



# Taiko Device Techno & Co., Ltd.

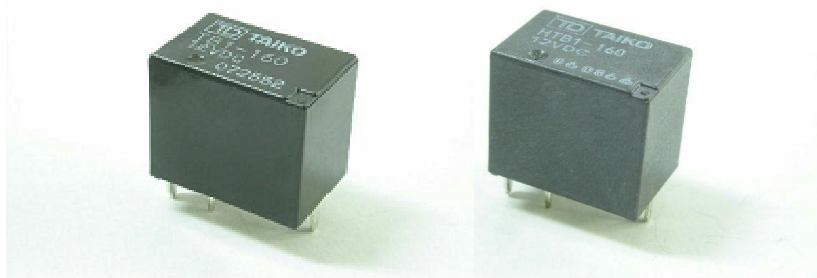
## TB1/HTB1 RELAY SPECIFICATION

All data are at 20°C ambient temperature unless otherwise noted.

Miniature High Power PCB relay.

Covers a broad range of automotive applications.

The relays are lead free / RoHS compliant.



		TB1	HTB1
Available Standard Types			
TB1	Standard Type	wave solderable	85°C
HTB1	High Temperature	wave solderable	125 °C

Special Features available: (see nomenclature page)

Available Coil Options					
Coil Resistance	Coil Inductance	Nominal Power	Operate Voltage	Operate Power	Release Voltage
160 Ω	227 mH	0.900 W	6.5 V	0.264 W	0.8 V
100 Ω	143 mH	1.440 W	5.5 V	0.303 W	0.5 V
225 Ω	310 mH	0.640 W	7.7 V	0.264 W	0.8 V

±10%

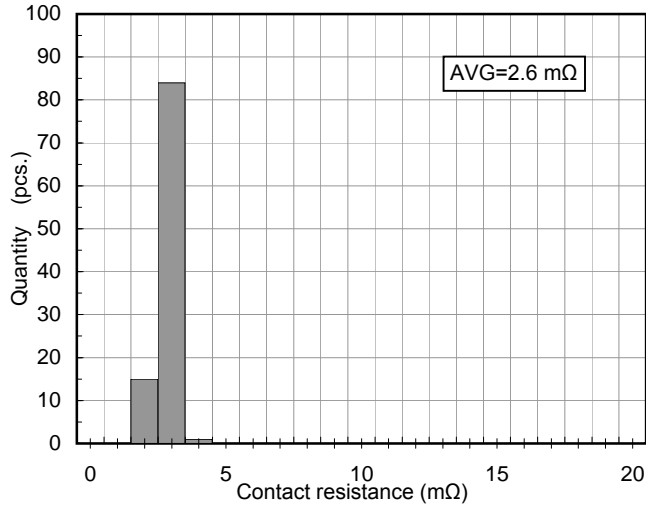
ITEM	SPECIFICATION
Contact Arrangement	1 Form C / 1 Form A
Contact Material	AgSnO <sub>2</sub> Alloy
Contact Resistance	Typical 4 mΩ (max 50mΩ at 6 VDC 1A)
Contact Rated Load	25A at 14VDC Motor load (Locked Rotor)
Max. Switching Current/ Voltage	30A at 16VDC
Max. Continuous Current at 20 °C	25A at 14VDC for 10minutes
Min. Switching Current (recommended)	1A at 12VDC
Dielectric Strength	500VAC for 1 minute (between coil and contact)
	500VAC for 1 minute (between open contacts)
Insulation Resistance	Min 100MΩ (at 500VDC)
Operate Time	typical 3 ms (at 12VDC/ 20 °C)
Release Time	typical 1.5 ms (with no diode parallel to coil)
Shock resistance	False Operation
	Endurance
Vibration resistance	False Operation
	Endurance
Mechanical Life (no load)	Min 10×10 <sup>6</sup> Operations(300 cycles/minute)
Electrical Life at rated load	Min 0.1×10 <sup>6</sup> Operations(1 sec. ON/ 9 sec. OFF)
Ambient Temperature range	-40°C to 85°C (125°C max. for H-type)
Weight	Approx. 5g

