>			
0...40.5mm	0...40mm <sup>(*)</sup>			



G		J		
BES517-139-M5-H				
BES517-140-M5-H	BES517-140-M6-CA1			
12...24V DC	12...24V DC			
10...55V DC	10...55V DC			
=<2.5V	=<2.5V			
200mA	200mA			
=<15mA	=<15mA			
=<0.08mA	=<0.08mA			
Polarity, Short circuit	Polarity, Short circuit			
-25...+70degrees C	-25...+70degrees C			
100Hz	100Hz			
Function, Power	Function, Power			
IP67	IP67			
PBT	PBT			
PBT	PBT			
Screw terminals <sup>1)</sup> /=<2.5mm <sup>2</sup>	Screw terminals/=<2.5mm <sup>2</sup>			
	(* ) Adjustable by a potentiometer in the range of 25 to 60mm.			

1)Connector type is also available.

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

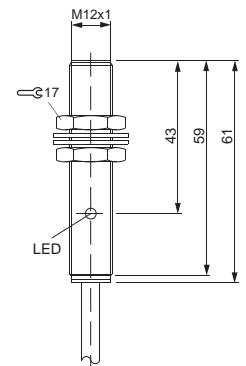
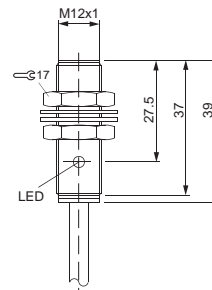
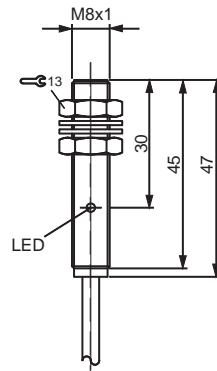
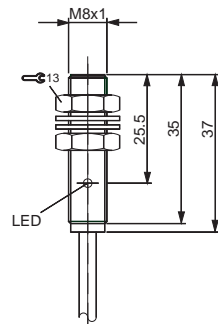
Temperature  
rated

Pressure  
rated

ATEX

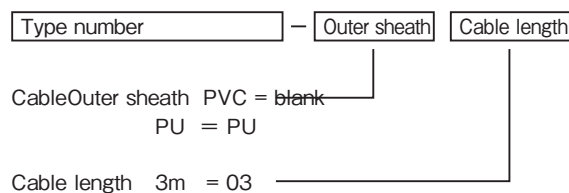
## Inductive Proximity switches Standard sensors

Housing size	M8 x 1	M8 x 1	M12 x 1	M12 x 1
Mounting type	Shield A	Shield A	Shield A	Shield A
Rated operating distance(Sn)	1.5mm	1.5mm	2mm	2mm
Assured operating distance(Sa)	0...1.2mm	0...1.2mm	0...1.6mm	0...1.6mm



Type number	DC2W	N.O.	N.C.
BR3-0801D			
BR3-0801D1			
BR5-0801D			
BR5-0801D1			
BR3-1202D			
BR3-1202D1			
BR5-1202D			
BR5-1202D1			
Rated operational voltage(Ue)	12...24V DC		
Supply voltage(U <sub>B</sub> )	10...30V DC		
Voltage drop(U <sub>d</sub> )	=<3.5V		
Rated operational current(I <sub>a</sub> )	4...100mA		
Off-state current(I <sub>r</sub> )	=<0.65mA		
Circuit protection	Polarity, Short circuit		
Ambient temperature range(T <sub>a</sub> )	-25...+70degrees C		
Frequency of operation(f)	800Hz		
LED indication	Function		
Protection class per IEC60529	IP67		
Material	Housing	Active surface	
	Stainless steel	Poly Propylene	
Connection	Cable		
Cable	Outer sheath	Diameter/core	Length
	PVC	φ 4mm / 2 x 0.14mm <sup>2</sup>	2m,3m,5m
	PVC	φ 4mm / 2 x 0.14mm <sup>2</sup>	2m,3m,5m
	PVC	φ 5mm / 2 x 0.5mm <sup>2</sup>	2m,3m,5m
	PVC	φ 5mm / 2 x 0.5mm <sup>2</sup>	2m,3m,5m
Remarks			

