

特征 Features

- 强制断开动作装置 (仅 NC 接点), 可以在发生像接点熔断等故障时断开接点。
- 标准的镀金接点保证了接触的高可靠性, 可用于标准负载及微小负载。
- 接点形式 1NC/1NO 及 2NC(仅限慢动型)。
- Forced open action device(NC contacts only), it can disconnect the contact when the contact has fusing and other failures.
- Standardized gold-clad contacts provide high contact reliability, Can be used with both standard loads and microloads.
- Contact forms 1NC/1NO and 2NC (only slow type).

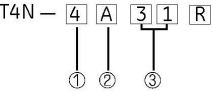


特性 Characteristics

保护等级 *1 Protection level*1		IP66	
寿命 *4Life *4	电气 Electrical	50 万次以上 (AC250V 3A、电阻负载)*3 More than 500,000 times (AC250V 3A, resistive load)*3	
		30 万次以上 (AC250V 10A、电阻负载) More than 300,000 times (AC250V 10A, resistive load)	
操作速度 Operating speed		1 ~ 500mm/s(T4N-1A20R)	
操作频率 Operating frequency		最大 30 次 /min Max. 30 times/min	
接触电阻 Contact resistance		25mΩ 以下 25 m Ω or less	
最小使用负载 *4 Minimum working load *4		DC5V 1mA 电阻负载 (N 标准参考值) 1mA resistive load below DC5V (N standard reference value)	
额定绝缘电压 (Ui) Rated insulation voltage (Ui)		300V	
防触电保护等级 Electric shock proof protection grade		Class II (双重绝缘) Class II (double insulated)	
污染度 (使用环境) Pollution degree (environmental conditions)		污染度 3 (EN60947-5-1) Pollution degree 3 (EN60947-5-1)	
耐电压 Withstand voltage (EN60947-5-1)		同极端子间 : 2.5kV Between homopolar terminals: 2.5kV	
		异极端子间 : 4kV Between heteropolar terminals: 4kV	
		各端子和非充电金属部间 : 6kV Between terminals and uncharged metal parts: 6kV	
绝缘电阻 Insulation resistance		100MΩ 以上 Above 100MΩ	
接点间隙 Contact gap		最小 2 × 0.5mm 速动型、 最小 2 × 2mm 慢动型 Minimum 2 × 0.5mm quick-action type, Minimum 2 × 2mm slow-action type	
振动 Vibration	误动作 Malfunction	10 ~ 55Hz 0.75mm 单振幅 10 ~ 55Hz 0.75mm single amplitude	
	耐久 Duration	1,000m/s ²	
冲击 Impact	误动作 Malfunction	300m/s ²	
	环境温度 Ambient temperature		-20 ~ +70℃ (无结冰、结露) -20 ~ +70℃ (No ice or dew)
环境湿度 Ambient humidity		95%RH 以下 Less than 95% RH	
重量 Weight		约 92g(T4N-4A20R) 约 100g(配连接器) About 100g (With gland)	

注 1. 上述值为初始值。
2. 一旦接点连接标准负载后, 就不可用于连接更小容量的负载。否则可能导致接点表面粗糙, 从而失去接触可靠性。
(1) 保护等级是根据 (EN60947-5-1) 规格的测试法得出的。使用前务必在实际使用的环境、条件下确认其密封性。开关盒本体具有防尘、防油构造, 但应尽可能保持头部在没有碎屑粉尘、油污、化学品的场所进行使用。否则可能导致过早磨损、损坏或故障。
(2) 耐久性的条件是使用环境温度 5℃ ~ 35℃、使用环境湿度 40% ~ 70% RH。其他详细条件请另行查询。
(3) 使用环境温度为 35℃ 以上时, 禁止使用 2 回路以上的 3A AC250V 负载。
(4) 这个值会因为开关频率、环境条件、可靠性等级等因素的影响而不同。请事先在实际负载上进行确认。