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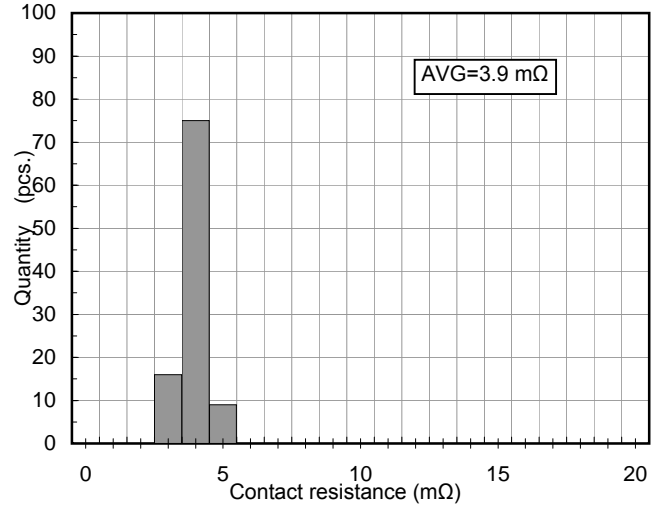
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## TECHNICAL REFERENCE DATA FOR THE TB1-160 AND THE HTB1-160 RELAY

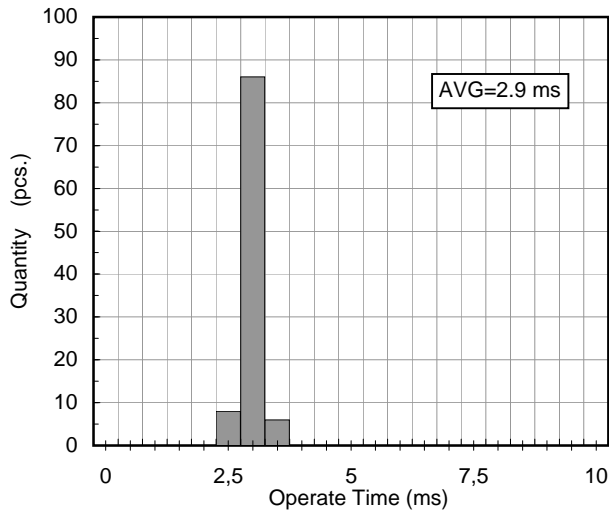
### Contact Resistance of the N/O contact



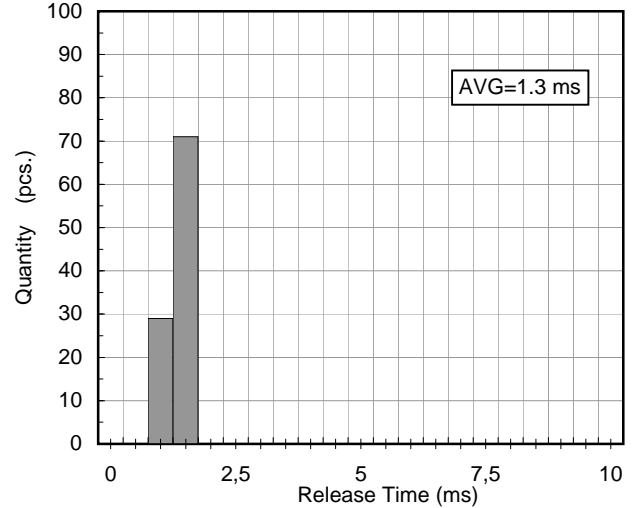
### Contact Resistance of the N/C contact



