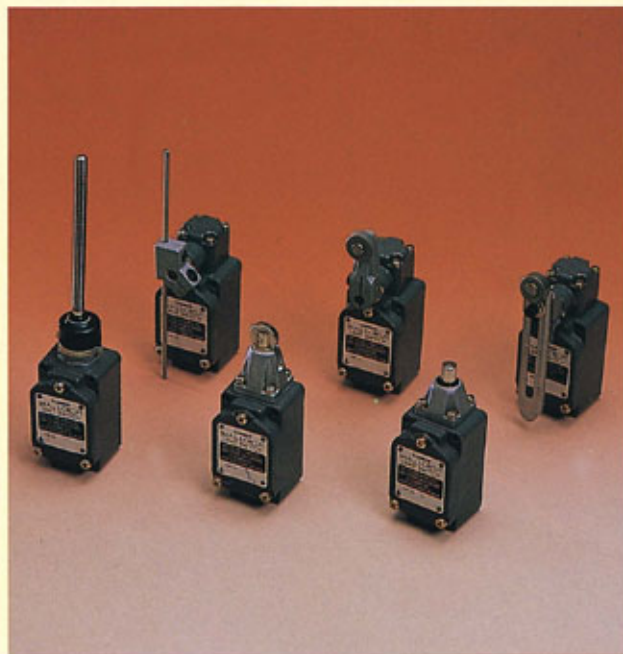
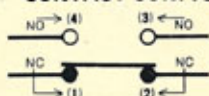


GENERAL-PURPOSE LIMIT SWITCH

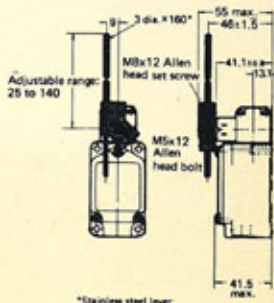
TYPE: LL

10A 125, 250, 480VAC AC
 1/21-P 125VAC 1 1-P 250V
 0.8A 125VDC 0.4A 250V DC
 0.1A 600VDC

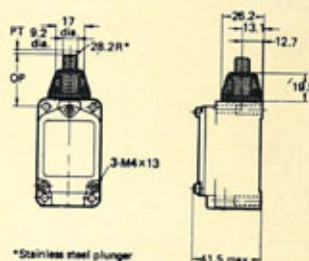
CONTACT CONFIGURATION



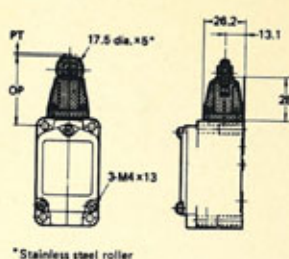
● LL-GL



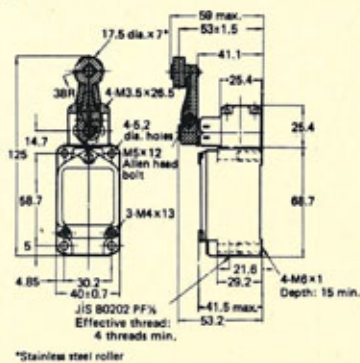
● LL-D



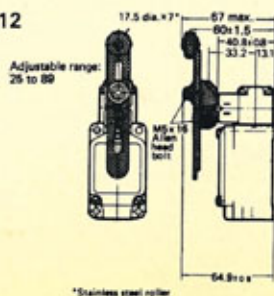
● LL-D2



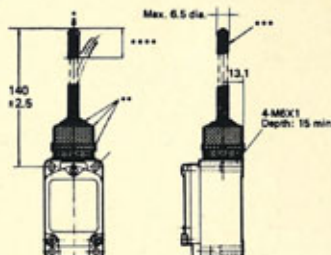
● LL-CA2



● LL-CA12



● LL-NJ

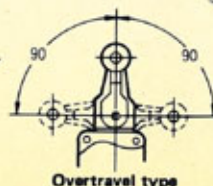
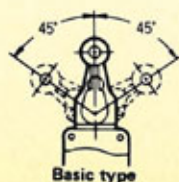
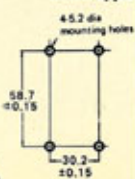


OVERTRAVEL TYPE

The Overtravel Type is a limit switch which is provided with a greater OT to facilitate dog setting. Since this type is identical to the Basic Type in dimensions, both types are interchangeable. The Overtravel Type is classified into two versions -2 series and -2N series.

