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eloProtect M - Sensor de segurança magnético 165MSK

O sensor de segurança magnético da família eloProtect M oferece maiores distâncias de comutação proporcionando maior flexibilidade durante a instalação e alta estabilidade durante sua operação. A carcaça deste sensor é robusta e resistente à choques mecânicos e produtos químicos.

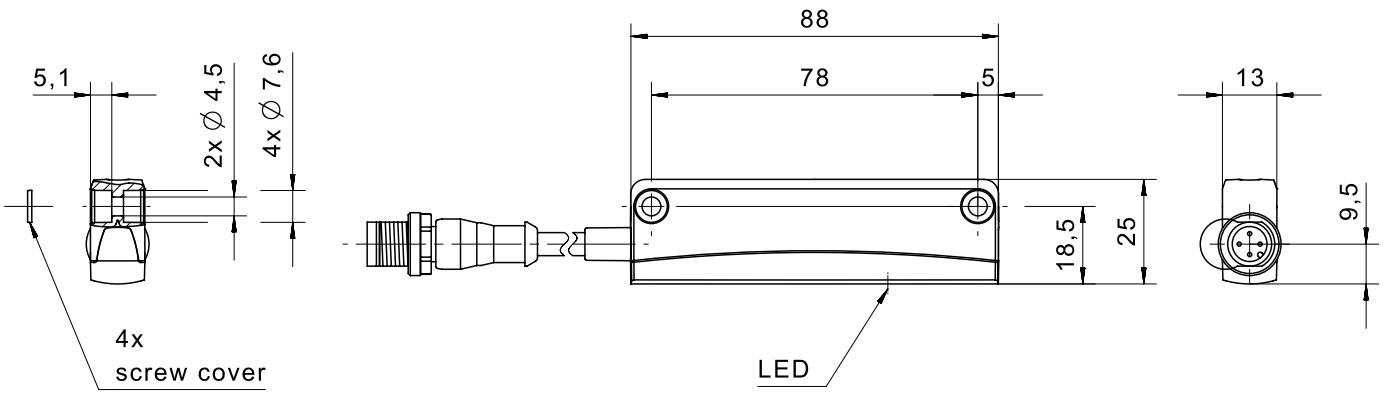
Esta família de sensores foi desenvolvida e aprovada para aplicação de produtos de limpeza (ECOLAB). A alta classe de proteção IP6K9K e a resistência à altas temperaturas até +80 ° C o tornam ideal para aplicação na indústria de alimentos e embalagens, bem como na indústria química e farmacêutica.

Especificação Técnica

- Dupla opção de fixação permite que seja montado de qualquer lado da porta
- Sinal de saída à cabo ou conector M12
- Diagnóstico simples através de LED (opcional) e contato de controle
- As tampas dos parafusos evitam o acúmulo de sujeira
- Classe de proteção IP6K9K (ISO 20653)

Desenho técnico

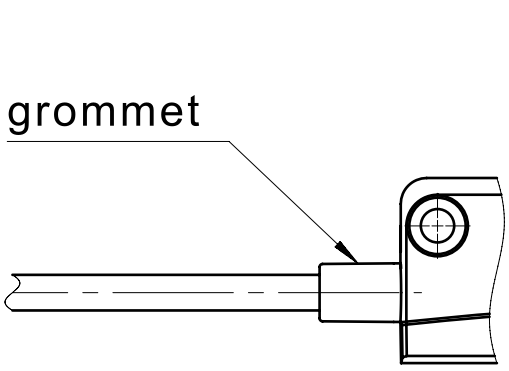
IMAGE 1/4

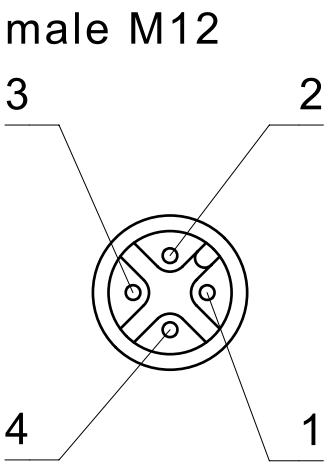


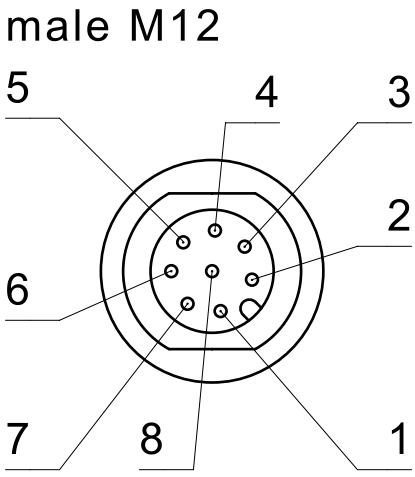
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IMAGE 2/4





