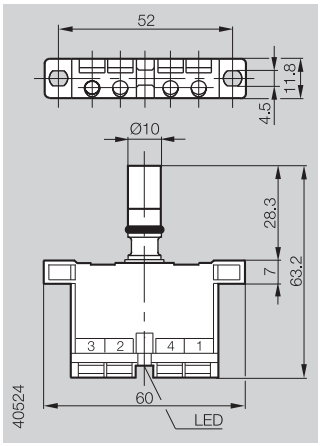
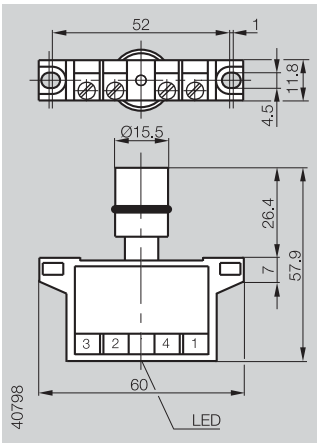
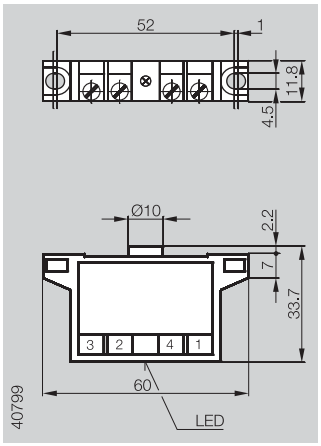
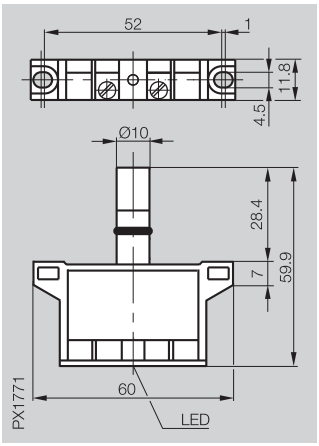
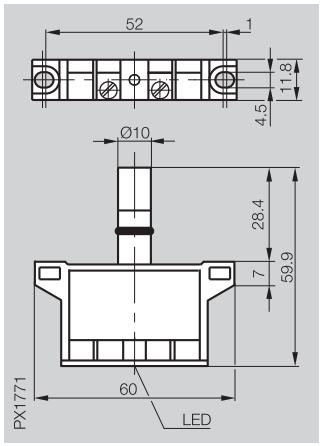
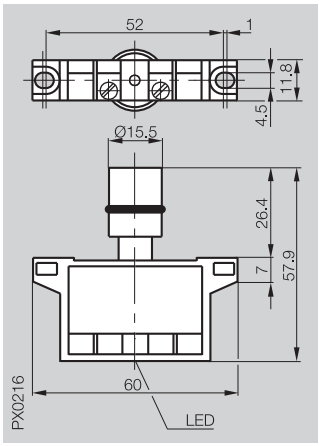
	NA	THA	DH	
	2 mm	**5 mm**	**2, 2 mm**	
	0...1.6 mm	0...4 mm	0...1.8 mm	
	602, 610...613, 605	602, 611, 613, 605	100, 62, 72, 61	
				
		BES 517-142-Y	BES 516-110-D	
	BES 517-108			
	24 V DC	24 V DC	24 V DC	
	10...60 V DC	10...30 V DC	10...30 V DC	
	≤ 1.5 V	≤ 3.5 V	≤ 1.2 V	
	75 V DC	75 V DC	75 V DC	
	200 mA	130 mA	400 mA	
	≤ 15 mA/≤ 12 mA	≤ 30 mA/≤ 30 mA	≤ 30 mA/≤ 30 mA	
	≤ 50 µA	≤ 80 µA	≤ 100 µA	
	yes	yes	yes	
	yes	yes	no	
	≤ 0.5 µF	≤ 1 µF	≤ 1 µF	
	≤ 5 %	≤ 5 %	≤ 5 %	
	–25...+70 °C	–25...+70 °C	–25...+70 °C	
	1500 Hz	500 Hz	1000 Hz	
	DC 13	DC 13	DC 13	
	yes	yes	yes	
	IP 67	IP 67	IP 67	
	PA 12	PA 12	PA 12	
	PA 12	PBT	PA 12	
	Screw terminals	Screw terminals	Screw terminals	
	up to 1.5 mm²	up to 2.5 mm²	up to 2.5 mm²	