Mounting holes

Basic type



Basic type

Overtravel type

CAMSCO

KL Limit Switch



SPECIFICATIONS

Contact Rating

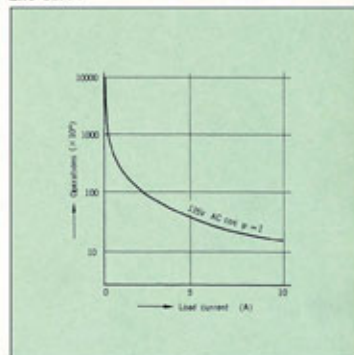
Voltage	Resistive load ($\cos \phi = 1$)	Inductive load ($\cos \phi = 0.4$)	Motor or lamp load	
			N.C. contact	N.O. contact
125V AC	10 A	6 A	3 A	1.5A
250V AC	10 A	4 A	1.5A	1 A
115V DC	0.4A	0.05A	—	—


UL, CSA rating: UL: 10 A 125/250 VAC
CSA: 10 A 125/250 VAC, 600 VAC MAX., 115 VDC MAX. PILOT DUTY

Characteristics

Contact arrangement	SPDT
Expected life (min. operations)	
Electrical (at rated load ON/OFF frequency: 20/min.)	200,000
Mechanical (ON/OFF frequency: 50/min.)	10,000,000
Insulation resistance (initial)	more than 100 MΩ at 500 V DC
Dielectric strength	
Between terminals	1,500 Vrms
Between terminals and other exposed metal parts	2,000 Vrms
Between terminals and ground	2,000 Vrms
Shock resistance	
At free position (max.)	10 G
At operation limit position (max.)	30 G
Vibration resistance (max.)	55 Hz at 1.5 mm travel
Contact resistance (initial)	less than 15 mΩ at 6-8 V DC
Allowable operation speed	120 cycles/min.
Ambient temperature	-20°C to +60°C -4°F to +140°F
Ambient humidity (max.)	95%

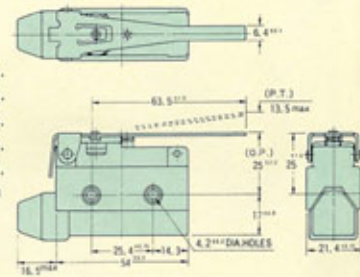
Life curve






Hinge lever
AZ 7120

Operating Force150 g max.
Release Force40 g min.
Pretravel13.5 mm max.
Movement Differential...3.2 mm max.
Overtravel4.0 mm min.
Operating Position25 ±2.0 mm

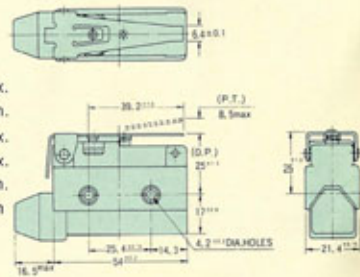


mm


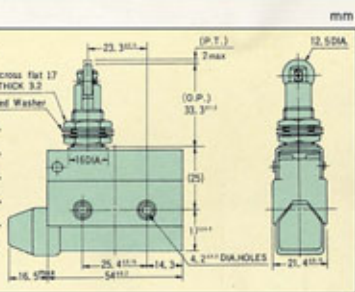

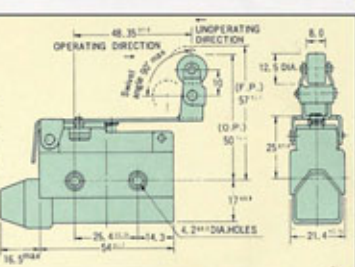

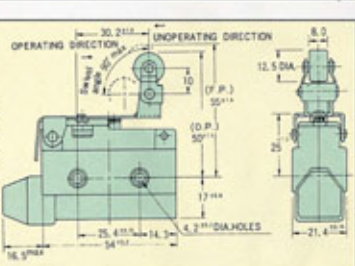

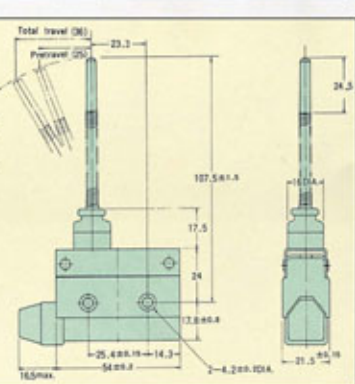

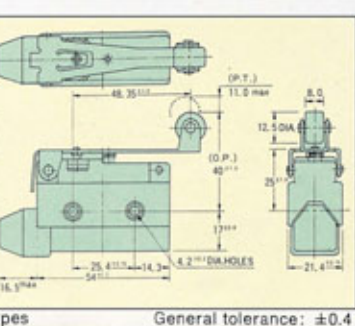


Hinge short lever
AZ 7140

Operating Force220 g max.
Release Force60 g min.
Pretravel8.5 mm max.
Movement Differential...2.0 mm max.
Overtravel2.5 mm min.
Operating Position25 ±1.3 mm



