

LIMIT SWITCHES SELECTION GUIDE

CLASSIC

STANDARD

SNAP-ACTION & SLOW-ACTION SWITCHES



Approx. body size (mm)

30x49x16

39x49x16

30x51x16

49x23x17

27x60x25

56x73x36

TYPE

STANDARD - WIRED (EN versions)

STANDARD - WIRED (US versions)

HIGH TEMPERATURE - WIRED (EN versions)

HORIZONTAL HOUSING - WIRED

ESSENTIAL

SCREW CONNECTIONS (fixed & adjustable versions)

SERIES

8387

8388

MP720

MP210/215-1
MP220/225-1

8380

8383

ELECTRICAL	Max. ratings	@ 250 V ~ @ 24/30 V ~ @ 250 V ~	10 A 10 A 0.8 A	10 A 10 A 0.8 A	6 A 6 A 0.8 A	15 A 15 A	6 A 6 A 0.5 A	10 A 10 A 0.6 A
	Assigned characteristics	AC15 DC13	A300 Q150	A300 Q150	A300 Q300	**	B300 R300	A300 Q150
	Dual-current version		1 mA → 5 A	1 mA → 5 A	**	**	1 mA → 5 A	
	Thermal rating	lthe	10 A	10 A	6 A	15 A	10 A	10 A
	Insulation voltage	Ui	500 V	500 V	250 V	250 V	250 V	500 V
	Impulse withstand voltage	Uimp	2.5 kV	2.5 kV	2.5 kV	**	2.5 kV	4 kV
	Snap Action / Slow Action		Snap	Snap	Slow	Snap	Snap	Snap
	Circuit diagram							
	Contact configuration	(for 1 pole changeover/SPDT)	Form Zb (separated contacts)	Form Zb (separated contacts)	Form Za	Form Za	Form Za	Form Za
	SPST-NC / SPST-NO versions		✓	✓	✓	✓		
ENVIRONMENT	Multipole version						2 poles**	
	Positive opening operation							
	Housing material		Zamak	Zamak	Plastic	Plastic	Plastic	Zamak
	Protection against electric shock		Class I	Class I	Class II	Class II	Class II	Class I
	Degree of protection	Solid objects + water	IP66 IP67 IP69	IP66 IP67 IP69	IP67	IP67 IP68 (20 m)	IP65	IP66
		Mechanical impact	IK07	IK07	**	**	**	**
	Operating temperature		-40 °C +70 °C	-40 °C +70 °C	-40 °C +130 °C	-40 °C +130 °C	-30 °C +70 °C	-40 °C +70 °C
	Mud / salt / dust / ice environment		✓	✓				
	Explosive atmospheres							
	Irradiated environment							
MECHANICAL	High pressure environment							
	Min. Operating Force	Linear Rotary	10 N 0.15 Nm	10 N 0.15 Nm	4 N	6 N ; 12.5 N	10 N 0.07 Nm	1.5 → 15 N 0.2 Nm
	Total Travel	Linear Rotary	5 mm 70°	5 mm 70°	4.5 mm 72°	3 → 11 mm	5 mm 60°	6 → 11 mm 60°
	Min. Overtravel		3 mm 35°	3 mm 35°	2 mm* 30°	2 → 10 mm	3.5 mm 45°	3.5 → 5 mm 35°
	Min. Positive Overtravel		1 mm 10°	1 mm 10°	1 mm 12°	0.12 mm		
	Max. Differential Travel		0.7 ; 1.3 mm 9° ; 17°	0.7 ; 1.3 mm 9° ; 17°			0.5 mm 8°	0.8 → 2 mm 10°
	Operating position repeat accuracy		<0.05 (FT)	<0.05 (FT)				
	Mechanical life	(cycles)	10 M	10 M	10 M	10 M*	10 M	10 M
	Min. actuating speed		0.1 mm/s	0.1 mm/s	1 mm/s	**	0.01 mm/s	0.01 mm/s
	Operating device	Plunger Plunger with roller Lever with roller Adjustable lever with roller Adjustable lever + idle-return roller	✓ ✓ 	✓ ✓ 	✓ ✓ 	✓ ✓ 	✓ ✓ 	✓ ✓
	For rotary mvt	Roller lever	✓	✓	✓		✓	✓
	Multi-direction	Flexible rod					✓	✓
		Plunger with ball	✓	✓				✓
	Fixing means	Plain holes	Ø 4	Ø 4	Ø 5	Ø 4.5	Ø 4	
	Non-adjustable	Tapped holes						
		Snap-in						
	Adjustable	Elongated holes						6 x 21 mm
		Threaded barrel	M12 x 0.75	M12 x 0.75	M12 x 1	M12 x 1	M16 x 1	
	Connections	Screw					✓	✓
	Terminals	Solder Fast-on					✓ ✓	
	Pre-wired	Wires	**	**			**	
		Cable	✓	✓	✓	✓	**	
		Integral connector	✓	✓			✓	
	Approvals	UL						
		CCC/EAC						
		CE/IECEX/ATEX						



24x32x13



CYLINDRIC ADJUSTABLE SUBMINIATURE	
MP600	
0.1 A	
1 mA → 0.1 A	
0.1 A	
30 V	
1.5 kV	
Slow	
	
Form C	
✓	
Nikel plated brass	
Class II 	
IP67	
**	
-55 °C	
+130 °C	
**	
**	
1.2 N ; 3 N	
2 mm	
0.5 mm → 1.7 mm*	
10 M*	
0.1 mm/s	
✓	
✓	
M8 x 0.75 / M12 x 1	
✓	
✓	
	
CE	

Note: data contained in product sheets dated 2016 and before may differ from the features shown in this selection guide. Update is in progress. Please contact us for confirmation.