型号说明 Model Designations



项目 Item	代号 Code	说明 Description
① 导管 / 连接器尺寸 Conduit / connector size	1	Pg13.5 (1 导管型) Pg13.5 (1 conduit type)
	2	G1/2 (1 导管型) G1/2 (1 conduit type)
	4	M20 (1 导管型) M20 (1 conduit type)*
	6	G1/2 (2 导管型) G1/2 (2 conduits type)
	8	M20 (2 导管型) M20 (2 conduits type)
② 内藏开关 Built-in switch	A	1NC/1NO (慢动型) 1NC/1NO (slow-action type)
	B	2NC (慢动型) 2NC (slow-action type)
③ 头部及传动杆 Head and driving rod	20	滚珠摆杆型 (树脂摆杆, 树脂滚珠) Roller lever (resin lever, resin ball)
	22	滚珠摆杆型 (金属摆杆, 树脂滚珠) Roller lever (metal lever, resin ball)
	25	滚珠摆杆型 (金属摆杆, 金属滚珠) Roller lever (metal lever, metal resin ball)
	2G	可调滚珠摆杆, Form Lock (金属摆杆, 树脂滚珠) Adjustable roller lever, Form Lock (metal lever, resin ball)
	2H	可调滚珠摆杆, Form Lock (金属摆杆, 橡胶滚珠) Adjustable roller lever, Form Lock (metal lever, rubber ball)
	2M	可调滚珠摆杆, Form Lock (金属摆杆, 金属滚珠) Adjustable roller lever, Form Lock (metal lever, metal resin ball)
	31	顶部柱塞型 Top plunger type
	32	顶部柱塞滚珠型 Top plunger ball type
	62	单侧悬臂滚珠型 (水平) Unilateral cantilever ball type (horizontal)
	72	单侧悬臂滚珠型 (垂直) Unilateral cantilever ball type (vertical)

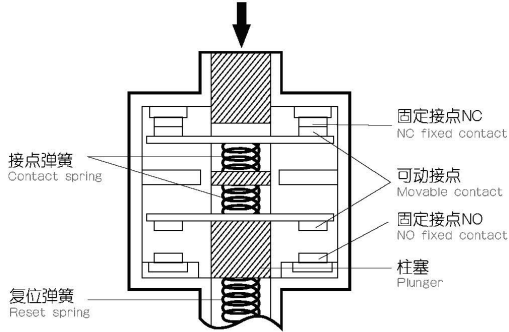
* 导管连接器尺寸标配 M20 × 1.5 M20x1.5 cable gland that can be equipped
Note 1. The above values are initial values.
2. Once the contact is connected to a standard load, it can not be used to connect a smaller load. If so, the contact may result in rough surface, thus losing contact reliability.
(1) The protection level is gotten based on test method of (EN60947-5-1). Please make sure its sealing under actual environmental conditions before use. The switch box has dust and oil resistance structure, but it should be used in places without dust, oil and chemicals. Otherwise it may lead to premature wear, damage or malfunction.
(2) The durability is for ambient temperature of 5℃ ~ 35℃ and humidity of 40% to 70% RH. For additional details, please contact us.
(3) When the ambient temperature is above 35℃, more than 2 circuits 3A 250VAC loads are prohibited.
(4) The values will vary with different switching frequency, environmental conditions, reliability level and other factors. Please confirm on the actual load in advance.

强制断开构造 Forced disconnect structure

1NC、1NO 接点 (慢动型)

1NC and 1NO contacts (slow-action type)

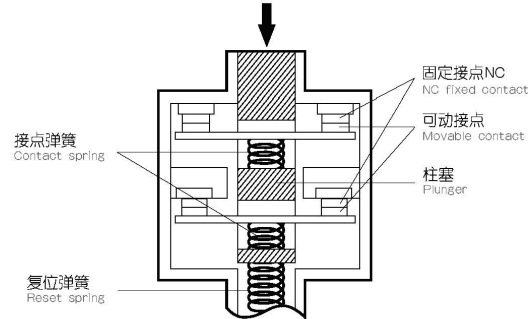
仅限 NC 接点侧有强制断开构造。
当发生溶着时，通过按下柱塞，可以分离接点，切断回路。(符合 EN60947-5-1 强制断开操作)。
Only NC contact has forced disconnect structure.
When melting occurs, the contact can be isolated by pressing the plunger to cut off the loop. (In accordance with EN60947-5-1 force disconnect operation).



