

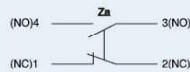
# HL 限位开关 Limit Switch

**TMAZTZ®**  
永得工控开关

## 特征 Features

- ◎ 头部、外壳和罩盖配有坚固表面以保持强度。
- ◎ 独特的头部结构提供了大 OT 的平稳操作。
- ◎ 导管开孔设计易于接线。
- ◎ 印刷设备、成型设备和照明设备的理想之选。(在接触油、水、雨水的环境中请选用 WL 或 TZ-3 等具有高密封性的开关。)
- ◎ 各型号均带有符合 CE 标志的接地端子。
- ◎ The Head, Box, and Cover mate with ridged surfaces to maintain strength.  
A unique Head structure provides a large OT for smooth operation.
- ◎ Easy-to-wire conduit opening design.
- ◎ Ideal for application in printing machines, forming machines, and light machines.(high Switches with high sealing characteristics, such as WL or TZ-3 Switches, in locations subject to oil, water, or precipitation.)
- ◎ Models with grounding terminals conform to the CE marking.

## 接触形式 Contact form



## 额定值 Ratings

额定电压 Rated voltage	非电感性负载 Noninductive Load (A)			电感性负载 Inductive Load (A)		
	电阻性负载 Resistance Load	灯泡负载 Lamp Load	电感性负载 Inductive Load	电动机负载 Motor Load	NC	NO
AC125V	5	1.5	0.7	3	2	1
AC250V	5	1	0.55	3	1.5	0.8
DC12V	5	3	—	4	—	3
DC24V	5	3	4	—	—	3
DC125V	0.4	0.2	—	—	—	—
DC250V	0.4	0.2	—	—	—	—
浪涌电流 Surge current	NC	—	24A 以下 (under)	NC	—	12A 以下 (under)

注：1. 上述数值表示稳定电流。

2. 所谓感性负载，就是功率因数 0.4 以上 (AC)、时间常数 7ms 以下 (DC) 的负载。

3. 所谓灯负载，就是有 10 倍的瞬时电流的负载。

4. 所谓电动机负载，就是有 5 倍的负荷电流的负载。

NOTES: 1. Inductive load has a power factor of 0.4 min(AC) and a time constant of 7 msec.max(DC).

2. Lamp load has an inrush current of 10 times the steady-state current, while motor load has an inrush current of 6 times the steady-state current.

3. Product with spring, its usable range of operating part is within one third of the whole spring length from the front end of spring.

## 特性 Characteristics

防护等级 Degree of protection	IP65
容许操作速度 Allowable operating speed	5mm/s~0.5m/s
容许操作频率 Allowable operating frequency	机械: 120 次/分 电气: 30 次/分 Mechanical: 120 operations/minute Electrical: 30 operations/minute
接触电阻 Contact resistance	25mΩ 以下 (初期) 25mΩ max. initial value
绝缘电阻 Insulation resistance	100MΩ 以上 (在 500VDC) 100MΩ min. (at 500VDC)
绝缘强度 Insulation strength	AC1000V, 50/60Hz, 1 分钟, 同极端子间 AC1000V, 50/60Hz, 1 minutes, between terminals AC1500V, 50/60Hz, 1 分钟, 在带电金属部件和接地之间 AC1500V, 50/60Hz, 1 minutes, between charged metal parts and the ground AC1500V, 50/60Hz, 1 分钟, 在每个端子和非带电金属部件之间 AC1500V, 50/60Hz, 1 minutes, between each terminal and non charged metal parts
额定频率 Rated frequency	50/60Hz
耐振动 Vibration	10 至 55Hz, 双振幅 1.5mm 10-55Hz, 1.5mm double amplitude
耐冲击 Shock	毁坏: 1.000m/S <sup>2</sup> 以下, 误动作: 最大 300m/S <sup>2</sup> Misoperation: Less than 1.000m/S <sup>2</sup> . Malfunction: 300m/S <sup>2</sup>
使用环境温度 Ambient Temp	-5°C ~ +65°C (没有结冰 With no icing)
使用环境湿度 Ambient humidity	35%~95%RH
质量 Quality	约 130~190g About 130~190g

## 动作特性 Operating Characteristics

动作特性 Operational characteristic	型号 Model	HL-5000	HL-5030	HL-5050	HL-5391	HL-5100	5200, 5220	5300, 5330, 5381	HL-5030	HL-5050	
动作力 Operational force	OF 最大 (Max)	7.35N	7.35N	7.35N	7.35N	8.83N	8.83N	1.47N	OF	3.09N	1.60N
回复力 Return force	RF 最小 (Min)	0.98N	0.98N	0.98N	0.98N	1.47N	1.47N	—	RF	0.41N	0.22N
预行程 Pre-travel	PT 最大 (Max)	20°	20°	20°	20°	1.5mm	1.5mm	30mm	—	—	—
过行程 Travel	OT 最小 (Min)	50°	50°	50°	50°	4mm	4mm	—	—	—	—
应差距离 Differential distance	MD 最大 (Max)	12°	12°	12°	12°	1mm	1mm	—	—	—	—
动作位置 Operational position	OP	—	—	—	—	30±0.8mm	40±0.8mm	—	—	—	—

注：使用臂长或杆长为 31.5mm 的类型测得。

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## 外观和尺寸 Appearance and Dimension