* Epoxy-sealed terminal types ** Neon lamp wired types General tolerance: ±0.4

	<p>Panel mount cross roller plunger</p> <p>AZ 7312</p> <p>Operating Force600 g max. Release Force100 g min. Pretravel2.0 mm max. Movement Differential ...0.8 mm max. Overtravel6.0 mm min. Operating Position33.3 ± 1.2 mm</p>	 <p>mm</p> <p>Hex.nut across flat 17 THICK 3.2 Teethed Washer (P.T.) 23.3 ± 0.1 1.7 max (O.P.) 33.3 ± 0.1 12.5 DIA 16.5 max 25.4 ± 0.15 14.3 54 ± 0.1 4.2 ± 0.1 DIA HOLES 21.4 ± 0.1</p>
	<p>One way roller lever</p> <p>AZ 7124</p> <p>Operating Force200 g max. Release Force60 g min. Pretravel11 mm max. Movement Differential ...2.4 mm max. Overtravel3.0 mm min. Operating Position50 ± 2.0 mm</p>	 <p>OPERATING DIRECTION UNOPERATING DIRECTION 48.25 ± 0.1 10 (P.P.) 57 ± 0.1 12.5 DIA 25 17 max 4.2 ± 0.1 DIA HOLES 21.4 ± 0.1 16.5 max 25.4 ± 0.15 14.3</p>
	<p>One way roller short lever</p> <p>AZ 7144</p> <p>Operating Force280 g max. Release Force100 g min. Pretravel6.5 mm max. Movement Differential ...1.5 mm max. Overtravel2.0 mm min. Operating Position50 ± 1.6 mm</p>	 <p>OPERATING DIRECTION UNOPERATING DIRECTION 30.2 ± 0.1 10 (P.P.) 50 ± 0.1 12.5 DIA 25 17 max 4.2 ± 0.1 DIA HOLES 21.4 ± 0.1 16.5 max 25.4 ± 0.15 14.3</p>
	<p>Hinge roller lever</p> <p>AZ 7166</p> <p>Operating Force120 g max. Pretravel25 mm max. Overtravel11 mm min. Total travel36 mm min.</p>	 <p>Total travel (36) Pretravel (25) 23.3 107.5 ± 0.4 17.5 24 12.5 ± 0.4 25.4 ± 0.15 14.3 4.2 ± 0.1 DIA HOLES 21.4 ± 0.1 16.5 max</p>
	<p>Hinge roller lever</p> <p>AZ 7121</p> <p>Operating Force180 g max. Release Force50 g min. Pretravel11.0 mm max. Movement Differential ...2.4 mm max. Overtravel3.0 mm min. Operating Position40 ± 1.9 mm</p>	 <p>(P.T.) 11.0 max 48.25 ± 0.1 10 (O.P.) 40 ± 0.1 12.5 DIA 25 17 max 4.2 ± 0.1 DIA HOLES 21.4 ± 0.1 16.5 max 25.4 ± 0.15 14.3</p>

* Epoxy-sealed terminal types

** Neon lamp wired types

General tolerance: ± 0.4

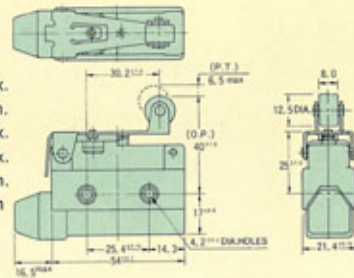
mm



Hinge short roller lever

AZ 7141

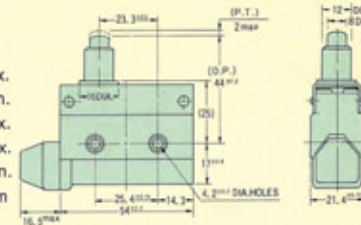
Operating Force240 g max.
Release Force80 g min.
Pretravel6.5 mm max.
Movement Differential...1.5 mm max.
Overtravel2.0 mm min.
Operating Position40 ± 1.6 mm



Overtravel plunger

AZ 7110

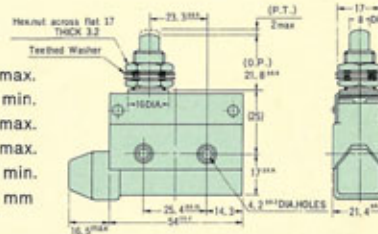
Operating Force600 g max.
Release Force100 g min.
Pretravel2.0 mm max.
Movement Differential...0.8 mm max.
Overtravel5.0 mm min.
Operating Position44 ± 1.2 mm



Panel mount plunger

AZ 7310

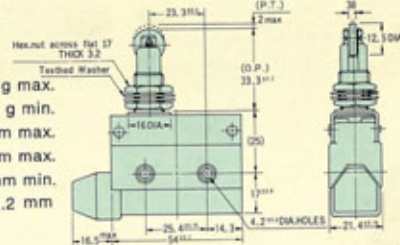
Operating Force600 g max.
Release Force100 g min.
Pretravel2.0 mm max.
Movement Differential...0.8 mm max.
Overtravel6.0 mm min.
Operating Position21.8 ± 0.8 mm



Panel mount roller plunger

AZ 7311

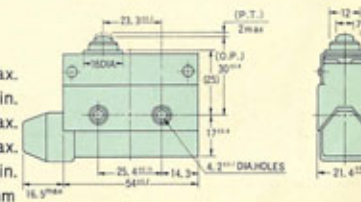
Operating Force600 g max.
Release Force100 g min.
Pretravel2.0 mm max.
Movement Differential...0.8 mm max.
Overtravel6.0 mm min.
Operating Position33.3 ± 1.2 mm



Compact overtravel plunger

AZ 7100

Operating Force600 g max.
Release Force100 g min.
Pretravel2.0 mm max.
Movement Differential...0.8 mm max.
Overtravel0.8 mm min.
Operating Position30 ± 0.8 mm



* Epoxy-sealed terminal types

** Neon lamp wired types

General tolerance: ± 0.4