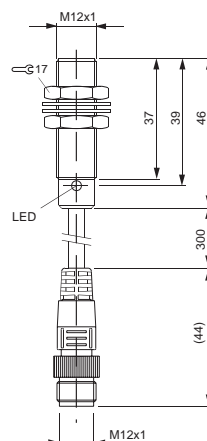
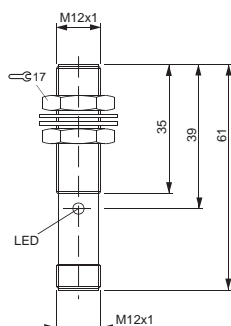
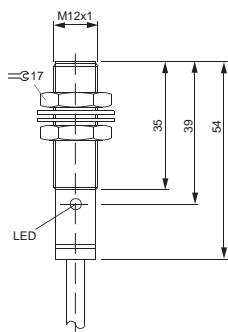
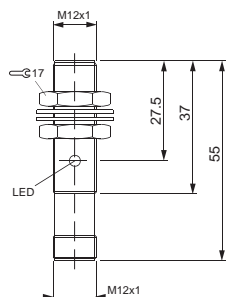
\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 3m)  
BR3-0801D-03

DC 2-wire / Polarized/Tubular  
M8/M12  
Sn 1.5/2/3mm

M12 x 1	M12 x 1	M12 x 1	M12 x 1	
Shield A	ShieldB2	ShieldB2	ShieldB2	
2mm	3mm	3mm	3mm	
0...1.6mm	0...2.4mm	0...2.4mm	0...2.4mm	



	J		J		J		J	
BC5-1202D		BR5-1203F		BCX-1203F		BCX-1203F-CP03		
BC5-1202D1								
12...24V DC		12...24V DC		12...24V DC		12...24V DC		
10...30V DC		10...30V DC		10...30V DC		10...30V DC		
=<3.5V		=<3.5V		=<3.5V		=<3.5V		
4...100mA		4...100mA		4...100mA		4...100mA		
=<0.65mA		=<0.65mA		=<0.65mA		=<0.65mA		
Polarity, Short circuit		Polarity, Short circuit		Polarity, Short circuit		Polarity, Short circuit		
-25...+70degrees C		-25...+70degrees C		-25...+70degrees C		-25...+70degrees C		
800Hz		800Hz		800Hz		800Hz		
Function		Function,Setting		Function,Setting		Function,Setting		
IP67		IP67		IP67		IP67		
Nickel plated brass		Nickel plated brass		Nickel plated brass		Nickel plated brass		
Poly Propylene		Nylon		Nylon		Nylon		
connector/M12		Cable		connector/M12		Cable with connector/M12		
		PVC						
		φ 5mm / 2 x 0.5mm <sup>2</sup>						
		2m,3m,5m						
Pin assignment of NO & NC :								
1= +, 3= -								

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

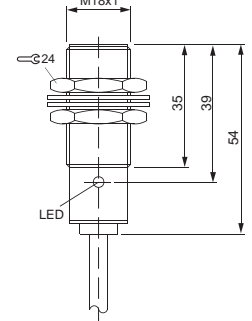
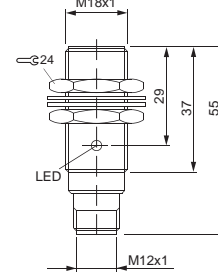
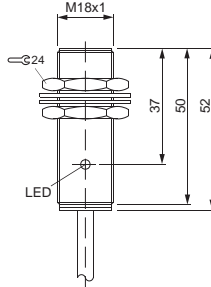
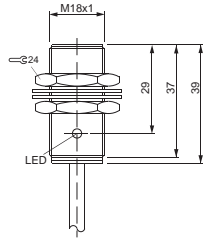
Temperature  
rated

