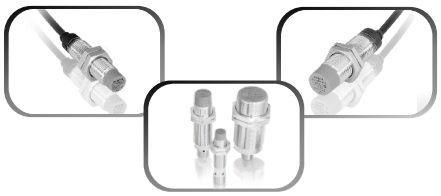
XI-BTR technology

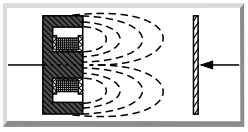
Cylindrical Inductive Proximity Sensor



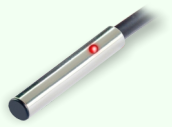
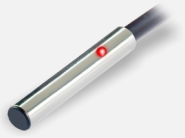
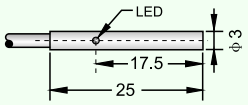
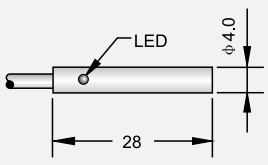
Features

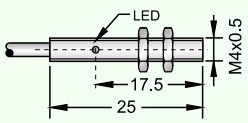
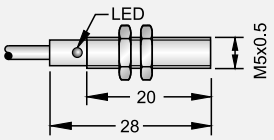
- Short-circuit protection, reversed polarity protection and overload protection (DC)
- Long life-span and high reliability
- Visual LED display to indicate output status
- Cost-effective, easy operation
- Widely used, can replace micro switch and limit switch

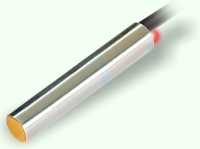
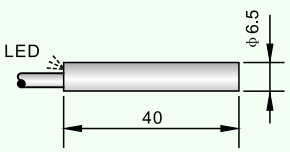
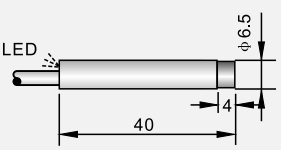
■ Inductive

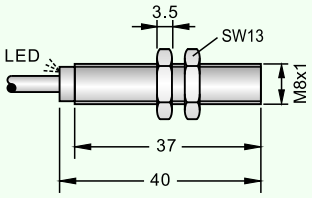
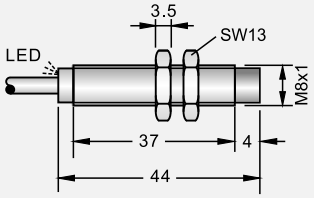


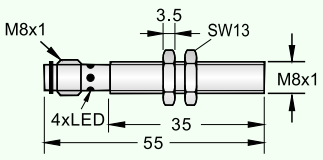
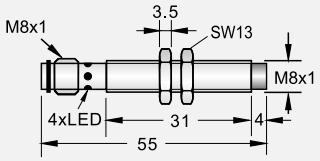
CE

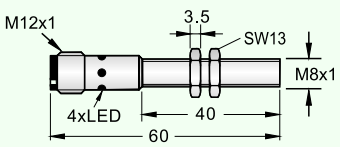
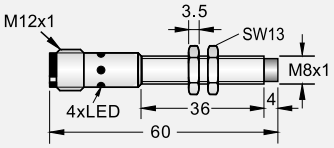
	ϕ3, L25		ϕ4, L28	
PICTURE				
DC–3 wires NPN N.O.	ISD3-S0.8NA-D3N2	*01	IBD4-S0.8NA-D3N2	*01
DC–3 wires NPN N.C.	ISD3-S0.8NB-D3N2	*02	IBD4-S0.8NB-D3N2	*02
DC–3 wires PNP N.O.	ISD3-S0.8PA-D3N2	*03	IBD4-S0.8PA-D3N2	*03
DC–3 wires PNP N.C.	ISD3-S0.8PB-D3N2	*04	IBD4-S0.8PB-D3N2	*04
DC–2 wires N.O.	———		———	
DC–2 wires N.C.	———		———	
Rated sensing distance	0.8mm			
Mounting	shield			
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA			
Setting distance	0...0.6mm			
Standard target	Iron 5x5x1mm			
Frequency	1500Hz			
Consumption	≤15mA			
Load current	100mA			
Voltage drop(V_P)	≤1.8V			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Reversed polarity protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	300m/s²(30G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP66			
Connection	Cable: ϕ2. 3mm 2M		Cable: ϕ2. 8mm 2M	
Housing material	stainless steel		nickel-plated brass	
Sensing face material	PC			
Dimensional drawing				
Remark	01 . 02 . 03 . 04—NO of wiring diagram(refers to page 12...15)			

