

WATERPROOF MICRO SWITCHES (POSITIVE OPENING) ZS-15 SERIES (Positive Opening IP67)

Specifications

Operating Speed	0.01mm-1m/sec
Operating Frequency	Mechanical: 240ops/min Electrical: 20 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<15mΩ
Rated Current/Voltage	15A, 125/250/480VAC 0.5HP, 125/250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1.0 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-40~+105°C (-40~221°F)
Humidity	< 95%RH
Degree of Protection	With Protective Sleeve: IP67 Without Protective Sleeve: IP67 (Upper Part) IP40 (Bottom Part)

Definitions of Operating Characteristics

OF	Operating Force	PT	Pretravel
RF	Releasing Force	MD	Movement Differential
OT	Overtravel	OP	Operating Position
TT	Total Travel	PO	Travel to Positive Opening

Ratings

Operating voltage	Non-inductive load (A)				Inductive load (A)				Inrush current	
	Resistive load		Bulb load		Inductive load		Motor load			
	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	15	-	3	1.5	15	-	5	2.5	30 Max	15 Max
250 VAC	15	-	2.5	1.25	15	-	3	1.5		
500 VAC	10	-	1.5	0.75	6	-	1.5	0.75		
8 VDC	15	-	3	1.5	15	-	5	2.5		
14 VDC	15	-	3	1.5	10	-	5	2.5		
30 VDC	6	-	3	1.5	5	-	5	2.5		
125 VDC	0.5	-	0.5	0.5	0.05	-	0.05	0.05		
250 VDC	0.25	-	0.25	0.25	0.03	-	0.03	0.03		

Selection Guide:

ZS -	15	G	-		+	
	Current	Actuator		Hinge Position	Contact Material	
	15	15A		None Standard S Far from plunger T Near plunger	None Silver Contact K Gold plated contact	None No sleeve ZS-1 With protective sleeve

Dimensions Unit: mm

<h4>ZS-15GD</h4> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 5.88N • RF_{min} 0.98N • PT_{max} 2.0mm • OT_{min} 0.8mm • MD_{max} 0.8mm • OP 21±0.4mm 	<h4>ZS-15GQ</h4> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 5.88N • RF_{min} 0.98N • PT_{max} 2.0mm • OT_{min} 5.0mm • MD_{max} 0.8mm • OP 20.8±0.8mm
<h4>ZS-15GW</h4> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 1.47N • RF_{min} 0.39N • PT_{max} 13.5mm • OT_{min} 4.0mm • MD_{max} 3.2mm • OP 19.1±0.7mm • FP_{max} 38.5mm 	<h4>ZS-15GW1</h4> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 2.16N • RF_{min} 0.59N • PT_{max} 8.5mm • OT_{min} 2.5mm • MD_{max} 2.0mm • OP 19.1±0.7mm • FP_{max} 33.5mm

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<p>ZS-15GW2</p> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 1.77N • RF_{min} 0.49N • PT_{max} 11.0mm • OT_{min} 3.0mm • MD_{max} 2.4mm • FP 51mm • OP 30.2±0.8mm 	<p>ZS-15GW22</p> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 2.35N • RF_{min} 0.87N • OT_{min} 6.5mm • PT_{max} 2.0mm • MD_{max} 1.0mm • FP 46.5mm • OP 30.2±0.8mm
<p>ZS-15GW2-P</p> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 1.77N • RF_{min} 0.49N • PT_{max} 11.0mm • OT_{min} 3.0mm • MD_{max} 2.4mm • FP 51mm • OP 30.2±0.8mm 	<p>ZS-15GW22-P</p> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 2.35N • RF_{min} 0.87N • OT_{min} 6.5mm • PT_{max} 2.0mm • MD_{max} 1.0mm • FP 46.5mm • OP 30.2±0.8mm
<p>ZS-15GQ21</p> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 5.88N • RF_{min} 0.98N • PT_{max} 2.0mm • OT_{min} 6.0mm • MD_{max} 0.8mm • OP 32.4±0.8mm <p>Positive Opening Travel: 2.5mm</p>	<p>ZS-15GQ22</p> <p>Operating Characteristics</p> <ul style="list-style-type: none"> • OF_{max} 5.88N • RF_{min} 0.98N • PT_{max} 2.0mm • OT_{min} 6.0mm • MD_{max} 0.8mm • OP 32.4±0.8mm <p>Positive Opening Travel: 2.5mm</p>
<p>ZS-1</p> <p>Protective sleeve</p>	