2NC 接点 (慢动型)

2NC contacts (slow-action type)

双侧 NC 接点均具有强制断开构造。
当发生溶着时，通过按下柱塞，可以分离接点，切断回路。(符合 EN60947-5-1 强制断开操作)。
When melting occurs, the contact can be isolated by pressing the plunger to cut off the loop. (In accordance with EN60947-5-1 force disconnect operation).



接点形式 Contact form

型号 Model	接点 Contact	接点形式 Contact form	动作模式 Operation mode	说明 Explanation
T4N-□A□R	1NC/1NO (慢动型) 1NC/1NO (Slow-action type)			仅 NC 接点 (11-12) 具有强制断开功能 (⊖)。 Only NC contact (11-12) has forced disconnect function (⊖) 接点 (11-12) 和 (33-34) 可作异极使用。 Contacts (11-12) and (33-34) can be used as heteropoles.
T4N-□B□R	2NC (慢动型) 2NC (Slow-action type)			仅 NC 接点 (11-12、31-32) 具有强制断开功能 (⊖)。 Only NC contact (31-32) has forced disconnect function (⊖) 接点 (11-12) 和 (31-32) 可作异极使用。 Contacts (11-12) and (31-32) can be used as heteropoles.

动作特性 Action characteristics

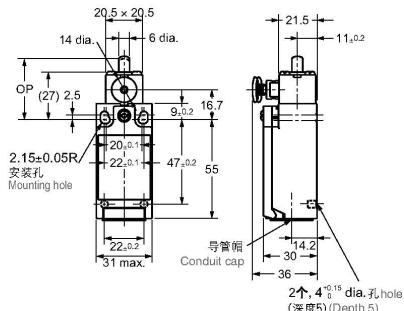
型号 Model		T4N-□□20R	T4N-□□22R	T4N-□□2GR *2	T4N-□□2HR	T4N-□□31R	T4N-□□32R	T4N-□□62R	T4N-□□72R
动作特性 Action characteristics									
锁定力	LF 最大 Max.	6.45N	6.45N	5.6N	5.4N	10.8N	10.8N	7.5	7.9N
锁定行程	LT 最大 Max.	55°	55°	55°	55°	4.5mm	4.5mm	7mm	7mm
预行程	PT1 *3	18~27°	18~27°	18~27°	18~27°	2mm	2mm	4mm	4mm
预行程	PT2 *4	{44° }	{44° }	{44° }	{44° }	(2.9mm)	(2.9mm)	(5.2mm)	(4.3mm)
动作位置	OP	--	--	--	--	34 ± 0.5mm	44.4 ± 0.8mm	53 ± 0.8mm	27 ± 0.8mm
总行程	TT *5	80°	80°	80°	80°	(6mm)	(6mm)	(9mm)	(9mm)
强制断开预行程	DOT 最小 Min. *6	50°	50°	50°	50°	3.2mm	3.2mm	5.8mm	5.8mm
强制断开力	DOF 最小 Min. *6	20N		20N	20N	20N	20N	20N	20N

注: (1) 2NC 接点的闭路 / 开路动作的同时性有所参差，使用时请务必确认。
(2) 摆杆长 32mm 时的特性值。
(3) NC 接点为开路 (OFF) 状态时的 PT 值。
(4) NO 接点闭合 (ON) 时的 PT 一般值 (仅限 1NC/1NO 型)。
(5) 参考值。
(6) 强制断路构造的负载和行程值。为保证安全，请务必保持在规定的上限和下限范围内。

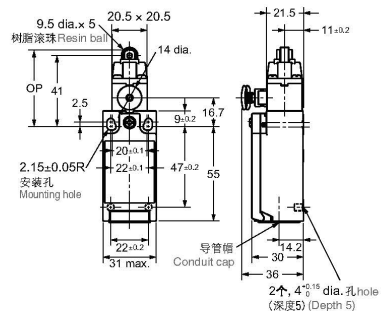
Note(1) The simultaneity of ON / OFF operation of 2NC contacts have difference, please make sure before using it.
(2) The property value when length of lever is 32mm.
(3) PT value when NC contact is at open (OFF) state.
(4) PT common value when NO contact is at close (ON) state (only for 1NC/1NO types).
(5) Reference values.
(6) Load and travel values of forced disconnect structure. To ensure safety, be sure to remain within the upper and lower range.