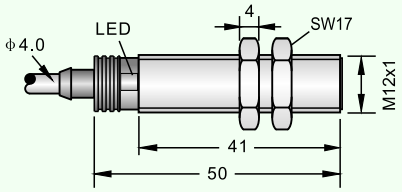
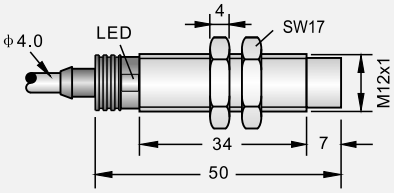
	M4x0.5, L25		M5x0.5, L28	
PICTURE				
DC–3 wires NPN N.O.	IST4-S0.8NA-D3N2	*01	IST5-S0.8NA-D3N2	*01
DC–3 wires NPN N.C.	IST4-S0.8NB-D3N2	*02	IST5-S0.8NB-D3N2	*02
DC–3 wires PNP N.O.	IST4-S0.8PA-D3N2	*03	IST5-S0.8PA-D3N2	*03
DC–3 wires PNP N.C.	IST4-S0.8PB-D3N2	*04	IST5-S0.8PB-D3N2	*04
DC–2 wires N.O.	————		————	
DC–2 wires N.C.	————		————	
Rated sensing distance	0.8mm			
Mounting	shield			
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA			
Setting distance	0...0.6mm			
Standard target	Iron 5x5x1mm			
Frequency	1500Hz			
Consumption	≤15mA			
Load current	100mA			
Voltage drop(V_P)	≤1.8V			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Reversed polarity protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	300m/s²(30G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP66			
Connection	Cable: ϕ2. 3mm 2M		Cable: ϕ2. 8mm 2M	
Housing material	stainless steel		stainless steel	
Sensing face material	PC			
Dimensional drawing				
Remark	01 . 02 . 03 . 04—NO of wiring diagram(refers to page 12...15)			

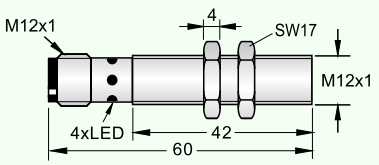
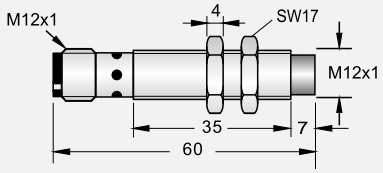
	ϕ6.5, L40	ϕ6.5, L40
PICTURE	 CE	 CE
DC–3 wires NPN N.O.	IBD6.5-S1.5NA-D3Y2 *01	IBD6.5-N02NA-D3Y2 *01
DC–3 wires NPN N.C.	IBD6.5-S1.5NB-D3Y2 *02	IBD6.5-N02NB-D3Y2 *02
DC–3 wires PNP N.O.	IBD6.5-S1.5PA-D3Y2 *03	IBD6.5-N02PA-D3Y2 *03
DC–3 wires PNP N.C.	IBD6.5-S1.5PB-D3Y2 *04	IBD6.5-N02PB-D3Y2 *04
DC–2 wires N.O.	————	————
DC–2 wires N.C.	————	————
Rated sensing distance	1.5mm	2mm
Mounting	shield	non-shield
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.	
Leakage current	<0.01mA	
Setting distance	0...1mm	0...1.4mm
Standard target	Iron 8x8x1mm	
Frequency	1000Hz	
Consumption	≤15mA	
Load current	200mA	
Voltage drop(V_P)	≤1.8V	
Hysteresis	1...15%	
Repeatability	≤2%	
Display	Red LED	
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection	
Operating temperature	-25...+70°C(no condensation)	
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times	
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours	
Protection	IP67	
Connection	Cable: ϕ3. 2mm 2M	
Housing material	nickel-plated brass	
Sensing face material	PBT	
Dimensional drawing		
Remark	01 . 02 . 03 . 04—NO of wiring diagram(refers to page 12...15)	

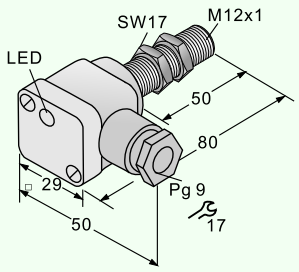
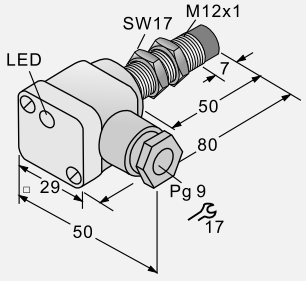
	M8x1, L40		M8x1, L44	
PICTURE				
DC–3 wires NPN N.O.	IBT8-S1.5NA-D3Y2	*01	IBT8-N02NA-D3Y2	*01
DC–3 wires NPN N.C.	IBT8-S1.5NB-D3Y2	*02	IBT8-N02NB-D3Y2	*02
DC–3 wires PNP N.O.	IBT8-S1.5PA-D3Y2	*03	IBT8-N02PA-D3Y2	*03
DC–3 wires PNP N.C.	IBT8-S1.5PB-D3Y2	*04	IBT8-N02PB-D3Y2	*04
DC–2 wires N.O.	IBT8-S1.5LA-D2Y2	*18	IBT8-N02LA-D2Y2	*18
DC–2 wires N.C.	IBT8-S1.5LB-D2Y2	*19	IBT8-N02LB-D2Y2	*19
Rated sensing distance	1.5mm		2mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...1mm		0...1.4mm	
Standard target	Iron 8x8x1mm			
Frequency	1000Hz			
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	Cable: Φ3. 2mm 2M (2 wire : Cable Φ2.8mm)			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)			