### Operate Time with 12 V

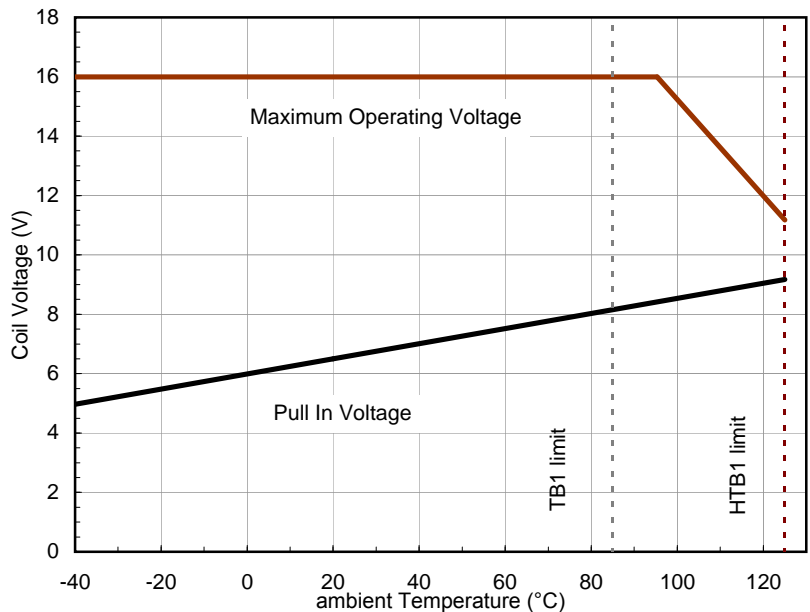


### Release Time without diode



### Operating Voltage Range

Please note, that this diagram shows the Pull In Voltage range for coil at ambient temperature and the Maximum Voltage is either 16 V or the voltage that over time brings the coil to the max. allowed temperature. No Load Current considered.

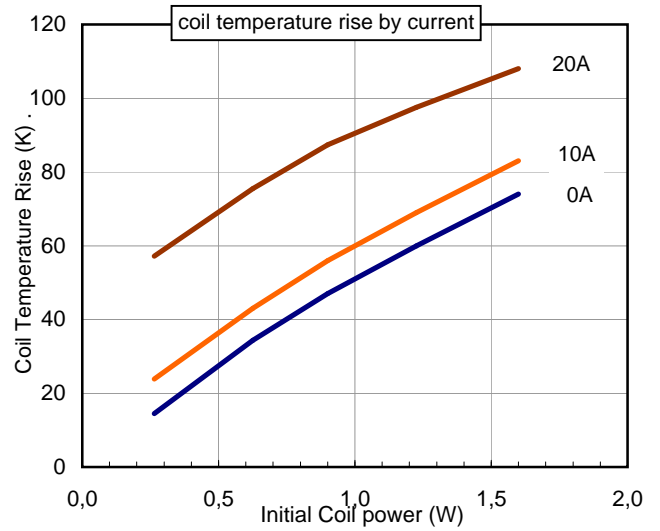
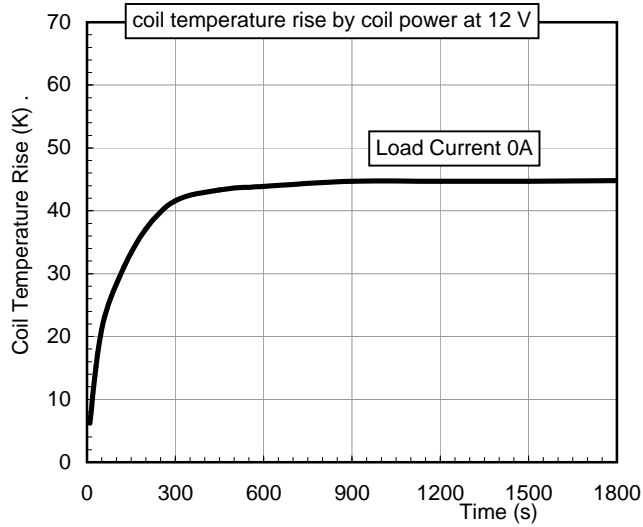


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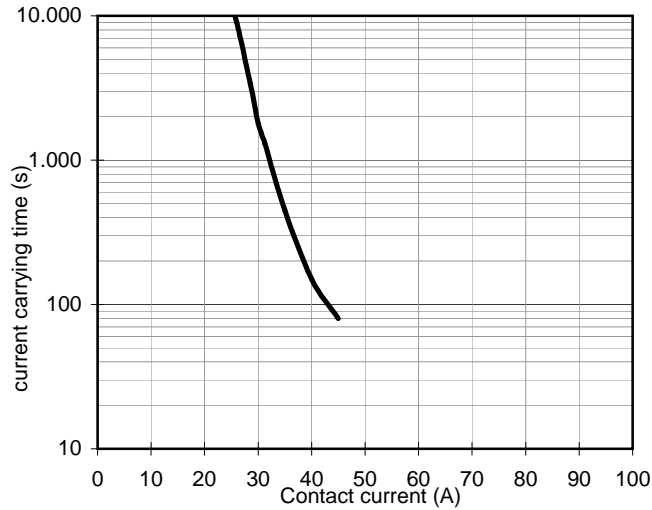
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## TECHNICAL REFERENCE DATA FOR THE TB1-160 AND THE HTB1-160 RELAY

