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Safety sensor 171

Our bestsellers with a design common to the market: magnetically actuated safety sensors in M30 housing. The large number of variants available from elobau provide solutions for almost all applications.

Technical specification

- Available connection types: cable outlet, M8 and M12 housing connectors
- Simple diagnosis through optional LED and control contact
- Optionally with LED display

Technical drawing

IMAGE 1/3

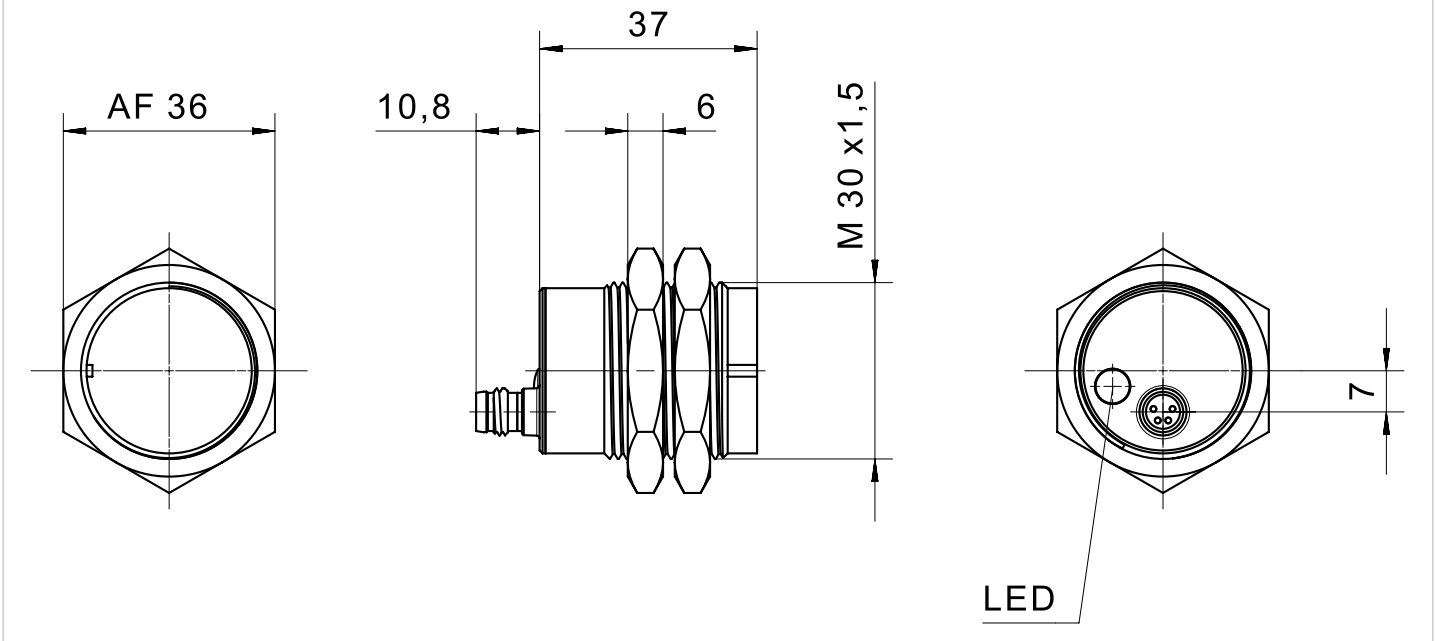

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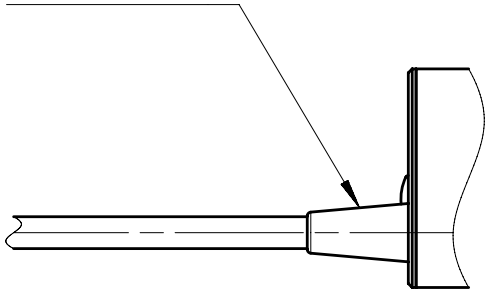
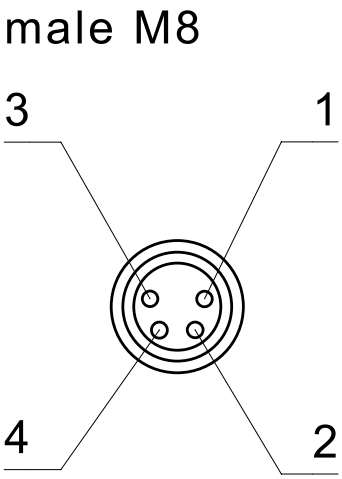
IMAGE 2/3