Pressure  
rated

ATEX

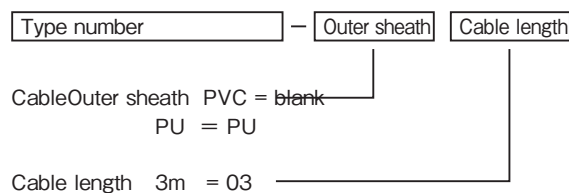
## Inductive Proximity switches Standard sensors

Housing size	M18 x 1	M18 x 1	M18 x 1	M18 x 1
Mounting type	Shield A	Shield A	Shield A	ShieldB2
Rated operating distance(Sn)	5mm	5mm	5mm	7mm
Assured operating distance(Sa)	0...4mm	0...4mm	0...4mm	0...5.6mm



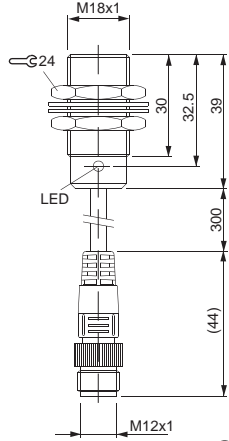
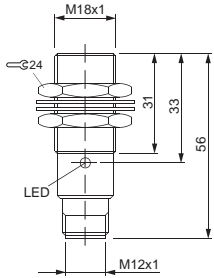
Type number	DC2W	N.O. N.C.	BR3-1805D BR3-1805D1	BR5-1805D BR5-1805D1	BC5-1805D BC5-1805D1	BR5-1807F
Rated operational voltage(Ue)			12...24V DC	12...24V DC	12...24V DC	12...24V DC
Supply voltage(U <sub>B</sub> )			10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(U <sub>d</sub> )			≤<3.5V	≤<3.5V	≤<3.5V	≤<3.5V
Rated operational current(I <sub>a</sub> )			4...100mA	4...100mA	4...100mA	4...100mA
Off-state current(I <sub>r</sub> )			≤<0.5mA	≤<0.5mA	≤<0.5mA	≤<0.65mA
Circuit protection			Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(T <sub>a</sub> )			-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			500Hz	500Hz	500Hz	200Hz
LED indication			Function	Function	Function	Function,Setting
Protection class per IEC60529			IP67	IP67	IP67	IP67
Material	Housing		Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass
	Active surface		Poly Propylene	Poly Propylene	Poly Propylene	Nylon
Connection			Cable	Cable	connector/M12	Cable
Cable	Outer sheath		PVC	PVC		PVC
	Diameter/core		φ 5mm / 2 x 0.5mm <sup>2</sup>	φ 5mm / 2 x 0.5mm <sup>2</sup>		φ 5mm / 2 x 0.5mm <sup>2</sup>
	Length		2m,3m,5m	2m,3m,5m		2m,3m,5m
Remarks					Pin assignment of NO & NC : 1= +, 3= -	

\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 3m)  
BR3-1805D-03

M18 x 1	M18 x 1			
ShieldB2	ShieldB2			
7mm	7mm			
0...5.6mm	0...5.6mm			



Ⓧ

Ⓧ

BCX-1807F	BCX-1807F-CP03			
12...24V DC	12...24V DC			
10...30V DC	10...30V DC			
=<3.5V	=<3.5V			
4...100mA	4...100mA			
=<0.65mA	=<0.65mA			
Polarity, Short circuit	Polarity, Short circuit			
-25...+70degrees C	-25...+70degrees C			
200Hz	200Hz			
Function,Setting	Function,Setting			
IP67	IP67			
Nickel plated brass	Nickel plated brass			
Nylon	Nylon			
connector/M12	Cable with connector/M12			