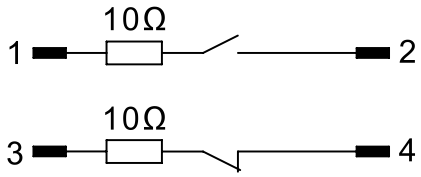


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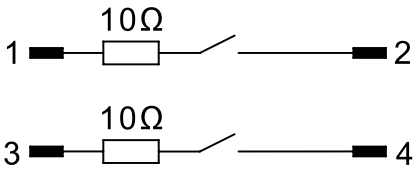
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IMAGE 3/4

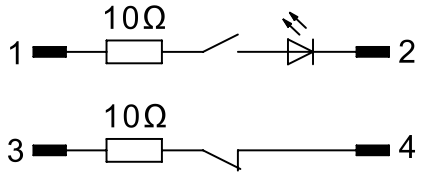
165MSK.0H1G, 165MSK.0H1K



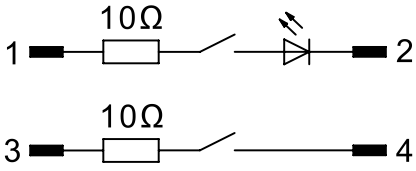
165MSK.0H1A, 165MSK.0H1E



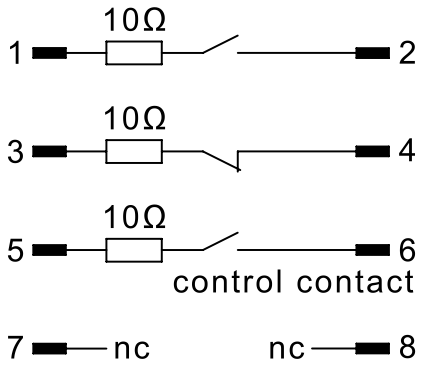
165MSK.0H1H



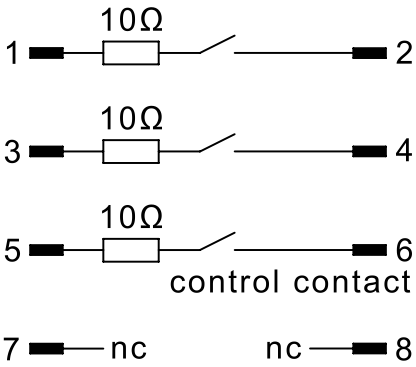
165MSK.0H1B



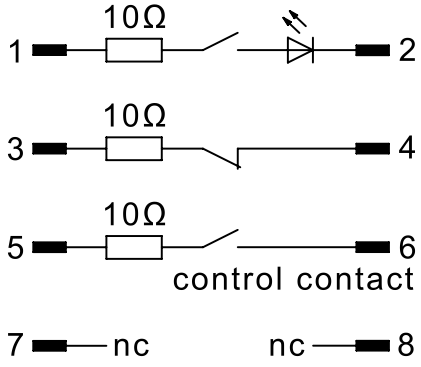
165MSK.0J1I



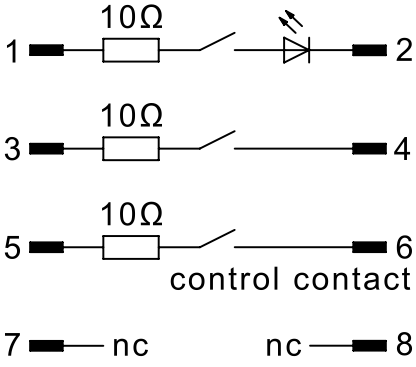
165MSK.0J1C



165MSK.0J1J



165MSK.0J1D

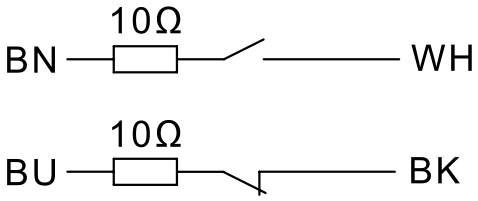


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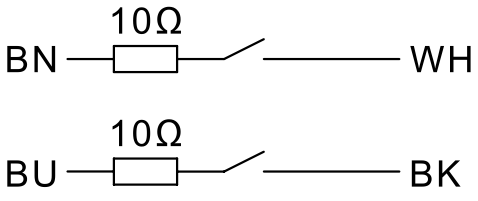
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IMAGE 4/4