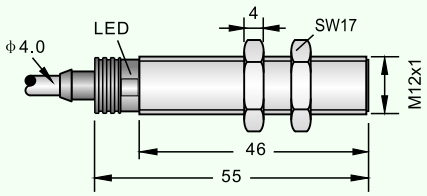
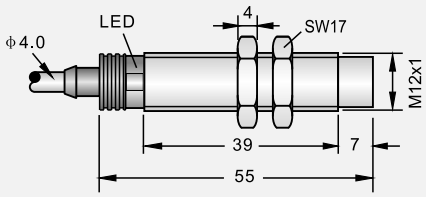
	M8x1, L55		M8x1, L55	
PICTURE				
DC–3 wires NPN N.O.	IBT8-S1.5NA-D3YV2	*27	IBT8-N02NA-D3YV2	*27
DC–3 wires NPN N.C.	IBT8-S1.5NB-D3YV2	*27	IBT8-N02NB-D3YV2	*27
DC–3 wires PNP N.O.	IBT8-S1.5PA-D3YV2	*28	IBT8-N02PA-D3YV2	*28
DC–3 wires PNP N.C.	IBT8-S1.5PB-D3YV2	*28	IBT8-N02PB-D3YV2	*28
DC–2 wires N.O.	————		————	
DC–2 wires N.C.	————		————	
Rated sensing distance	1.5mm		2mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA			
Setting distance	0...1mm		0...1.4mm	
Standard target	Iron 8x8x1mm			
Frequency	1000Hz			
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	M8 connector，LEDx4			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	27 . 28—NO of wiring diagram(refers to page 12...15)			

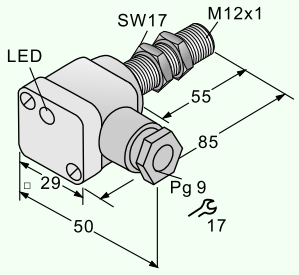
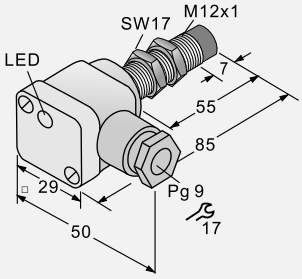
	M8x1, L60		M8x1, L60	
PICTURE				
DC–3 wires NPN N.O.	IBT8-S1.5NA-D4YV1	* 29	IBT8-N02NA-D4YV1	* 29
DC–3 wires NPN N.C.	IBT8-S1.5NB-D4YV1	* 30	IBT8-N02NB-D4YV1	* 30
DC–3 wires PNP N.O.	IBT8-S1.5PA-D4YV1	* 31	IBT8-N02PA-D4YV1	* 31
DC–3 wires PNP N.C.	IBT8-S1.5PB-D4YV1	* 32	IBT8-N02PB-D4YV1	* 32
DC–2 wires N.O.	IBT8-S1.5LA-D4YV1	* 37	IBT8-N02LA-D4YV1	* 37
DC–2 wires N.C.	IBT8-S1.5LB-D4YV1	* 38	IBT8-N02LB-D4YV1	* 38
Rated sensing distance	1.5mm		2mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...1mm		0...1.4mm	
Standard target	Iron 8x8x1mm			
Frequency	1000Hz			
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	M12 connector，LEDx4			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	29 . 30 . 31 . 32 . 37 . 38—NO of wiring diagram(refers to page 12...15)			

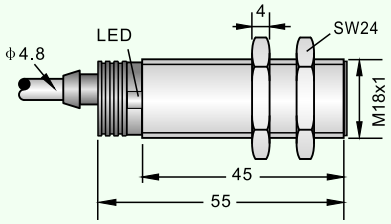
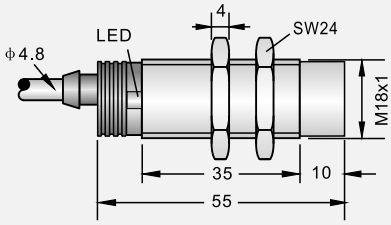
	M12x1, L50		M12x1, L50	
PICTURE				
DC–3 wires NPN N.O.	IBT12-S02NA-D3Y2	*01	IBT12-N04NA-D3Y2	*01
DC–3 wires NPN N.C.	IBT12-S02NB-D3Y2	*02	IBT12-N04NB-D3Y2	*02
DC–3 wires PNP N.O.	IBT12-S02PA-D3Y2	*03	IBT12-N04PA-D3Y2	*03
DC–3 wires PNP N.C.	IBT12-S02PB-D3Y2	*04	IBT12-N04PB-D3Y2	*04
DC–2 wires N.O.	IBT12-S02LA-D2Y2	*18	IBT12-N04LA-D2Y2	*18
DC–2 wires N.C.	IBT12-S02LB-D2Y2	*19	IBT12-N04LB-D2Y2	*19
Rated sensing distance	2mm		4mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...1.4mm		0...2.8mm	
Standard target	Iron 12x12x1mm			
Frequency	800Hz		600Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	Cable: ϕ4mm 2M			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)			