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

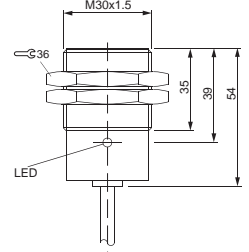
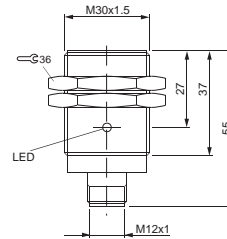
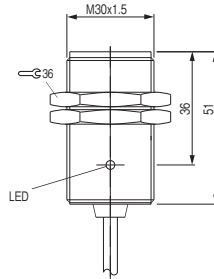
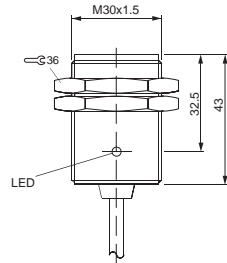
Temperature  
rated

Pressure  
rated

ATEX

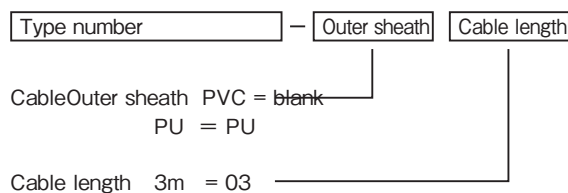
Inductive Proximity switches  
Standard sensors

Housing size	M30 x 1.5	M30 x 1.5	M30 x 1.5	M30 x 1.5
Mounting type	Shield A	Shield A	Shield A	ShieldB2
Rated operating distance(Sn)	10mm	10mm	10mm	12mm
Assured operating distance(Sa)	0...8mm	0...8mm	0...8mm	0...9.6mm



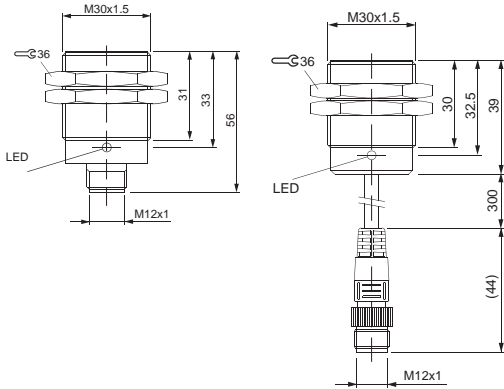
Type number	DC2W	N.O. N.C.	BR3-3010D BR3-3010D1	BR5-3010D BR5-3010D1	BC5-3010D	BR5-3012F
Rated operational voltage(Ue)			12...24V DC	12...24V DC	12...24V DC	12...24V DC
Supply voltage(U <sub>B</sub> )			10...30V DC	10...30V DC	10...30V DC	10...30V DC
Voltage drop(U <sub>d</sub> )			≤3.5V	≤3.5V	≤3.5V	≤3.5V
Rated operational current(I <sub>a</sub> )			4...100mA	4...100mA	4...100mA	4...100mA
Off-state current(I <sub>r</sub> )			≤0.65mA	≤0.65mA	≤0.5mA	≤0.65mA
Circuit protection			Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit
Ambient temperature range(T <sub>a</sub> )			-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			300Hz	300Hz	300Hz	200Hz
LED indication			Function	Function	Function	Function,Setting
Protection class per IEC60529			IP67	IP67	IP67	IP67
Material	Housing		Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass
	Active surface		Poly Propylene	Poly Propylene	Poly Propylene	Nylon
Connection			Cable	Cable	connector/M12	Cable
Cable	Outer sheath		PVC	PVC		PVC
	Diameter/core		φ 5mm / 2 x 0.5mm <sup>2</sup>	φ 5mm / 2 x 0.5mm <sup>2</sup>		φ 5mm / 2 x 0.5mm <sup>2</sup>
	Length		2m,3m,5m	2m,3m,5m		2m,3m,5m
Remarks					Pin assignment : 1=+,3= -	