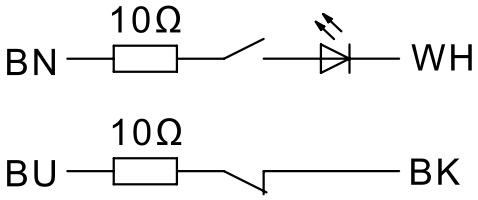
165MSK.0K1G, 165MSK.0K1K



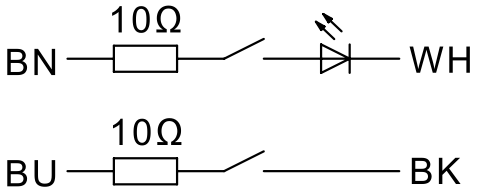
165MSK.0K1A, 165MSK.0K1E



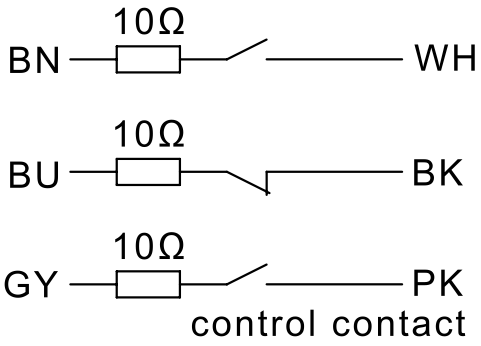
165MSK.0K1H



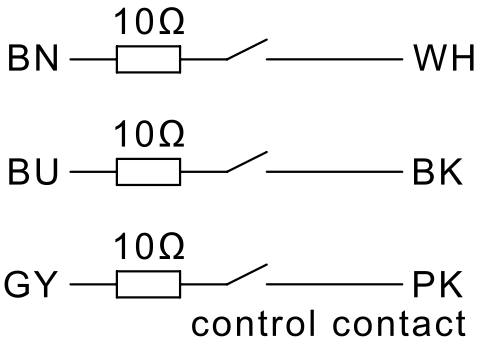
165MSK.0K1B



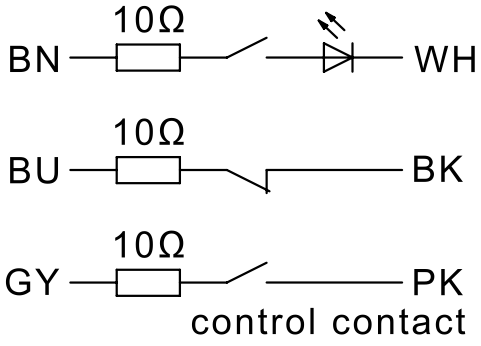
165MSK.0K1I



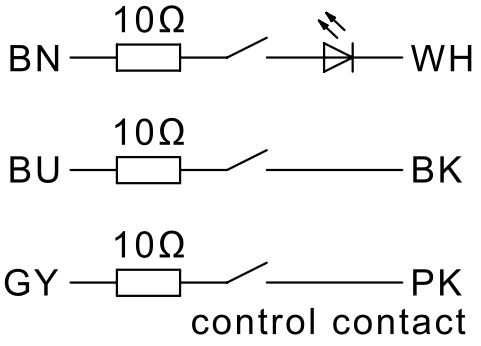
