

□Model List

>Normal type

Operating sensitivity	Power supply voltage	
	5V DC	12V DC
10pF	HTD-20-0510□△	HTD-20-1210□△
40pF	HTD-20-0540□△	HTD-20-1240□△

>Latch type

Operating sensitivity	Power supply voltage	
	5V DC	12V DC
10pF	HTD-L20-0510□△	HTD-L20-1210□△
40pF	HTD-L20-0540□△	HTD-L20-1240□△

*□: contains the operating display of LED color symbol of.

O=Orange R=Red Y=Yellow

*△: The format the end of the different frequency type contains the B or C (standard frequency products without display).

Application

- Touch switch for door knobs
- Elevator switch
- Input switch of entertainment equipment
- Input switch for electric devices

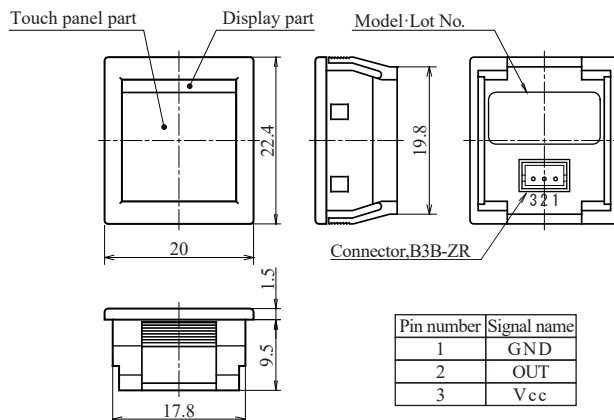
Characteristics

- Does not operate by mistake when touched by an object with small electrostatic capacity such as plastic objects or bags.
- Fixed sensitivity to avoid the need for troublesome settings.
- Can withstand human static electricity without any external connection.
- Does not use any contact point to prevent poor contact problems and increase the lifespan.
- Normal type outputs the signal only when you have touch.
- Latch type output to touch upon alternately inverted hold.

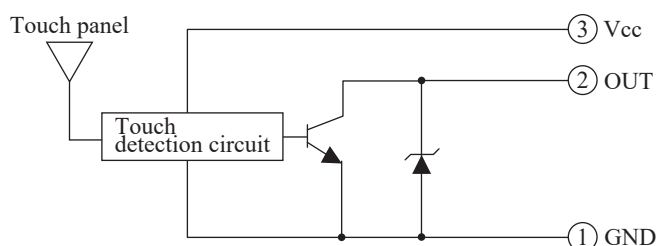
Rating / Performance

Model	Normal Type	HTD-20-0510	HTD-20-0540	HTD-20-1210	HTD-20-1240
	Latch Type	HTD-L20-0510	HTD-L20-0540	HTD-L20-1210	HTD-L20-1240
Operating Sensitivity	10 pF ±3 pF		40 pF ±10 pF		40 pF ±10 pF
Power Supply Voltage	5 V DC ±10 %			12 V DC ±10 %	
Power Consumption	When Off : 4 mA DC or less, when On : 20 mA DC or less			When Off : 20 mA DC or less, when On : 20 mA DC or less	
Output	30 V DC 50 mA DC or less NPN transistor open collector				
Output Residual Voltage	1 V DC or less (Load current 50 mA DC)				
Operation Configuration	HTD-20 series : On output when touch is detected HTD-L20 series : Keep ON and OFF alternately for each touch, LED : ON at output ON				
Operation Display	Orange or Red or Yellow LED (Lit when On output)				
Operating Temperature Range	-10 to 60 °C (-25 to 65 °C during storage) (Without dew condensation or freezing)				
Operating Humidity Range	35 to 85% RH (35 to 85% RH during storage) (Without dew condensation)				
Static Electricity Resistance	±15 kV between the touch part and GND (500 pF, 500 Ω)				
Withstand Voltage	1 min at 500 VAC 50/60 Hz (Between the live part and case)				
Insulation Resistance	20 MΩ or more measured with an ohmmeter at 500 V DC (Between the live part and case)				
Vibration Resistance	Durability: 2 hours in each X, Y, Z direction at 10 to 55 Hz and with peak-to-peak amplitude of 1.5 mm (At power off)				
Shock Resistance	Durability: 3 times at 500 m/s ² (approx. 50 G) in each X, Y, Z direction (At power off)				
Protection Rating	IP50				
Case Material	Case: PBT reinforced with glass-fiber, touch panel : phosphor bronze + nickel coating				
Connector	Connector: B3B-ZR (3-pin)(from J.S.T. Mfg. Co., Ltd.) [Connections] Housing: ZHR-3, Contact: SZH-002T-P0.5 (from J.S.T. Mfg. Co., Ltd.)				
Weight	Approx. 5 g				
Options (Sold Separately)	Connector harness : SZH-3-300				

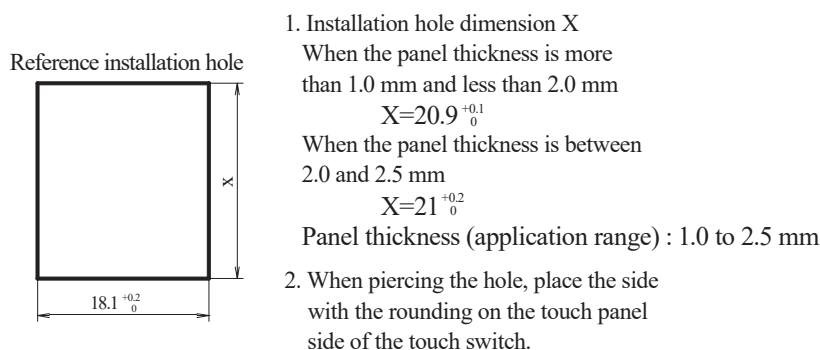
External dimensions diagram



Output circuit

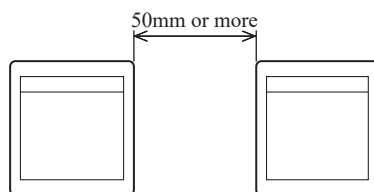


Installation hole



Usage precautions

- Do not apply excessive force when installing the HTD-20 to the panel. Otherwise, it may malfunction.
- When using two or more of the same product aligned together, place them separated by at least the distances indicated in the figure below, or use standard products and products with a different frequency alternately to prevent interference. (B or C is added at the end of the model names of different frequency sensors.)



- The touch (detection) electrode of the touch sensor is connected to the detection circuit. Therefore, it is necessary to ensure sufficient withstand voltage and insulation between the touch sensor power supply and the AC power supply to ensure safety.
- If the sensor is used near a broadcasting station with high output, or if there is strong common-mode noise in the DC power supply because it is also used for a large inverter-fed device, install a capacitor of 0.1 μF or more to the 0 V line to remove the noise to the FG terminal.
- A high-frequency oscillation circuit is used in the touch sensor. Therefore, if several sensors get close or if the same person touches the touch electrodes of several touch sensors at the same time, the detection operation may malfunction due to reciprocal interference. It is recommended to consult with our company since the interference depends on the position and wiring of the touch sensors and the sensor electrodes.
- See Touch sensor general usage precautions for other precautions.

*For a detailed specification of the other, please refer to specifications.