HARSH ENVIRONMENT



min. Ø 17x40



min. Ø 14x34



min. 100x30x30



Depending on type

AEROSPACE SEALED	AEROSPACE HERMETIC	EXPLOSIVE ATMOSPHERES	NUCLEAR
83777 83778	83770 83771	8399 Ex	8399 Nuc
4 A 4 A 0.15 A C300	4 A 4 A 0.3 A C300	1 A 3 A 4 mA 137 V $\equiv$ C300	1 A 3 A 0.2 A 137 V $\equiv$ C300
1 mA $\rightarrow$ 1 A	1 mA $\rightarrow$ 1 A	1 mA $\rightarrow$ 1 A	1 mA $\rightarrow$ 1 A
4 A 250 V 2.5 kV Snap	4 A 250 V 2.5 kV Snap	3 A 250 V 2.5 kV Snap	3 A 250 V 2.5 kV Snap
Form C	Form C	Form C	Form C
✓	✓	✓	✓
2 ; 3 poles	2 poles		2 poles
Aluminium	Inox steel	Aluminium ; Bronze or Inox steel	Aluminium ; Bronze or Inox steel
Class I	Class I	Class I	Class I
IP66 IP68 (4 m) IP69	IP66 IP68 (18 m) IP69	IP66 IP67 IP69	IP66 IP68 (18 m) IP69
** -55 °C +125 °C ✓	** -55 °C +250 °C ✓	** -40 °C +200 °C ✓	** -55 °C +250 °C ✓
		II2G diCT xGb	
60 N	max. 6 bar 12 $\rightarrow$ 30 N	max. 6 bar 20 N 0.4 Nm	max. 6 bar 8 $\rightarrow$ 30 N 1.1 Nm
4.4 mm ; 6.7 mm	1.3 $\rightarrow$ 5.5 mm	5.5 mm 60°	2 $\rightarrow$ 4 mm 80°
3.2 mm ; 5.5 mm	1 $\rightarrow$ 5 mm	4 mm 40° $\rightarrow$ 50°	0.5 $\rightarrow$ 3 mm 70°
0.2 mm ; 0.5 mm	0.05 mm ; 0.15 mm	0.05 mm 2°	0.05 $\rightarrow$ 1 mm 2°
0.05 M 0.01 mm/s ✓ ✓	0.1 M 0.01 mm/s ✓ ✓	0.1 M 0.01 mm/s ✓ ✓	0.1 M ✓ ✓ ✓
✓	✓	✓	✓
✓	✓	Ø 3 - 3.5 - 4 M5	Ø 3 M5
M12 x 0.75 ; M16 x 1	M8/M12/M14 x 0.75		M12 x 0.75
✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
** / EAC CE	 CE	 CE	 CE

DOOR & SEAT SWITCHES



35x38x11



29x40x15



32x43x17



Depending on type



17x27x12

ELECTRICAL PANEL DOORS	DOUBLE BREAK HEAVY DUTY	TRUCK DOORS	PASSENGER DETECTION	Extensive range
83523 83528	83513 83522	83576	839921**	83161 SP9603/SP9604 + variants
16 A 16 A 5 A A300 R300	16 A 16 A 5 A A300 Q300	10 A 10 A 0.3 A B300 R300	4 A 4 A 0.2 A C300 R300	25 A 16 A 5 A A300 Q300
1 mA $\rightarrow$ 5 A	10 mA $\rightarrow$ 5 A	1 mA $\rightarrow$ 5 A	1 mA $\rightarrow$ 4 A	1 mA $\rightarrow$ 5 A
17 A 250 V 2.5 kV Snap	17 A 250 V 2.5 kV Snap	12 A 250 V 2.5 kV Snap	5 A 250 V 2.5 kV Snap	25 A 250 V 2.5 kV Snap
Form Za	Form Za	Form C	Form C	Form C
✓	✓	✓	✓	✓
2 ; 3 poles	2 ; 3 poles			2 poles**
Metal + Plastic	Metal + Plastic	Plastic	Plastic	Metal + Plastic
Class I	Class I	Class II (front side)	Class I Class II	Class I
IP40	IP40	IP40	IP67	IP40
** -40 °C +125 °C	** -40 °C +125 °C	IK04 -40 °C +70 °C	** -40 °C +85 °C	** -60 °C +200 °C
7.5 N $\rightarrow$ 30 N	4 $\rightarrow$ 12 N	10 N	3 $\rightarrow$ 10 N	0.8 $\rightarrow$ 5 N
6 mm	6 mm	10 $\rightarrow$ 25 mm	3 mm	4 mm ; 6 mm
3 mm ; 3.5 mm	4.5 mm	8 $\rightarrow$ 23 mm	2 mm	2.5 $\rightarrow$ 4 mm
				0.3 mm
1 mm	0.9 mm	1 mm	0.06 $\rightarrow$ 0.20mm	0.4 $\rightarrow$ 1.2 mm
10 M 0.01 mm/s ✓	1 M ✓	0.1 M ✓	1 M ✓	0.1 M ✓ ✓
✓	✓	✓	✓	✓ ✓
Ø 3 M3	M3	28 x 14 cut - out	✓ ✓	✓
	M12 x 0.75			M10 x 0.75
✓ ✓ ✓	✓ ✓ ✓	✓	✓ ✓	✓ ✓ ✓
 CE	 CE	** CE	 CE	 CE

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