5.1

Code for inductive switch elements	**WS**	**WO**	**EJA**
Rated operating distance s_n	**2 mm**	**2 mm**	**5 mm**
Assured operating distance s_a	0...1.6 mm	0...1.6 mm	0...4 mm
for multiple position switches series	602, 610...613, 605	602, 610...613, 605	602, 611, 613, 605





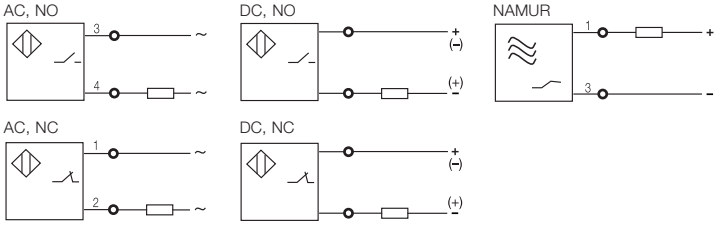


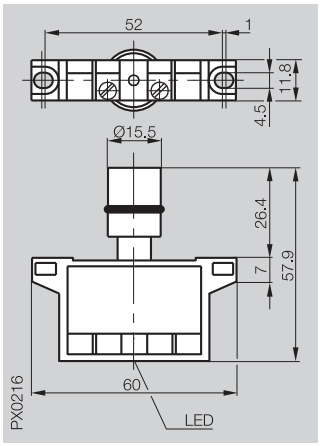
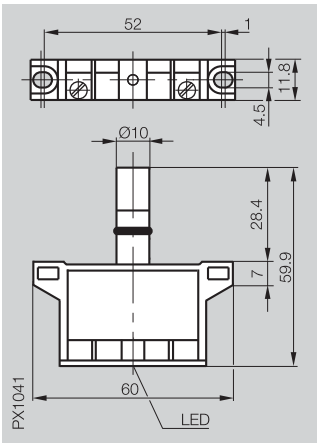
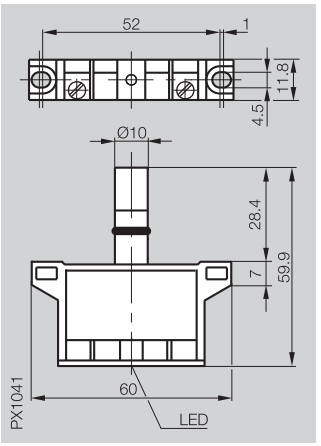
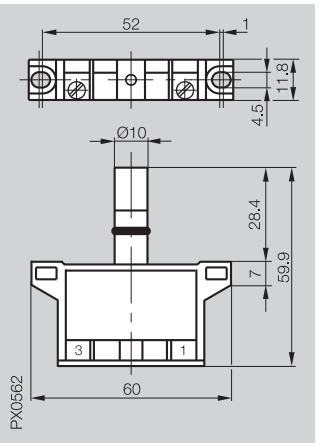
Order code for replacement switch elements