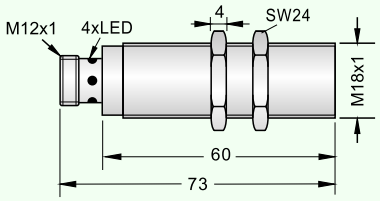
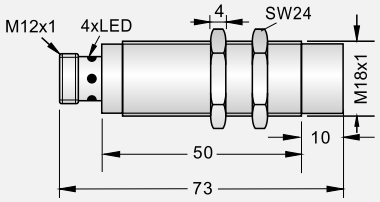
	M12x1, L60		M12x1, L60	
PICTURE				
DC–3 wires NPN N.O.	IBT12-S02NA-D4YV1	*29	IBT12-N04NA-D4YV1	*29
DC–3 wires NPN N.C.	IBT12-S02NB-D4YV1	*30	IBT12-N04NB-D4YV1	*30
DC–3 wires PNP N.O.	IBT12-S02PA-D4YV1	*31	IBT12-N04PA-D4YV1	*31
DC–3 wires PNP N.C.	IBT12-S02PB-D4YV1	*32	IBT12-N04PB-D4YV1	*32
DC–2 wires N.O.	IBT12-S02LA-D4YV1	*37	IBT12-N04LA-D4YV1	*37
DC–2 wires N.C.	IBT12-S02LB-D4YV1	*38	IBT12-N04LB-D4YV1	*38
Rated sensing distance	2mm		4mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...1.4mm		0...2.8mm	
Standard target	Iron 12x12x1mm			
Frequency	800Hz		600Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_P)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	M12 connector，LEDx4			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	29 . 30 . 31 . 32 . 37 . 38—NO of wiring diagram(refers to page 12...15)			

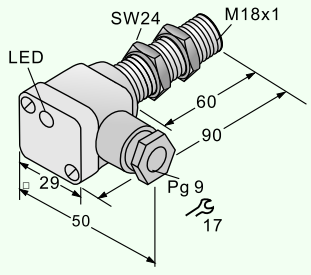
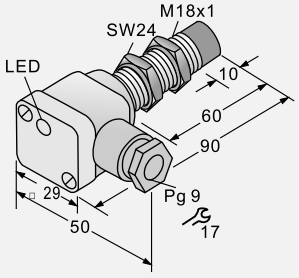
	M12x1, L80		M12x1, L80	
PICTURE				
DC–3 wires NPN N.O.	IBL12-S02NA-D3YT	*01	IBL12-N04NA-D3YT	*01
DC–3 wires NPN N.C.	IBL12-S02NB-D3YT	*02	IBL12-N04NB-D3YT	*02
DC–3 wires PNP N.O.	IBL12-S02PA-D3YT	*03	IBL12-N04PA-D3YT	*03
DC–3 wires PNP N.C.	IBL12-S02PB-D3YT	*04	IBL12-N04PB-D3YT	*04
DC–2 wires N.O.	IBL12-S02LA-D3YT	*18	IBL12-N04LA-D3YT	*18
DC–2 wires N.C.	IBL12-S02LB-D3YT	*19	IBL12-N04LB-D3YT	*19
Rated sensing distance	2mm		4mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...1.4mm		0...2.8mm	
Standard target	Iron 12x12x1mm			
Frequency	800Hz		600Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP66			
Connection	Terminal connection			
Housing material	PBT + nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)			

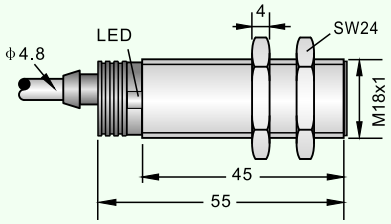
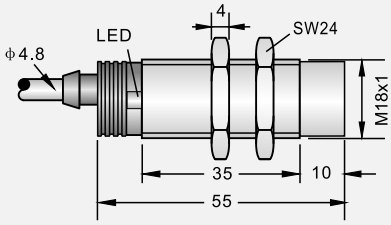
	M12x1, L55		M12x1, L55	
PICTURE				
AC–2 wires N.O.	IBT12-S02AA-A2N2	*20	IBT12-N04AA-A2N2	*20
AC–2 wires N.C.	IBT12-S02AB-A2N2	*21	IBT12-N04AB-A2N2	*21
Rated sensing distance	2mm		4mm	
Mounting	shield		non-shield	
Supply voltage	20...250V AC(50/60Hz)			
Leakage current	≤1.7mA			
Setting distance	0...1.4mm		0...2.8mm	
Standard target	Iron 12x12x1mm			
Frequency	20Hz			
Consumption	———			
Load current	200mA			
Voltage drop(V_p)	≤8V			
Hysteresis	3...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	———			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	Cable: ϕ4mm 2M			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	20 . 21—NO of wiring diagram(refers to page 12...15)			