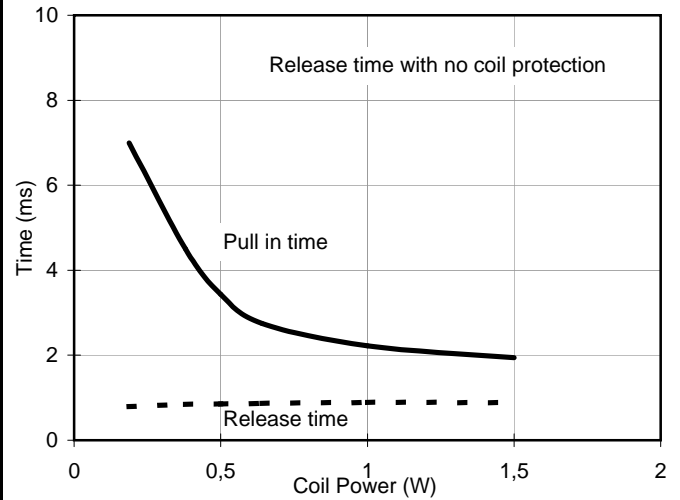
### Coil temperature rise



### Over current limit



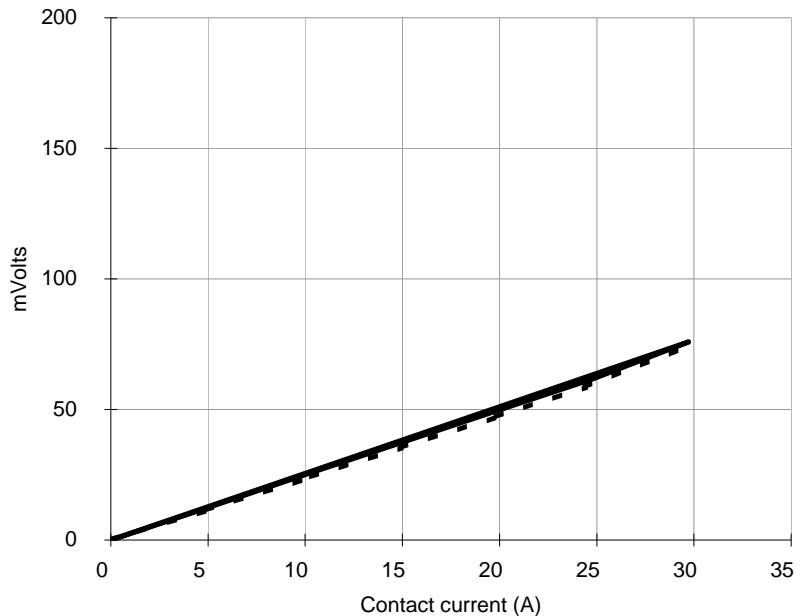
### Operate and Release Time



### Contact voltage drop over the NO contact

- increasing current
- - - decreasing current

This diagram shows the voltage drop over current for the NO contact during the increase of the current and during the decrease



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**External Dimensions / Wiring Diagram / PCB Pin Layout of the TB1 and HTB1 Relay**