165MSK.0K1C



165MSK.0K1J



165MSK.0K1D

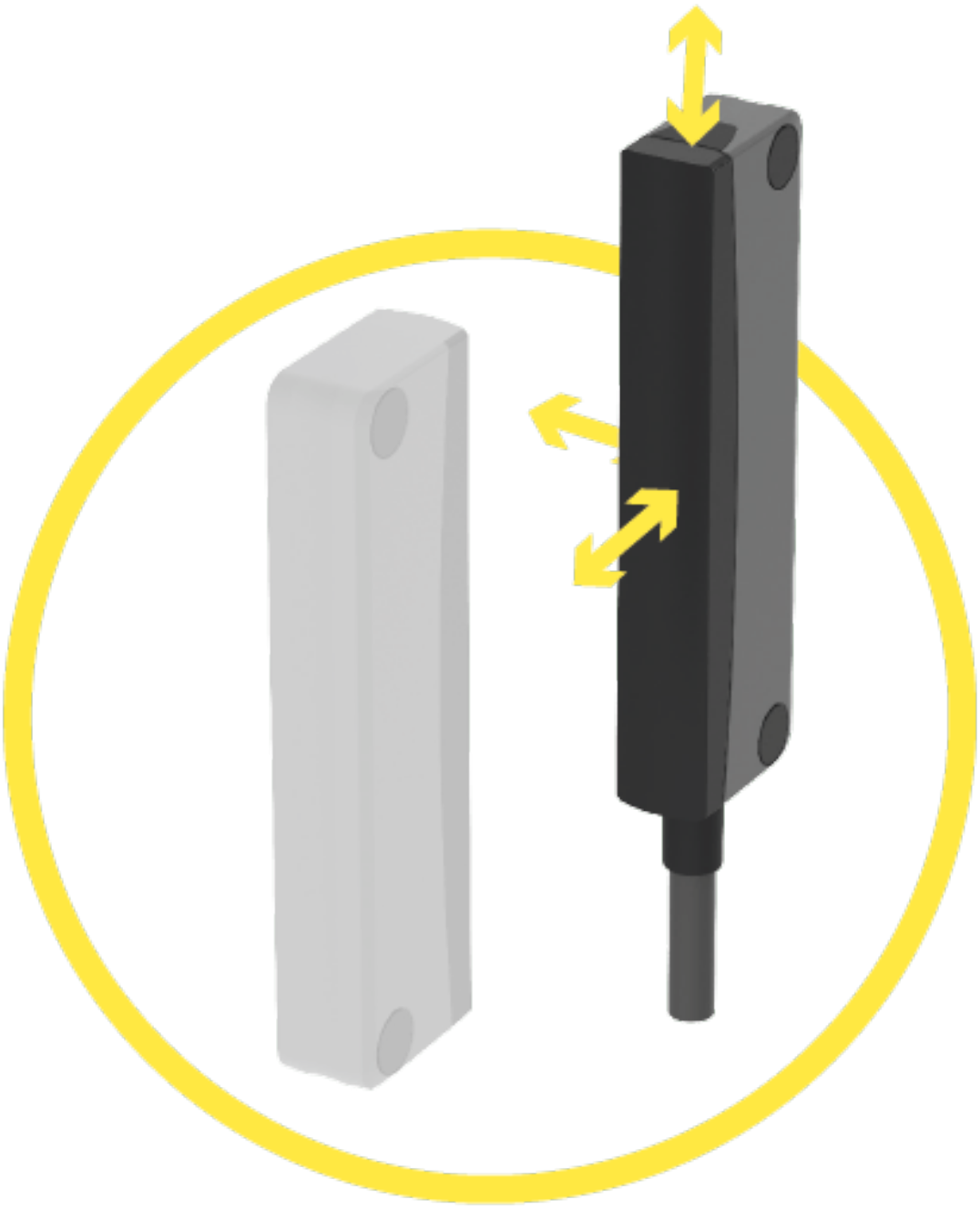


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Product options

IMAGE 1/3



Suitable for front, side and 90° actuation. Operating distance (Sao) from 5 to 14 mm. Assured switch-off distance (Sar) from 8 to 18 mm.