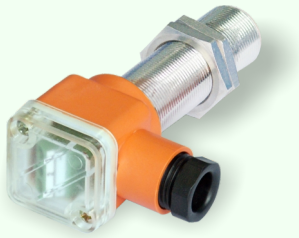
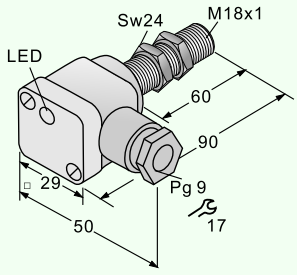
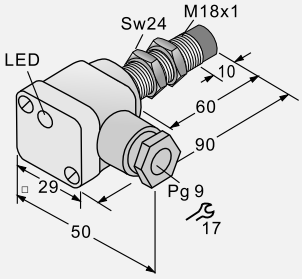
	M12x1, L85		M12x1, L85	
PICTURE				
AC–2 wires N.O.	IBL12-S02AA-A3NT	*20	IBL12-N04AA-A3NT	*20
AC–2 wires N.C.	IBL12-S02AB-A3NT	*21	IBL12-N04AB-A3NT	*21
Rated sensing distance	2mm		4mm	
Mounting	shield		non-shield	
Supply voltage	20...250V AC(50/60Hz)			
Leakage current	≤1.7mA			
Setting distance	0...1.4mm		0...2.8mm	
Standard target	Iron 12x12x1mm			
Frequency	20Hz			
Consumption	———			
Load current	200mA			
Voltage drop(V_p)	≤8V			
Hysteresis	3...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	———			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP66			
Connection	Terminal connection			
Housing material	PBT + nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	20 . 21—NO of wiring diagram(refers to page 12...15)			

	M18x1, L55(nickel-plated brass) M18x1, L65(PBT)			M18x1, L55(nickel-plated brass) M18x1, L65(PBT)		
PICTURE						
DC–3 wires NPN N.O.	IBT18-S05NA-D3Y2	IPT18-S05NA-D3Y2	*01	IBT18-N08NA-D3Y2	IPT18-N08NA-D3Y2	*01
DC–3 wires NPN N.C.	IBT18-S05NB-D3Y2	IPT18-S05NB-D3Y2	*02	IBT18-N08NB-D3Y2	IPT18-N08NB-D3Y2	*02
DC–3 wires PNP N.O.	IBT18-S05PA-D3Y2	IPT18-S05PA-D3Y2	*03	IBT18-N08PA-D3Y2	IPT18-N08PA-D3Y2	*03
DC–3 wires PNP N.C.	IBT18-S05PB-D3Y2	IPT18-S05PB-D3Y2	*04	IBT18-N08PB-D3Y2	IPT18-N08PB-D3Y2	*04
DC–2 wires N.O.	IBT18-S05LA-D2Y2	IPT18-S05LA-D2Y2	*18	IBT18-N08LA-D2Y2	IPT18-N08LA-D2Y2	*18
DC–2 wires N.C.	IBT18-S05LB-D2Y2	IPT18-S05LB-D2Y2	*19	IBT18-N08LB-D2Y2	IPT18-N08LB-D2Y2	*19
Rated sensing distance	5mm			8mm		
Mounting	shield			non-shield		
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.					
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)					
Setting distance	0...3.5mm			0...5.6mm		
Standard target	Iron 18x18x1mm			Iron 25x25x1mm		
Frequency	600Hz			400Hz		
Consumption	≤15mA					
Load current	200mA					
Voltage drop(V_P)	≤1.8V(2 wires : Load current 100mA < 5V)					
Hysteresis	1...15%					
Repeatability	≤2%					
Display	Red LED					
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection					
Operating temperature	-25...+70°C(no condensation)					
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times					
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours					
Protection	IP67					
Connection	Cable: ϕ4.8mm 2M					
Housing material	nickel-plated brass	PBT		nickel-plated brass	PBT	
Sensing face material	PBT					
Dimensional drawing						
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)					

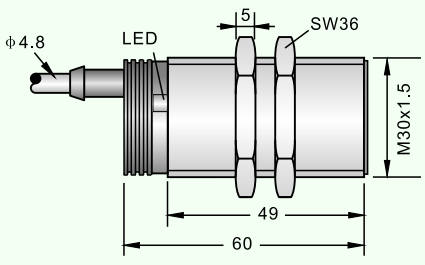
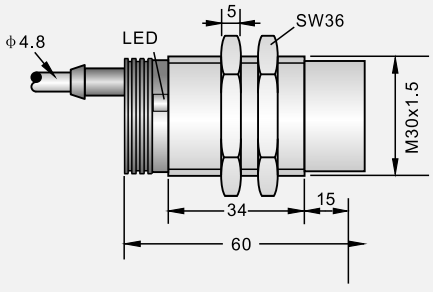
	M18x1, L73		M18x1, L73	
PICTURE				
DC–3 wires NPN N.O.	IBT18-S05NA-D4YV1	*29	IBT18-N08NA-D4YV1	*29
DC–3 wires NPN N.C.	IBT18-S05NB-D4YV1	*30	IBT18-N08NB-D4YV1	*30
DC–3 wires PNP N.O.	IBT18-S05PA-D4YV1	*31	IBT18-N08PA-D4YV1	*31
DC–3 wires PNP N.C.	IBT18-S05PB-D4YV1	*32	IBT18-N08PB-D4YV1	*32
DC–2 wires N.O.	IBT18-S05LA-D4YV1	*37	IBT18-N08LA-D4YV1	*37
DC–2 wires N.C.	IBT18-S05LB-D4YV1	*38	IBT18-N08LB-D4YV1	*38
Rated sensing distance	5mm		8mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...3.5mm		0...5.6mm	
Standard target	Iron 18x18x1mm		Iron 25x25x1mm	
Frequency	600Hz		400Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	M12 connector，LEDx4			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	29 . 30 . 31 . 32 . 37 . 38—NO of wiring diagram(refers to page 12...15)			