\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 3m)  
BR3-3010D-03

M30 x 1.5	M30 x 1.5			
ShieldB2	ShieldB2			
12mm	12mm			
0...9.6mm	0...9.6mm			



	Ⓟ			
BCX-3012F	BCX-3012F-CP03			
12...24V DC	12...24V DC			
10...30V DC	10...30V DC			
=<3.5V	=<3.5V			
4...100mA	4...100mA			
=<0.65mA	=<0.65mA			
Polarity, Short circuit	Polarity, Short circuit			
-25...+70degrees C	-25...+70degrees C			
200Hz	200Hz			
Function,Setting	Function,Setting			
IP67	IP67			
Nickel plated brass	Nickel plated brass			
Nylon	Nylon			
connector/M12	Cable withconnector/M12			

Global  
Version

Standard

Extended  
distance

Aluminum chip  
non-detectable

Multi metal

Weld  
immune

Weld splatter  
resistance

Steel face

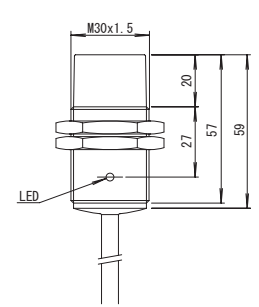
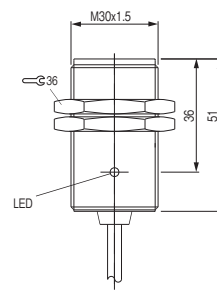
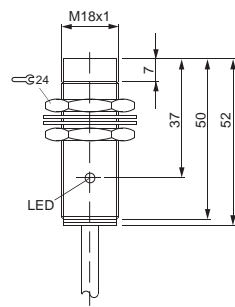
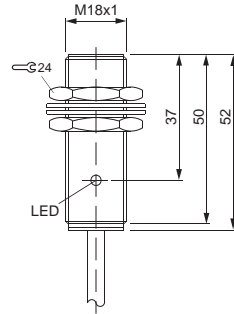
Temperature  
rated

Pressure  
rated

ATEX

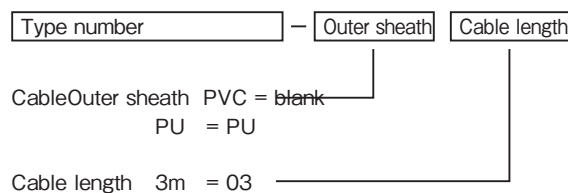


Housing size	M18 x 1	M18 x 1	M30 x 1.5	M30 x 1.5
Mounting type	Shield A	Non-shield A	Shield A	Non-shield B2
Rated operating distance(Sn)	5mm	8mm	10mm	20mm
Assured operating distance(Sa)	0...4mm	0...6.4mm	0...8.1mm	0...16mm