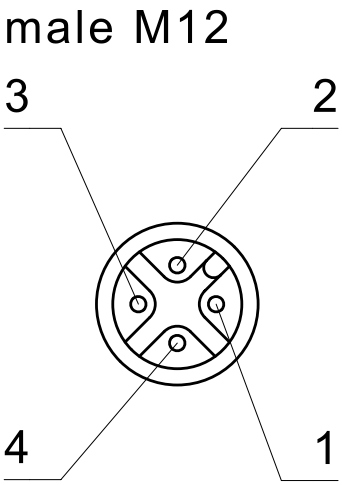


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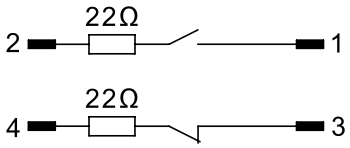
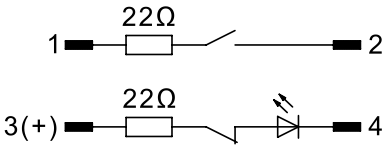
IMAGE 3/3

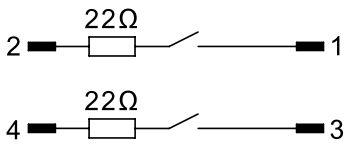
171271AY, 171271A0D



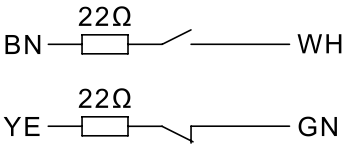
171271AZ, 171271A0E



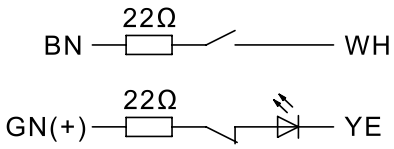
171V62AY, 171V62A0D



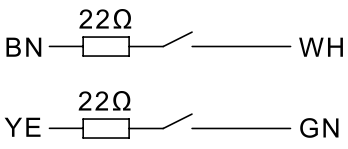
171V62AY, 171V62A0D



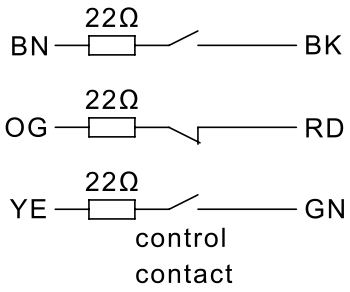
171271AA



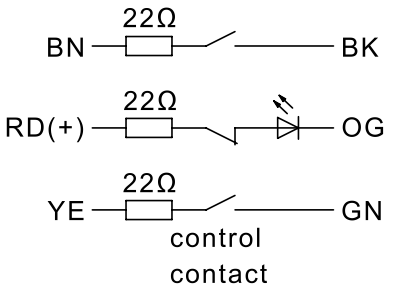
171V62,



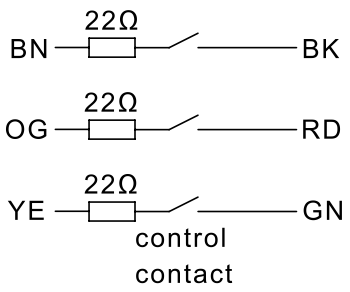
171571



171571AA



171562



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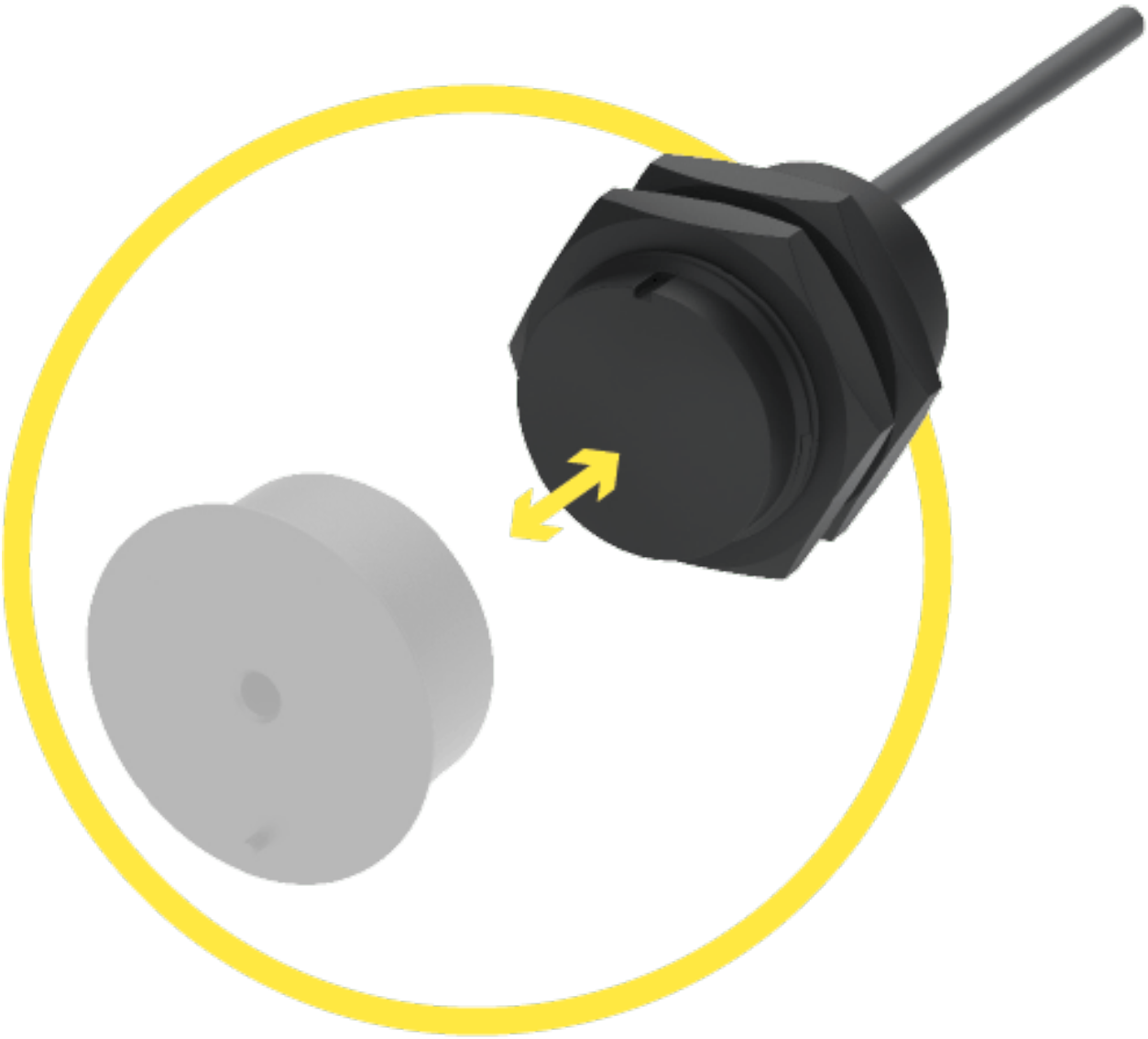
Product options

IMAGE 1/3



Suitable for front actuation. Assured switching distance (Sao) of 4 mm with standard actuators, 7 mm with extended-range actuators. Assured switch-off distance (Sar) of up to 17 mm with standard actuators, up to 23 mm with extended-range actuators

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IMAGE 2/3

ORDERING KEY

	171V62	171V62AY	171V62A0D	171271	171271AA
Plastic housing M30	x	x	x	x	x
M12x1 connector, 4-pin, plastic	-	x	-	-	-
M8x1 connector, 4-pin, nickel-plated brass	-	-	x	-	-
Connection cable 1m*	x	-	-	x	x
N.O./N.O. contacts	x	x	x	-	-
N.O./N.C. contacts	-	-	-	x	x
Additional N.O. control contact	-	-	-	-	-
LED in series to N.C.	-	-	-	-	x
Coded	x	x	x	x	x
Uncoded	-	-	-	-	-