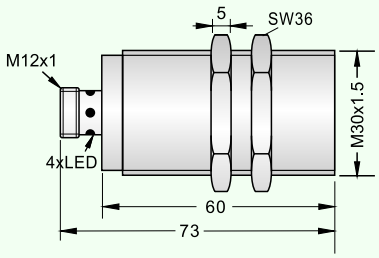
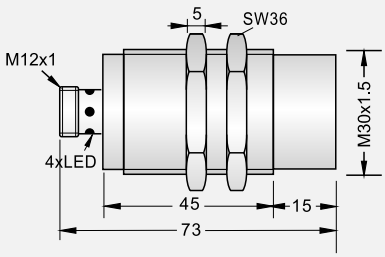
	M18x1, L90		M18x1, L90	
PICTURE				
DC–3 wires NPN N.O.	IBL18-S05NA-D3YT	*01	IBL18-N08NA-D3YT	*01
DC–3 wires NPN N.C.	IBL18-S05NB-D3YT	*02	IBL18-N08NB-D3YT	*02
DC–3 wires PNP N.O.	IBL18-S05PA-D3YT	*03	IBL18-N08PA-D3YT	*03
DC–3 wires PNP N.C.	IBL18-S05PB-D3YT	*04	IBL18-N08PB-D3YT	*04
DC–2 wires N.O.	IBL18-S05LA-D3YT	*18	IBL18-N08LA-D3YT	*18
DC–2 wires N.C.	IBL18-S05LB-D3YT	*19	IBL18-N08LB-D3YT	*19
Rated sensing distance	5mm		8mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...3.5mm		0...5.6mm	
Standard target	Iron 18x18x1mm		Iron 25x25x1mm	
Frequency	600Hz		400Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_P)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP66			
Connection	Terminal connection			
Housing material	PBT + nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)			

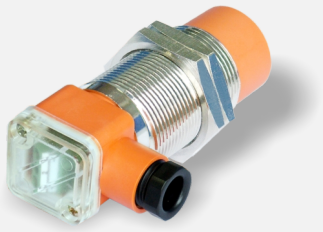
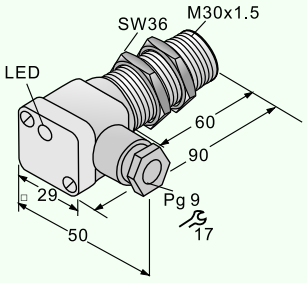
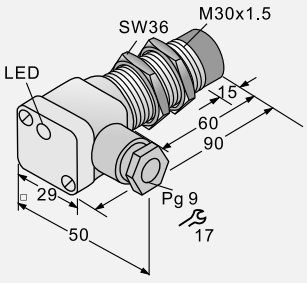
	M18x1, L55(nickel-plated brass) M18x1, L65(PBT)			M18x1, L55(nickel-plated brass) M18x1, L65(PBT)		
PICTURE						
AC–2 wires N.O.	IBT18-S05AA-A2N2	IPT18-S05AA-A2N2	* 20	IBT18-N08AA-A2N2	IPT18-N08AA-A2N2	* 20
AC–2 wires N.C.	IBT18-S05AB-A2N2	IPT18-S05AB-A2N2	* 21	IBT18-N08AB-A2N2	IPT18-N08AB-A2N2	* 21
Rated sensing distance	5mm			8mm		
Mounting	shield			non-shield		
Supply voltage	20...250V AC(50/60Hz)					
Leakage current	≤1.7mA					
Setting distance	0...3.5mm			0...5.6mm		
Standard target	Iron 18x18x1mm			Iron 25x25x1mm		
Frequency	20Hz					
Consumption	———					
Load current	200mA					
Voltage drop(V_p)	≤8V					
Hysteresis	3...15%					
Repeatability	≤2%					
Display	Red LED					
Protection Circuit	———					
Operating temperature	-25...+70°C(no condensation)					
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times					
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours					
Protection	IP67					
Connection	Cable: ϕ4.8mm 2M					
Housing material	nickel-plated brass	PBT		nickel-plated brass	PBT	
Sensing face material	PBT					
Dimensional drawing						
Remark	20 . 21—NO of wiring diagram(refers to page 12...15)					