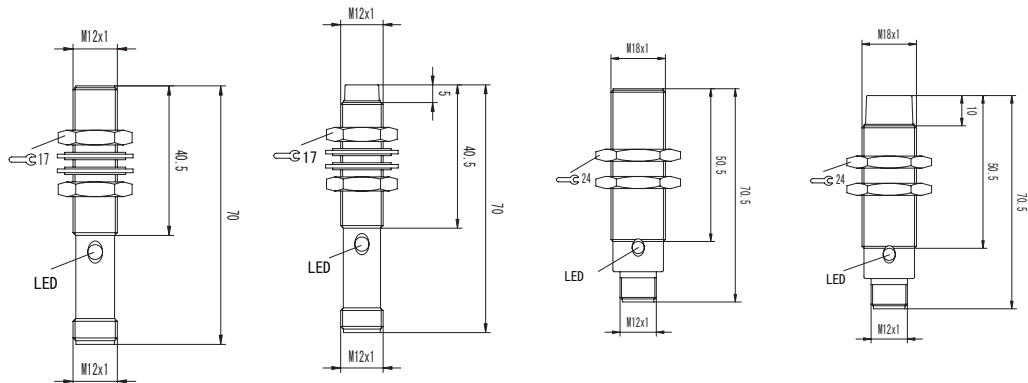
Type number	AC2W	N.O.	BES516-420-E3R	BES516-437-E3R	BES516-418-E3R	BES516-434-E3R
		N.C.	BES516-426-E3R		BES516-427-E3R	
Rated operational voltage(Ue)			100...225V AC/40...60Hz	100...225V AC/40...60Hz	100...225V AC/40...60Hz	100...225V AC/40...60Hz
Supply voltage(U <sub>B</sub> )			90...250V AC/40...60Hz	90...250V AC/40...60Hz	90...250V AC/40...60Hz	90...250V AC/40...60Hz
Voltage drop(U <sub>d</sub> )			=<8.5V	=<8.5V	=<8.5V	=<8.5V
Rated operational current(I <sub>a</sub> )			5...250mA	5...250mA	5...250mA	5...250mA
Inrush current(T=<20ms)			2A	2A	2A	2A
Off-state current(I <sub>r</sub> )			=<1.0...3.0mA	=<1.0...3.0mA	=<1.0...3.0mA	=<1.0...3.0mA
Circuit protection			No	No	No	No
Ambient temperature range(T <sub>a</sub> )			-25...+70degrees C	-25...+70degrees C	-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			15Hz	5Hz	15Hz	5Hz
Function indication			Yes	Yes	Yes	Yes
Protection class per IEC60529			IP67	IP67	IP67	IP67
Material	Housing		Nickel plated brass	Nickel plated brass	Nickel plated brass	Nickel plated brass
	Active surface		Poly Propylene	Poly Propylene	Poly Propylene	Poly Propylene
Connection			Cable	Cable	Cable	Cable
Cable	Outer sheath		PVC	PVC	PVC	PVC
	Diameter/core		φ 5mm / 2 x 0.5mm <sup>2</sup>	φ 5mm / 2 x 0.5mm <sup>2</sup>	φ 5mm / 2 x 0.5mm <sup>2</sup>	φ 5mm / 2 x 0.5mm <sup>2</sup>
	Length		2m,3m,5m	2m,3m,5m	2m,3m,5m	2m,3m,5m
Remarks						

\*In ordering, please specify cable specification (outer sheath and length) as following example.



Ordering example (PVC cable 3m)  
BES516-420-E3R-03

Housing size	M12 x 1	M12 x 1	M18 x 1	M18 x 1
Mounting type	Shield A	Non-shield A	Shield A	Non-shield A
Rated operating distance	2mm	4mm	5mm	8mm
Assured operating	0...1.6mm	0...3.2mm	0...4.1mm	0...6.5mm



Type	AC/DC2W	N.O. N.C.	G	
			BES516-207-S27-E	BES516-209-S27-E
			BES516-208-S27-E	BES516-210-S27-E
			BES516-211-E5-E-S27	BES516-212-E5-E-S27
			BES516-213-E5-E-S27	BES516-214-E5-E-S27
Rated operational			110V AC	110V AC
Supply voltage(U <sub>B</sub> )			20...250V AC/DC	20...250V AC/DC
Voltage drop(U <sub>d</sub> )			≦11V	≦11V
Rated			130mA	250mA
			100mA	150mA
Inrush current (T≦20ms)			≦0.7A	≦1.5A
No-load supply current(I <sub>0</sub> )			5mA	5mA
Off-state current(I <sub>r</sub> )			≦1.7mA(110V AC 時)	≦1.7mA(110V AC 時)
Circuit protection			Polarity, Short circuit	Polarity, Short circuit
Ambient temperature			-25...+70degrees C	-25...+70degrees C
Frequency of operation(f)			1000Hz	400Hz
Function indication			Yes	Yes
Protection class per			IP67	IP67
Material	Housing		Stainless steel	Nickel plated brass
	Active		PA12	PA12
Connection			connector/M12	connector/M12
Remarks				

