

# ML (AZ7)

## FOREIGN STANDARDS

Standards	Applicable product	Part No.
UL	File No. : E122222 Ratings : 10A 250V AC Product type : Standard type only	Order by standard part No.
C-UL	File No. : E122222 Ratings : 10A 250V AC Product type : Standard type only	
TÜV	File No. : J9551204 Ratings : AC-15 2A/250V~ Product type : Standard type only	

## SPECIFICATIONS

### 1. Rating

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

### 2.Characteristics

Contact arrangement	1 Form C	
Initial contact resistance, max.	15m $\Omega$ * (By voltage drop 6 to 8V DC at rated current)	
Contact material	AgCdO contact	
Initial insulation resistance (At 500V DC)	Min. 100 M $\Omega$	
Initial breakdown voltage	1,500 Vrms for 1 min Between non-consecutive terminals 2,000 Vrms for 1 min Between dead metal parts and each terminal 2,000 Vrms for 1 min Between ground and each terminal	
Shock resistance	In the free position	Max. 98m/s <sup>2</sup> {10G}
	In the full operating position	Max. 294m/s <sup>2</sup> {30G}
Vibration resistance	55 Hz, double amplitude of 1.5 mm	
Expected life (Min. operation)	Mechanical	10 <sup>7</sup> (at 50 cpm)
	Electrical	2 $\times$ 10 <sup>8</sup> (at 20 cpm)
Ambient temperature/Ambient humidity	-20 to +60°C -4 to +140°F/Max. 95% R.H. (at 20°C 68°F)	
Max. operating speed	120 cpm	

\*The resistance of a copper wire is not included.

### 3.EN60947-5-1 performance

Item	Rating
Rated insulation voltage (Ui)	250VAC
Rated impulse withstand voltage (Uimp)	2.5kV
Switching over voltage	2.5kV
Rated enclosed thermal current (Ithe)	10A
Conditional short-circuit current	100A
Short-circuit protection device	10A fuse
Protective construction	IP64 (switch)
Pollution degree	3

### 4. Operating characteristics

Characteristics	O.F. (N{gf}) max.	R.F. (N{gf}) min.	Pretravel (P.T.), max. mm inch	Movement Differential (M.D.), max. mm inch	Overtravel (O.T.), min. mm inch	Operating Position (O.P.) mm inch
Short push plunger	5.88 {600}	0.98 {100}	2.0 .079	0.8 .031	0.8 .031	30 $\pm$ 0.8 1.181 $\pm$ .031
Push plunger	5.88 {600}	0.98 {100}	2.0 .079	0.8 .031	5.0 .197	44 $\pm$ 1.2 1.732 $\pm$ .047
Hinge lever	1.47 {150}	0.39 {40}	13.5 .531	3.2 .126	4.0 .157	25 $\pm$ 2.0 .984 $\pm$ .079
Roller lever	1.77 {180}	0.49 {50}	11.0 .433	2.4 .094	3.0 .118	40 $\pm$ 1.9 1.575 $\pm$ .75
One-way roller lever	1.96 {200}	0.59 {60}	11.0 .433	2.4 .094	3.0 .118	50 $\pm$ 2.0 1.969 $\pm$ .079
Hinge short lever	2.16 {200}	0.59 {60}	8.5 .335	2.0 .079	2.5 .098	25 $\pm$ 1.3 .984 $\pm$ .051
Short roller lever	2.35 {240}	0.78 {80}	6.5 .256	1.5 .059	2.0 .079	40 $\pm$ 1.6 1.575 $\pm$ .063
One-way short roller lever	2.75 {280}	0.98 {100}	6.5 .256	1.5 .059	2.0 .079	50 $\pm$ 1.6 1.969 $\pm$ .063
Panel mount push plunger	5.88 {600}	0.98 {100}	2.0 .079	0.8 .031	6.0 .236	21.8 $\pm$ 0.8 .858 $\pm$ .031
Panel mount roller plunger	5.88 {600}	0.98 {100}	2.0 .079	0.8 .031	6.0 .236	33.3 $\pm$ 1.2 1.311 $\pm$ .047
Panel mount cross roller plunger	5.88 {600}	0.98 {100}	2.0 .079	0.8 .031	6.0 .236	33.3 $\pm$ 1.2 1.311 $\pm$ .047
Flexible rod	1.18 {120}	—	25 .984	—	11 .433	36 1.417 (T.T.)

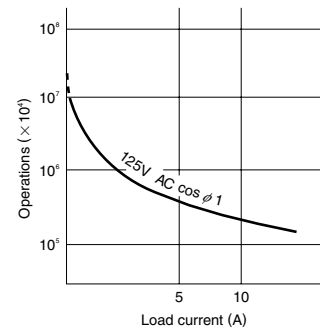
Note) For the operating characteristics, refer to the TECHNICAL INFORMATION.

### 5. Protective characteristics

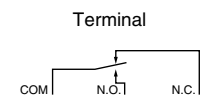
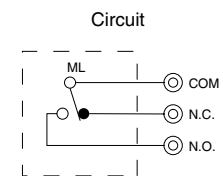
Protective construction	Standard type	Terminal mold type (Epoxy-sealed terminal type)
IEC		
IP60	○	○
IP64	—	○

## DATA

### 1. Life curve



## WIRING DIAGRAM



Standard type