外观和尺寸 Appearance and Dimension

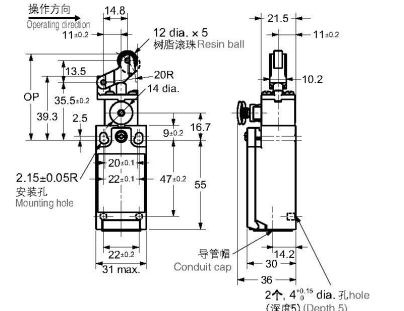
T4N-4A31R



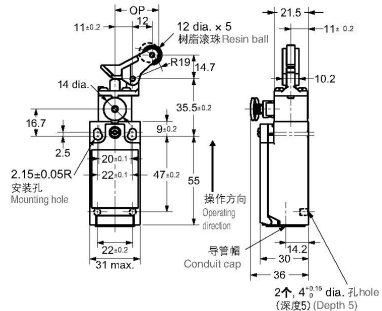
T4N-4A32R



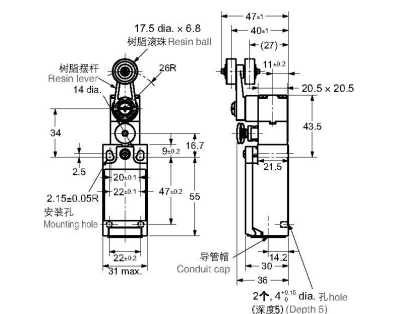
T4N-4A62R



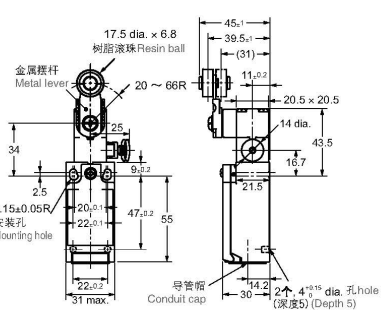
T4N-4A72R



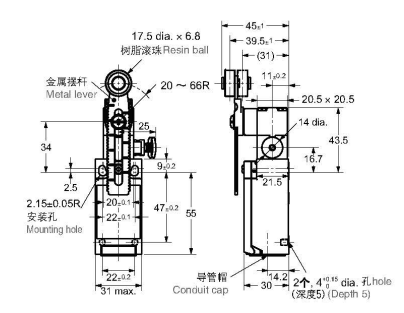
T4N-4A20R



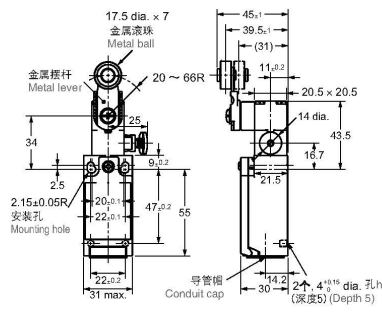
T4N-4A22R



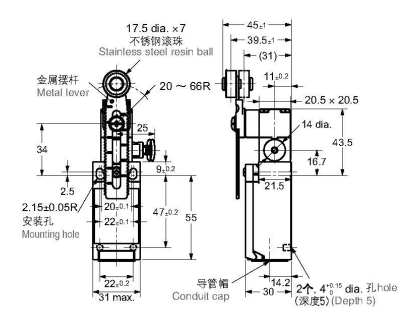
T4N-4A2GR



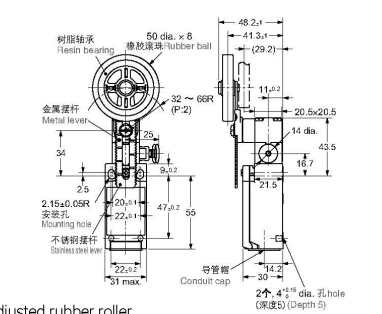
T4N-4A25R



T4N-4A2MR



T4N-4A2HR



* 可选配可调式橡胶轮 Optional adjusted rubber roller