Global Version

Standard

Extended distance

Aluminum chip non-detectable

Multi metal

Weld immune

Weld splatter resistance

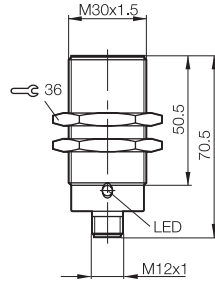
Steel face

Temperature rated

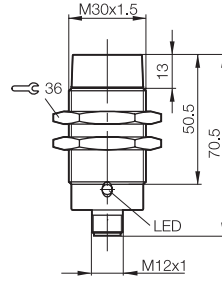
Pressure rated

ATEX

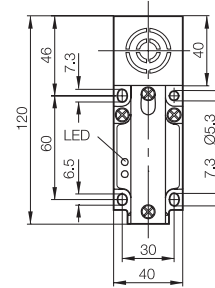
Housing size	M30 x 1.5	M30 x 1.5	40 x 40 x 120	
Mounting type	Shield A	Non-shield A	Shield A	Non-shield
Rated operating distance(Sn)	10mm	15mm	15mm	30mm
Assured operating distance(Sa)	0...8.1mm	0...12.2mm	0...12.2mm	0...24.3mm



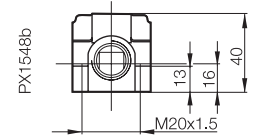
PX0371



PX0704



PX1548



PX1548b

Type number	AC/ N.O. N.C. N.O./N.C. 設定可	①		②		③		④	
BES516-215-E5E-S27		BES516-215-E5E-S27	BES516-217-E5E-S27						
BES516-216-E5E-S27		BES516-216-E5E-S27	BES516-218-E5E-S27						
				BES517-223-M3-E				BES517-223-M5-E	
Rated operational voltage(Ue)		110V AC	110V AC	110V AC		110V AC		110V AC	
Supply voltage(U <sub>B</sub> )		20...250V AC/DC	20...250V AC/DC	20...250V AC/DC		20...250V AC/DC		20...250V AC/DC	
Voltage drop(U <sub>d</sub> )		=<11V	=<11V	=<11.5V		=<11.5V		=<11.5V	
Rated		250mA	250mA	250mA		250mA		250mA	
		180mA	180mA	180mA		180mA		180mA	
Inrush current(T=<20ms)		=<3A	=<3A	=<1A/1Hz		=<1A/1Hz		=<1A	
No-load supply current(I <sub>o</sub> )		5mA	5mA	5mA		5mA		5mA	
Off-state current(I <sub>r</sub> )		=<1.7mA(110V AC 時)	=<1.7mA(110V AC 時)	=<1.7mA(110V AC 時)		=<1.7mA(110V AC 時)		=<1.7mA(110V AC 時)	
Circuit protection		Polarity, Short circuit	Polarity, Short circuit	Polarity, Short circuit		Polarity, Short circuit		Polarity, Short circuit	
Ambient temperature range(T <sub>a</sub> )		-25...+70degrees C	-25...+70degrees C	-25...+70degrees C		-25...+70degrees C		-25...+70degrees C	
Frequency of operation(f)		150Hz	100Hz	100Hz		100Hz		100Hz	
Function indication		Yes	Yes	Yes		Yes		Yes	
Protection class per IEC60529		IP67	IP67	IP67		IP67		IP67	
Material	Housing	Nickel plated brass	Nickel plated brass	PBT		PBT		PBT	
	Active surface	PA12	PA12	PBT		PBT		PBT	
Connection		connector/M12	connector/M12	接続端子 =<2.5mm <sup>2</sup>		接続端子 =<2.5mm <sup>2</sup>		接続端子 =<2.5mm <sup>2</sup>	
Cable	Outer sheath								
	Diameter/core								
	Length								
金属への取付				図 1.....6 可能		図 4, 5, 6 可能		図 4, 5, 6 可能	
Remarks				Active surface5 方向可変		Active surface は上または		Active surface は上または	