	171271AY	171271AZ	171271A0D	171271A0E	171562
Plastic housing M30	x	x	x	x	x
M12x1 connector, 4-pin, plastic	x	x	-	-	-
M8x1 connector, 4-pin, nickel-plated brass	-	-	x	x	-
Connection cable 1m*	-	-	-	-	x
N.O./N.O. contacts	-	-	-	-	x
N.O./N.C. contacts	x	x	x	x	-
Additional N.O. control contact	-	-	-	-	x
LED in series to N.C.	-	x	-	x	-
Coded	x	x	x	x	x
Uncoded	-	-	-	-	-

	171571	171571AA			
Plastic housing M30	x	x			
M12x1 connector, 4-pin, plastic	-	-			
M8x1 connector, 4-pin, nickel-plated brass	-	-			
Connection cable 1m*	x	x			
N.O./N.O. contacts	-	-			
N.O./N.C. contacts	x	x			
Additional N.O. control contact	x	x			
LED in series to N.C.	-	x			
Coded	x	x			
Uncoded	-	-			

* Other cable lengths, cable materials and connector types on request

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IMAGE 3/3

MATCHING ACTUATORS

Actuators	Actuation direction	171V62			171V62AY			171V62A0D			171271			171271A		
		SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}
304 200 00	Front*	0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16
304 200 00 V		0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16
304 200 00 H		0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16
304 200 00 S		3	7	20	3	7	20	3	7	20	3	7	23	3	7	23
304 200 00 VS		3	7	20	3	7	20	3	7	20	3	7	23	3	7	23
304 200 00 SH		3	7	20	3	7	20	3	7	20	3	7	23	3	7	23

Actuators	Actuation direction	171271AY			171271AZ			171271A0D			171271A0E			171562		
		SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}
304 200 00	Front*	0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	17
304 200 00 V		0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16	-	-	-
304 200 00 H		0.5	4	16	0.5	4	16	0.5	4	16	0.5	4	16	-	-	-
304 200 00 S		3	7	23	3	7	23	3	7	23	3	7	23	0.5	6	19
304 200 00 VS		3	7	23	3	7	23	3	7	23	3	7	23	-	-	-
304 200 00 SH		3	7	23	3	7	23	3	7	23	3	7	23	-	-	-

Actuators	Actuation direction	171571			171571AA											
		SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}									
304 200 00	Front*	0.5	4	15	0.5	4	15									
304 200 00 V		-	-	-	-	-	-									
304 200 00 H		-	-	-	-	-	-									
304 200 00 S		0.5	6	17	0.5	6	17									
304 200 00 VS		-	-	-	-	-	-									
304 200 00 SH		-	-	-	-	-	-									

SO_{min} = minimum switching distance (mm), S_{ao} = operating distance (mm), S_{ar} = assured switch-off distance (mm)

* switching points for lateral actuation on request

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Electrical data

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	0.1 A					
Max. switching current with LED	–			0.02 A		–
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	4 mm					
Assured switch-off distance (Sar)	16 mm					
Minimum switching distance (S0 min)	0.5 mm					
LED display	No			single-coloured		No
Actuation	front					
Switching principle	magnetic					
Series resistor	22 Ohm					
Technology	Reed					
Contact form	NO/NO		NO/NC			NO/NO
Pollution degree	3					
Protection class	III					

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Electrical data

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	–	0.1 A				
Max. switching current with LED	–	0.02 A	–			0.02 A
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	4 mm					
Assured switch-off distance (Sar)	16 mm			17 mm	15 mm	
Minimum switching distance (S0 min)	0.5 mm					
LED display	No	single-coloured	No			single-coloured
Actuation	front					
Switching principle	magnetic					
Series resistor	22 Ohm					
Technology	Reed					
Contact form	NO/NC			NO/NO/NO (Kontrollkontakt)		
Pollution degree	3					
Protection class	III					

Safety-related characteristics

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Coding acc. to EN ISO 14119	Low					
B10d acc. to EN ISO 13849-1	20000000					
Type acc. to EN ISO 14119	4					
Mission time in years	20 a					
Structure acc. to EN ISO 13849-1	Two-channel					