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IMAGE 2/3

ORDERING KEY

165MSK	00				Safety sensor, rectangular, plastic
		K1			Connection cable – PVC - 1m
		H1			Connection pigtail – PVC – M12, 4-pin
		J1			Connection pigtail – PVC – M12, 8-pin
			A		N.O./N.O. – front actuation
			B		N.O./N.O. – LED – front actuation
			C		N.O./N.O./control contact – front actuation
			D		N.O./N.O./control contact – LED – front actuation
			E		N.O./N.O. – side actuation
			F		N.O./N.O. – LED – side actuation
			G		N.O./N.C. – front actuation
			H		N.O./N.C. – LED – front actuation
			I		N.O./N.C./control contact – front actuation
			J		N.O./N.C./control contact – LED – front actuation
			K		N.O./N.C. – side actuation
			L		N.O./N.C. – LED – side actuation
					Other available cable lengths (only with "K" at 9th position)
				-3	3 m
				-5	5 m
				-10	10 m
					Other cable materials, cable lengths and connector types on request

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IMAGE 3/3

MATCHING ACTUATORS

Actuators	Actuation direction	165MSK00.1A 165MSK00.1G			165MSK00.1E 165MSK00.1K			165MSK00.1B 165MSK00.1H		
		SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}
165 MBK 001	Front	0.5	5	14	-	-	-	0.5	5	14
165 MBK 101		0.5	8	18	-	-	-	0.5	8	18
165 MBK 201	Front 90°	0.5	5	14	-	-	-	0.5	5	14
165 MBK 301		0.5	8	18	-	-	-	0.5	8	18
165 MBK 001	Side	-	-	-	0.5	5	14	-	-	-
165 MBK 101		-	-	-	-	8	18	-	-	-
165 MBK 201	Side 90°	-	-	-	0.5	5	14	-	-	-
165 MBK 301		-	-	-	-	8	18	-	-	-

Actuators	Actuation direction	165MSK00.1F 165MSK00.1L			165MSK00.1C 165MSK00.1I			165MSK00.1D 165MSK00.1J		
		SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}	SO_{min}	S_{ao}	S_{ar}
165 MBK 001	Front	-	-	-	0.5	5	14	0.5	5	14
165 MBK 101		-	-	-	0.5	8	18	0.5	8	18
165 MBK 201	Front 90°	-	-	-	0.5	5	14	0.5	5	14
165 MBK 301		-	-	-	0.5	8	18	0.5	8	18
165 MBK 001	Side	0.5	5	14	-	-	-	-	-	-
165 MBK 101		-	8	18	-	-	-	-	-	-
165 MBK 201	Side 90°	0.5	5	14	-	-	-	-	-	-
165 MBK 301		-	8	18	-	-	-	-	-	-

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

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Características do artigo

Attribute	165MSK00H1A	165MSK00H1B	165MSK00H1F	165MSK00H1G	165MSK00H1H	165MSK00H1K
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	0.2 A					
Max. switching current with LED	–	0.01 A		–	0.01 A	–
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	5 mm					
Assured switch-off distance (Sar)	14 mm					
Minimum switching distance (S0 min)	0.5 mm					
LED display	No	single-coloured		No	single-coloured	No
Actuation	front		side	front		side
Switching principle	magnetic					
Series resistor	10 Ohm					
Technology	Reed					
Contact form	NO/NO			NO/NC		
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					
Housing colour	grau, schwarz					
Housing design	rectangular					
Dimensions	25 x 88 x 13 mm					
cannot be mounted flush	yes					
Housing material	PBT, PC					
Cable material	PVC					
Pollution degree	3					
Protection class	III					
Protection class	IP67 DIN EN 60529 - IP6K9K ISO 20653					

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Attribute	165MSK00H1A	165MSK00H1B	165MSK00H1F	165MSK00H1G	165MSK00H1H	165MSK00H1K
Protection class, connector	IP67 DIN EN 60529					
Operating temperature min.	-25 °C					
Max. operating temperature	80 °C					
Min. cable temperature range, moving	-5 °C					
Max. cable temperature range, moving	80 °C					
Min. cable temperature range, fixed installation	-30 °C					
Max. cable temperature range, fixed installation	80 °C					
Shock resistance (Norm)	30g / 11ms					
Vibration resistance (Norm)	10 - 55Hz					
Min. storage temperature	-25 °C					
Max. storage temperature	80 °C					
Mounting type	screwed					
Detent present	no					
Connector type	M12x1 - 4 polig					
Cable length	0.15 m					
Number of strands	4					
Wire cross section	0.25 mm²					
Certified in accordance with	–	UL				
CE label	yes					
Possible actuators	165MBK001					