Fig.1. External dimensions

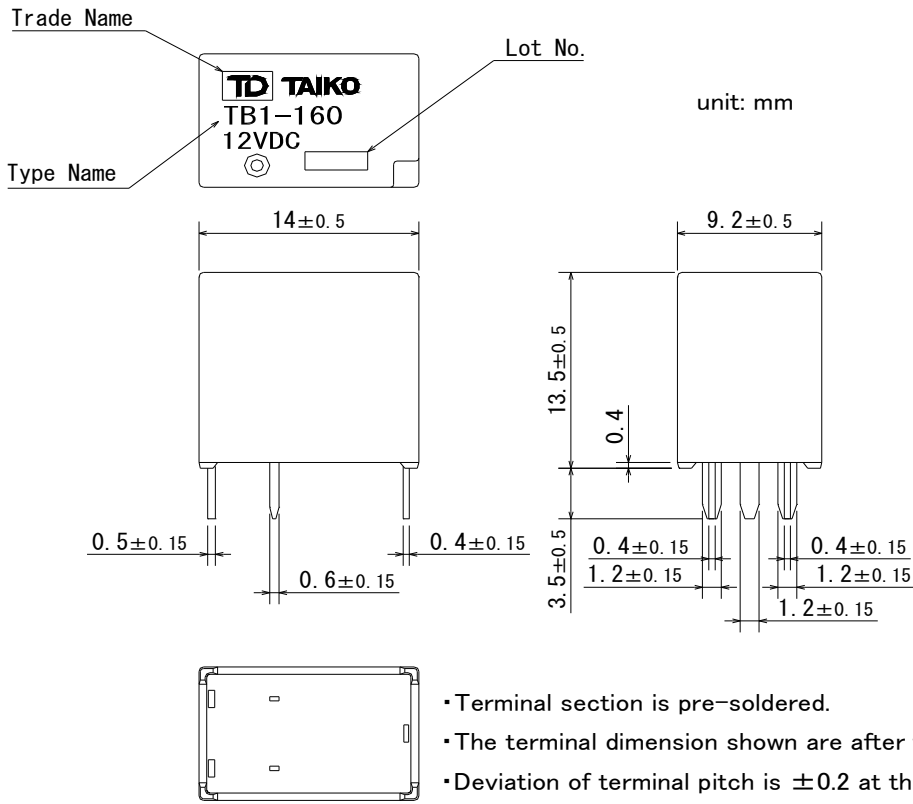
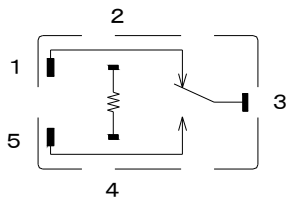


Fig.2. Wiring diagram  
 (BOTTOM VIEW)

1 Form C



1 Form A

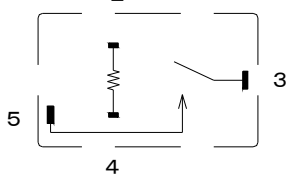
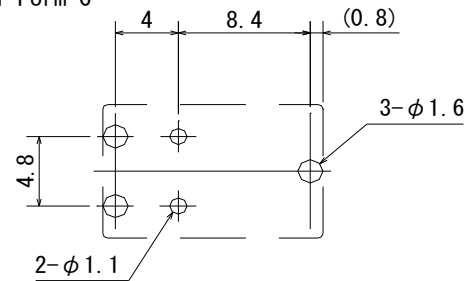
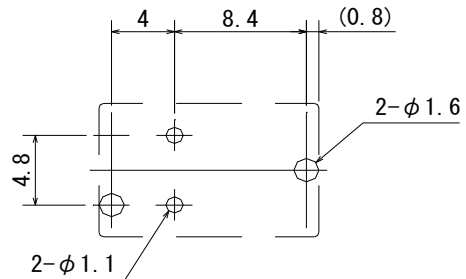


Fig.3. PCB pin layout (Reference figure)  
 (BOTTOM VIEW)

1 Form C



1 Form A



Hole punching tolerance ±0.1

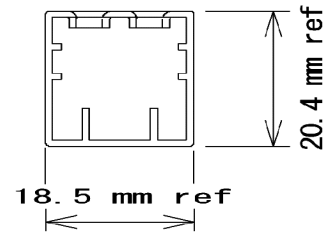
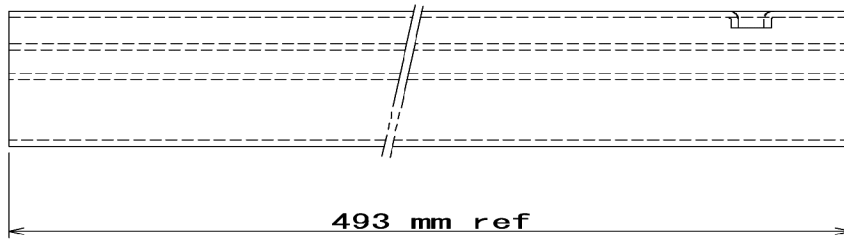
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**Packaging specification of the TB1 and HTB1 Relay**

Standard Tube Packaging

50 relays per tube, 40 tubes per box (2000 relays per box)



**Notes:**

For further information, please contact Taiko device Techno.

**Disclaimer:**

The above information is for information only and with no responsibility, not binding and can be changed any time.  
Taiko Device Techno cannot be held responsible for typos, or misprints.