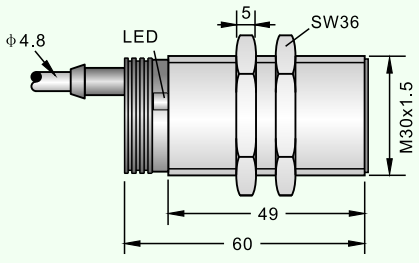
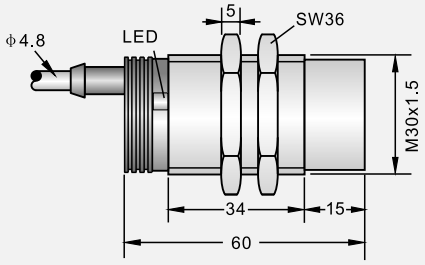
PICTURE	M18x1, L90  CE	M18x1, L90  CE
AC–2 wires N.O.	IBL18-S05AA-A3NT *20	IBL18-N08NA-A3NT *20
AC–2 wires N.C.	IBL18-S05AB-A3NT *21	IBL18-N08NB-A3NT *21
Rated sensing distance	5mm	8mm
Mounting	shield	non-shield
Supply voltage	20...250V AC(50/60Hz)	
Leakage current	≤1.7mA	
Setting distance	0...3.5mm	0...5.6mm
Standard target	Iron 18x18x1mm	Iron 25x25x1mm
Frequency	20Hz	
Consumption	———	
Load current	200mA	
Voltage drop(V_p)	≤8V	
Hysteresis	3...15%	
Repeatability	≤2%	
Display	Red LED	
Protection Circuit	———	
Operating temperature	-25...+70°C(no condensation)	
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times	
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours	
Protection	IP66	
Connection	Terminal connection	
Housing material	PBT + nickel-plated brass	
Sensing face material	PBT	
Dimensional drawing		
Remark	20 . 21—NO of wiring diagram(refers to page 12...15)	

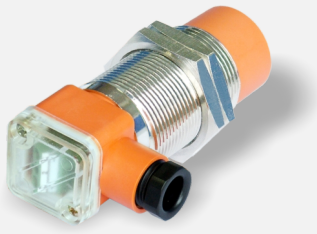
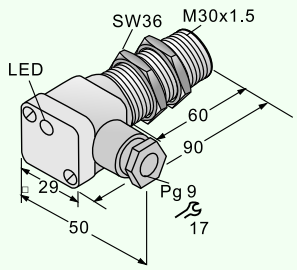
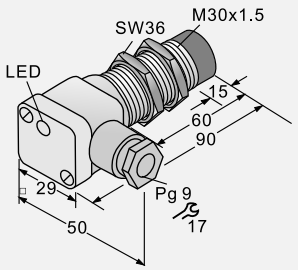
PICTURE

	M30x1.5, L60(nickel-plated brass) M30x1.5, L72(PBT)			M30x1.5, L60(nickel-plated brass) M30x1.5, L72(PBT)		
						
DC–3 wires NPN N.O.	IBT30-S10NA-D3Y2	IPT30-S10NA-D3Y2	*01	IBT30-N15NA-D3Y2	IPT30-N15NA-D3Y2	*01
DC–3 wires NPN N.C.	IBT30-S10NB-D3Y2	IPT30-S10NB-D3Y2	*02	IBT30-N15NB-D3Y2	IPT30-N15NB-D3Y2	*02
DC–3 wires PNP N.O.	IBT30-S10PA-D3Y2	IPT30-S10PA-D3Y2	*03	IBT30-N15PA-D3Y2	IPT30-N15PA-D3Y2	*03
DC–3 wires PNP N.C.	IBT30-S10PB-D3Y2	IPT30-S10PB-D3Y2	*04	IBT30-N15PB-D3Y2	IPT30-N15PB-D3Y2	*04
DC–2 wires N.O.	IBT30-S10LA-D2Y2	IPT30-S10LA-D2Y2	*18	IBT30-N15LA-D2Y2	IPT30-N15LA-D2Y2	*18
DC–2 wires N.C.	IBT30-S10LB-D2Y2	IPT30-S10LB-D2Y2	*19	IBT30-N15LB-D2Y2	IPT30-N15LB-D2Y2	*19
Rated sensing distance	10mm			15mm		
Mounting	shield			non-shield		
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.					
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)					
Setting distance	0...7mm			0...10.5mm		
Standard target	Iron 30x30x1mm			Iron 45x45x1mm		
Frequency	400Hz			300Hz		
Consumption	≤15mA					
Load current	200mA					
Voltage drop(V_P)	≤1.8V(2 wires : Load current 100mA < 5V)					
Hysteresis	1...15%					
Repeatability	≤2%					
Display	Red LED					
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection					
Operating temperature	-25...+70°C(no condensation)					
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times					
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours					
Protection	IP67					
Connection	Cable: ϕ4.8mm 2M					
Housing material	nickel-plated brass	PBT		nickel-plated brass	PBT	
Sensing face material	PBT					
Dimensional drawing						
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)					

	M30x1.5, L73		M30x1.5, L73	
PICTURE				
DC–3 wires NPN N.O.	IBT30-S10NA-D4YV1	* 29	IBT30-N15NA-D4YV1	* 29
DC–3 wires NPN N.C.	IBT30-S10NB-D4YV1	* 30	IBT30-N15NB-D4YV1	* 30
DC–3 wires PNP N.O.	IBT30-S10PA-D4YV1	* 31	IBT30-N15PA-D4YV1	* 31
DC–3 wires PNP N.C.	IBT30-S10PB-D4YV1	* 32	IBT30-N15PB-D4YV1	* 32
DC–2 wires N.O.	IBT30-S10LA-D4YV1	* 37	IBT30-N15LA-D4YV1	* 37
DC–2 wires N.C.	IBT30-S10LB-D4YV1	* 38	IBT30-N15LB-D4YV1	* 38
Rated sensing distance	10mm		15mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...7mm		0...10.5mm	
Standard target	Iron 30x30x1mm		Iron 45x45x1mm	
Frequency	400Hz		300Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_p)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP67			
Connection	M12 connector，LEDx4			
Housing material	nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	29 . 30 . 31 . 32 . 37 . 38—NO of wiring diagram(refers to page 12...15)			