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Attribute	165MSK00H1L	165MSK00J1C	165MSK00J1D	165MSK00J1I	165MSK00J1J	165MSK00K1A
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	0.2 A					
Max. switching current with LED	0.01 A	–	0.01 A	–	0.01 A	–
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	5 mm					
Assured switch-off distance (Sar)	14 mm					
Minimum switching distance (S0 min)	0.5 mm					
LED display	single-coloured	No	single-coloured	No	single-coloured	No
Actuation	side	front				
Switching principle	magnetic					
Series resistor	10 Ohm					
Technology	Reed					
Contact form	NO/NC	NO/NO/NO (Kontrollkontakt)		NO/NC/NO		NO/NO
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					
Housing colour	grau, schwarz					
Housing design	rectangular					
Dimensions	25 x 88 x 13 mm					
cannot be mounted flush	yes					
Housing material	PBT, PC					
Cable material	PVC					
Pollution degree	3					
Protection class	III					
Protection class	IP67 DIN EN 60529 - IP6K9K ISO 20653					
Protection class, connector	IP67 DIN EN 60529					–

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Attribute	165MSK00H1L	165MSK00J1C	165MSK00J1D	165MSK00J1I	165MSK00J1J	165MSK00K1A
Operating temperature min.	-25 °C					
Max. operating temperature	80 °C					
Min. cable temperature range, moving	-5 °C					
Max. cable temperature range, moving	80 °C					
Min. cable temperature range, fixed installation	-30 °C					
Max. cable temperature range, fixed installation	80 °C					
Shock resistance (Norm)	30g / 11ms					
Vibration resistance (Norm)	10 - 55Hz					
Min. storage temperature	-25 °C					
Max. storage temperature	80 °C					
Mounting type	screwed					
Detent present	no					
Connector type	M12x1 - 4 polig	M12x1 - 8 polig				–
Cable length	0.15 m					1 m
Number of strands	4	8				4
Wire cross section	0.25 mm²					
Certified in accordance with	UL					
CE label	yes					
Possible actuators	165MBK001					

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Attribute	165MSK00K1B	165MSK00K1C	165MSK00K1D	165MSK00K1F	165MSK00K1G	165MSK00K1H
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	0.2 A					
Max. switching current with LED	0.01 A	–	0.01 A		–	0.01 A
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	5 mm					
Assured switch-off distance (Sar)	14 mm					
Minimum switching distance (S0 min)	0.5 mm					
LED display	single-coloured	No	single-coloured		No	single-coloured
Actuation	front			side	front	
Switching principle	magnetic					
Series resistor	10 Ohm					
Technology	Reed					
Contact form	NO/NO	NO/NO/NO (Kontrollkontakt)		NO/NO	NO/NC	
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					
Housing colour	grau, schwarz					
Housing design	rectangular					
Dimensions	25 x 88 x 13 mm					
cannot be mounted flush	yes					
Housing material	PBT, PC					
Cable material	PVC					
Pollution degree	3					
Protection class	III					
Protection class	IP67 DIN EN 60529 - IP6K9K ISO 20653					
Protection class, connector	–					

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Attribute	165MSK00K1B	165MSK00K1C	165MSK00K1D	165MSK00K1F	165MSK00K1G	165MSK00K1H
Operating temperature min.	-25 °C					
Max. operating temperature	80 °C					
Min. cable temperature range, moving	-5 °C					
Max. cable temperature range, moving	80 °C					
Min. cable temperature range, fixed installation	-30 °C					
Max. cable temperature range, fixed installation	80 °C					
Shock resistance (Norm)	30g / 11ms					
Vibration resistance (Norm)	10 - 55Hz					
Min. storage temperature	-25 °C					
Max. storage temperature	80 °C					
Mounting type	screwed					
Detent present	no					
Connector type	-					
Cable length	1 m					
Number of strands	4	6		4		
Wire cross section	0.25 mm²					
Certified in accordance with	UL					
CE label	yes					
Possible actuators	165MBK001					