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Safety-related characteristics

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Coding acc. to EN ISO 14119	Low					
B10d acc. to EN ISO 13849-1	20000000					
Type acc. to EN ISO 14119	4					
Mission time in years	20 a					
Structure acc. to EN ISO 13849-1	Two-channel					

Mechanical data

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Housing design	cylindrical					
Dimensions	M30 x 37 mm					
Minimum installation distance (between two sensors)	50 mm					
cannot be mounted flush	yes					
Detent present	no					

Mechanical data

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Housing design	cylindrical					
Dimensions	M30 x 37 mm					
Minimum installation distance (between two sensors)	50 mm					
cannot be mounted flush	yes					
Detent present	no					

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Material information

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Housing material	PBT					
Cable material	–					PVC
Nut material	PBT					
Housing colour	schwarz					

Material information

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Housing material	PBT					
Cable material	PVC		–	PVC		
Nut material	PBT					
Housing colour	schwarz					

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Environmental conditions

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Protection class	IP67 DIN EN 60529	IP65 DIN EN 60529	IP67 DIN EN 60529		IP65 DIN EN 60529	IP67 DIN EN 60529
Protection class, connector	IP67 DIN EN 60529 (screwed) - IP65 DIN EN 60529 (plugged)	IP65 DIN EN 60529	IP67 DIN EN 60529 (screwed) - IP65 DIN EN 60529 (plugged)	IP67 DIN EN 60529	IP65 DIN EN 60529	-
Operating temperature min.	-25 °C					
Max. operating temperature	75 °C					
Min. cable temperature range, moving	-					-5 °C
Max. cable temperature range, moving	-					70 °C
Min. cable temperature range, fixed installation	-					-25 °C
Max. cable temperature range, fixed installation	-					70 °C
Shock resistance (Norm)	30g / 11ms					
Vibration resistance (Norm)	10 - 55Hz					
Min. storage temperature	-25 °C					
Max. storage temperature	75 °C					

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Environmental conditions

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Protection class	IP67 DIN EN 60529		IP65 DIN EN 60529	IP67 DIN EN 60529		
Protection class, connector	-		IP65 DIN EN 60529	-		
Operating temperature min.	-25 °C					
Max. operating temperature	75 °C			70 °C		
Min. cable temperature range, moving	-5 °C		-	-10 °C		
Max. cable temperature range, moving	70 °C		-	105 °C		
Min. cable temperature range, fixed installation	-25 °C		-	-30 °C		
Max. cable temperature range, fixed installation	70 °C		-	105 °C		
Shock resistance (Norm)	30g / 11ms					
Vibration resistance (Norm)	10 - 55Hz					
Min. storage temperature	-	-25 °C				
Max. storage temperature	-	75 °C		70 °C		

Installation

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Mounting type	Fastening nut					
Thread	M30					
Torque for nuts	10 N m					
Installation	arbitrary					
Weight	-					60 g

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Installation

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Mounting type	Fastening nut					
Thread	M30					
Torque for nuts	10 N m					
Installation	arbitrary					
Weight	60 g		–	60 g		

Connection

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Connector type	M12x1 - 4 polig	M8x1 - 4 polig	M12x1 - 4 polig		M8x1 - 4 polig	–
Cable length	–					1 m
Number of strands	–					4
Wire cross section	–					0.25 mm²
Cable type	–					LiYY 4x0,25
Cable colour	–					grau

Connection

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Connector type	–		M8x1 - 4 polig	–		
Cable length	1 m		–	1 m		
Number of strands	4		–	6		
Wire cross section	0.25 mm²		–	0.22 mm²		
Cable type	LiYY 4x0,25		–	LiYY 6x0,25		
Cable colour	grau		–	schwarz		

Approvals

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
CE label	yes					
Certified in accordance with	ETL					

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Approvals

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
CE label	no	yes				
Certified in accordance with	ETL					

Operating data

Attribute	171V62AY	171V62A0D	171271AY	171271AZ	171271A0E	171V62
Possible actuators	30420000					

Operating data

Attribute	171271	171271AA	171271A0D	171562	171571	171571AA
Possible actuators	30420000					