	M30x1.5, L90		M30x1.5, L90	
PICTURE				
DC–3 wires NPN N.O.	IBL30-S10NA-D3YT	*01	IBL30-N15NA-D3YT	*01
DC–3 wires NPN N.C.	IBL30-S10NB-D3YT	*02	IBL30-N15NB-D3YT	*02
DC–3 wires PNP N.O.	IBL30-S10PA-D3YT	*03	IBL30-N15PA-D3YT	*03
DC–3 wires PNP N.C.	IBL30-S10PB-D3YT	*04	IBL30-N15PB-D3YT	*04
DC–2 wires N.O.	IBL30-S10LA-D3YT	*18	IBL30-N15LA-D3YT	*18
DC–2 wires N.C.	IBL30-S10LB-D3YT	*19	IBL30-N15LB-D3YT	*19
Rated sensing distance	10mm		15mm	
Mounting	shield		non-shield	
Supply voltage	12...24V DC (10...30V DC), ripple(p-p):10% max.			
Leakage current	<0.01mA (3 wires) ; <0.8mA(2 wires)			
Setting distance	0...7mm		0...10.5mm	
Standard target	Iron 30x30x1mm		Iron 45x45x1mm	
Frequency	400Hz		300Hz	
Consumption	≤15mA			
Load current	200mA			
Voltage drop(V_P)	≤1.8V(2 wires : Load current 100mA < 5V)			
Hysteresis	1...15%			
Repeatability	≤2%			
Display	Red LED			
Protection Circuit	Short circuit protection, reversed polarity protection and overload protection			
Operating temperature	-25...+70°C(no condensation)			
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times			
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours			
Protection	IP66			
Connection	Terminal connection			
Housing material	PBT + nickel-plated brass			
Sensing face material	PBT			
Dimensional drawing				
Remark	01 . 02 . 03 . 04 . 18 . 19—NO of wiring diagram(refers to page 12...15)			

PICTURE	M30x1.5, L60(nickel-plated brass) M30x1.5, L72(PBT)			M30x1.5, L60(nickel-plated brass) M30x1.5, L72(PBT)		
AC–2 wires N.O.	IBT30-S10AA-A2N2	IPT30-S10AA-A2N2	*20	IBT30-N15AA-A2N2	IPT30-N15AA-A2N2	*20
AC–2 wires N.C.	IBT30-S10AB-A2N2	IPT30-S10AB-A2N2	*21	IBT30-N15AB-A2N2	IPT30-N15AB-A2N2	*21
Rated sensing distance	10mm			15mm		
Mounting	shield			non-shield		
Supply voltage	20...250V AC(50/60Hz)					
Leakage current	≤1.7mA					
Setting distance	0...7mm			0...10.5mm		
Standard target	Iron 30x30x1mm			Iron 45x45x1mm		
Frequency	20Hz					
Consumption	———					
Load current	200mA					
Voltage drop(V_p)	≤8V					
Hysteresis	3...15%					
Repeatability	≤2%					
Display	Red LED					
Protection Circuit	———					
Operating temperature	-25...+70°C(no condensation)					
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times					
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours					
Protection	IP67					
Connection	Cable: ϕ4.8mm 2M					
Housing material	nickel-plated brass	PBT		nickel-plated brass	PBT	
Sensing face material	PBT					
Dimensional drawing						
Remark	20 . 21—NO of wiring diagram(refers to page 12...15)					

PICTURE	M30x1.5, L90  CE	M30x1.5, L90  CE
AC–2 wires N.O.	IBL30-S10AA-A3NT *20	IBL30-N15AA-A3NT *20
AC–2 wires N.C.	IBL30-S10AB-A3NT *21	IBL30-N15AB-A3NT *21
Rated sensing distance	10mm	15mm
Mounting	shield	non-shield
Supply voltage	20...250V AC(50/60Hz)	
Leakage current	≤1.7mA	
Setting distance	0...7mm	0...10.5mm
Standard target	Iron 30x30x1mm	Iron 45x45x1mm
Frequency	20Hz	
Consumption	———	
Load current	200mA	
Voltage drop(V_P)	≤8V	
Hysteresis	3...15%	
Repeatability	≤2%	
Display	Red LED	
Protection Circuit	———	
Operating temperature	-25...+70°C(no condensation)	
Anti–impact	500m/s²(50G) X、Y、Z direction, each 10 times	
Anti–vibration	10...55Hz(amplitude 1.5mm)X、Y、Z direction each 2 hours	
Protection	IP66	
Connection	Terminal connection	
Housing material	PBT + nickel-plated brass	
Sensing face material	PBT	
Dimensional drawing		
Remark	20 . 21—NO of wiring diagram(refers to page 12...15)	