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Attribute	165MSK00K1I	165MSK00K1J	165MSK00K1K	165MSK00K1L	165MSK00K1H31	165MSK00H1A31
Min. switching voltage	19.2 V DC					
Max. switching voltage	28.8 V DC					
Max. switching current	0.2 A					
Max. switching current with LED	–	0.01 A	–	0.01 A	–	
Max. switching power	3 W					
Switching frequency	5 Hz					
Assured switching distance (Sao)	5 mm					
Assured switch-off distance (Sar)	14 mm					
Minimum switching distance (S0 min)	0.5 mm					
LED display	No	single-coloured	No	single-coloured	No	
Actuation	front		side		front	
Switching principle	magnetic					
Series resistor	10 Ohm					
Technology	Reed					
Contact form	NO/NC/NO		NO/NC		NO/NO	
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			–	20 a	
Structure acc. to EN ISO 13849-1	Two-channel					
Housing colour	grau, schwarz					
Housing design	rectangular					
Dimensions	25 x 88 x 13 mm					
cannot be mounted flush	yes					
Housing material	PBT, PC					
Cable material	PVC					
Pollution degree	3					
Protection class	III					
Protection class	IP67 DIN EN 60529 - IP6K9K ISO 20653					

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Attribute	165MSK00K1I	165MSK00K1J	165MSK00K1K	165MSK00K1L	165MSK00K1H31	165MSK00H1A31
Protection class, connector	–					IP67 DIN EN 60529
Operating temperature min.	-25 °C					
Max. operating temperature	80 °C					
Min. cable temperature range, moving	-5 °C					
Max. cable temperature range, moving	80 °C					
Min. cable temperature range, fixed installation	-30 °C					
Max. cable temperature range, fixed installation	80 °C					
Shock resistance (Norm)	30g / 11ms					
Vibration resistance (Norm)	10 - 55Hz					
Min. storage temperature	-25 °C					
Max. storage temperature	80 °C					
Mounting type	screwed					
Detent present	no					
Connector type	–					M12x1 - 4 polig
Cable length	1 m					0.15 m
Number of strands	6		4			
Wire cross section	0.25 mm²					
Certified in accordance with	UL					–
CE label	yes					
Possible actuators	165MBK001					

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Attribute	165MSK00H1E	165MSK00K1E
Min. switching voltage	19.2 V DC	
Max. switching voltage	28.8 V DC	
Max. switching current	0.2 A	
Max. switching current with LED	–	
Max. switching power	3 W	
Switching frequency	5 Hz	
Assured switching distance (Sao)	5 mm	
Assured switch-off distance (Sar)	14 mm	
Minimum switching distance (S0 min)	0.5 mm	
LED display	No	
Actuation	front	side
Switching principle	magnetic	
Series resistor	10 Ohm	
Technology	Reed	
Contact form	NO/NO	
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	
Housing colour	grau, schwarz	
Housing design	rectangular	
Dimensions	25 x 88 x 13 mm	
cannot be mounted flush	yes	
Housing material	PBT, PC	
Cable material	PVC	
Pollution degree	3	
Protection class	III	
Protection class	IP67 DIN EN 60529 - IP6K9K ISO 20653	
Protection class, connector	IP67 DIN EN 60529	–
Operating temperature min.	-25 °C	
Max. operating temperature	80 °C	

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Attribute	165MSK00H1E	165MSK00K1E
Min. cable temperature range, moving	-5 °C	
Max. cable temperature range, moving	80 °C	
Min. cable temperature range, fixed installation	-30 °C	
Max. cable temperature range, fixed installation	80 °C	
Shock resistance (Norm)	30g / 11ms	
Vibration resistance (Norm)	10 - 55Hz	
Min. storage temperature	-25 °C	
Max. storage temperature	80 °C	
Mounting type	screwed	
Detent present	no	
Connector type	M12x1 - 4 polig	–
Cable length	0.15 m	1 m
Number of strands	4	
Wire cross section	0.25 mm²	
Certified in accordance with	–	UL
CE label	yes	
Possible actuators	165MBK001	