AC	NO	BES 517-410		BES 517-463
	NC		BES 517-421	
DC	NO			
	NC			
	NAMUR			

Rated operational voltage U_e	110 V AC	110 V AC	220 V AC
Supply voltage U_B	35...250 V AC	35...250 V AC	90...250 V AC
Voltage drop U_d at I_e static	≤ 8.5 V	≤ 8.5 V	≤ 8.5 V
Rated insulation voltage U_i	250 V AC	250 V AC	250 V AC
Rated operational current I_e	100 mA	100 mA	100 mA
No-load current I_0 damped/undamped			
Off-state current I_r	≤ 1700 µA	≤ 1700 µA	≤ 3000 µA
Polarity reversal protected	yes	yes	yes
Short circuit protected	no	no	no
Permissible load capacitance			
Repeat accuracy R	≤ 5 %	≤ 5 %	≤ 5 %
Ambient temperature range T_a	–25...+70 °C	–25...+70 °C	–25...+70 °C
Switching frequency f	10 Hz	10 Hz	15 Hz
Utilization category	AC 140	AC 140	AC 140
Function indicator	yes	yes	yes
Degree of protection per IEC 60529	IP 67	IP 67	IP 67
Housing material	PA	PA	PA
Material of sensing face	PA 12	PA 12	PA 12
Connection type	Screw terminals	Screw terminals	Screw terminals
max. conductor cross-section	up to 2.5 mm²	up to 2.5 mm²	up to 2.5 mm²
Approval	cULus	cULus	cULus
Output signal:			
Fully undamped			
Fully damped			
Permissible series resistance R_V			

Wiring diagrams

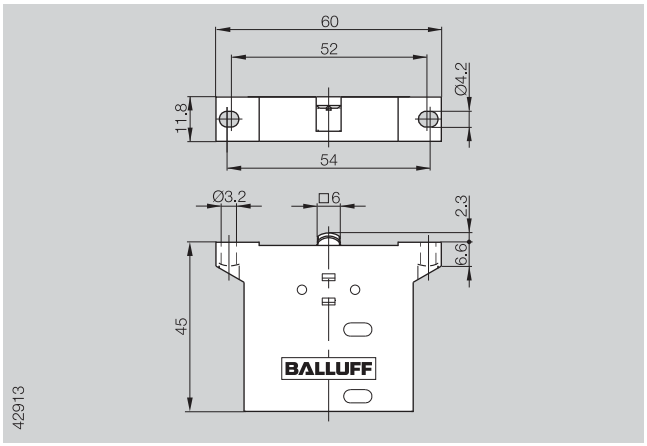


	AAA	KHG	KHH	NG
	5 mm	**2 mm**	**2 mm**	**2 mm**
	0...4 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm
	602, 611, 613, 605	602, 610...613, 605	602, 610...613, 605	602, 610...613, 605
				
	BES 517-464	BES 517-560-H	BES 517-561-H	BES 516-314-N
	220 V AC	24 V DC	24 V DC	8.2 V DC
	90...250 V AC	10...55 V DC	10...55 V DC	7.7...9 V DC
	≤ 8.5 V	≤ 7 V DC	≤ 7 V DC	
	250 V AC	75 V DC	75 V DC	75 V DC
	100 mA	100 mA	100 mA	
	≤ 3000 µA	≤ 1350 µA	≤ 1350 µA	
	yes	yes	yes	yes
	no	yes	yes	no
		≤ 0.5 µF	≤ 0.5 µF	
	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %
	–25...+70 °C	–25...+70 °C	–25...+70 °C	–25...+70 °C
	15 Hz	1000 Hz	1000 Hz	1000 Hz
	AC 140	DC 13	DC 13	
	yes	yes	yes	no
	IP 67	IP 67	IP 67	IP 67
	PA	PA 12	PA 12	PBT
	PA 12	PA 12	PA 12	PBT
	Screw terminals	Screw terminals	Screw terminals	Screw terminals
	up to 2.5 mm²	up to 2.5 mm²	up to 2.5 mm²	up to 2.5 mm²
	cULus			
				Current change (no trigger response)
				≥ 4 mA
				≤ 1 mA
				550...1100 Ohm

5.1

Snap switch element BWT for wireless position switch F 60

Type	Snap switch element BWT T1-185-01
for wireless position switches series	F 60



Ordering code for replacement element	BWT T1-185-01

Construction

Switching principle	Snap switch

Mechanical data

Switching actuation force on telescoping plunger	min. 20 N
Switching frequency	max. 60 operations/min
Housing material	Duroplast
Ambient temperature range T_a	–5...+70 °C

Electrical data

Supply voltage	Electrodynamic power generator
Transmitting frequency	868 MHz
Transmission power	max. 10 mW
Protocol	14 bytes
ID number	32 bits
Duty cycle	1 %

Service life

Mechanical data	> 0.25 mil. switching operations
Electrical	Depending on load, switching frequency and traverse speed