



TWC NTC SERIES resistance thermometers



measuring
•
monitoring
•
analysing

TWC-N



APPLICATIONS

- E-CAR MOTOR
- E-CAR CHARGING SOCKET & PISTOLE
- POWER BATTERY BMS
- INDUSTRIAL MOTOR, TRANSFORMER
- INDUSTRIAL ENGINEERING
- HEATING EQUIPMENT
- INTELLIGENT HOME SYSTEM

BENEFITS

- TEMP RANGE: $-40 \sim 200^{\circ}\text{C}$
- CHIP: NTC
- HIGH PRECISION & RELIABILITY
- FAST RESPONSE TIME
- GOOD SEALING, IP68
- DIVERSITY, CUSTOMIZED

KOBOLD companies worldwide:

ARGENTINA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECHIA, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, ROMANIA, SINGAPORE, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, USA, VIETNAM

KOBOLD Messring GmbH
Nordring 22-24
D-65719 Hofheim/Ts.
Head Office:
+49(0)6192 299-0
+49(0)6192 23398
info.de@kobold.com
www.kobold.com



TWC NTC SERIES resistance thermometers

Description

TWC NTC series resistance thermometers can have different types of resistor chips packaged according to customer requirements, mainly including NTC negative temperature coefficient thermistors.

NTC temperature thermistor is a kind of sensor packaging negative temperature coefficient thermistor. NTC chip is made from Mn, Co, Ni, Cu and other metallic oxides, using ceramic sintering process to produce chips with semiconductor properties. These oxide materials have a low number of carriers at low temperature, so their resistance is high. However, with the increase of temperature, the number of carriers increases and the resistance decreases gradually. NTC thermistors are widely used for temperature measurement.

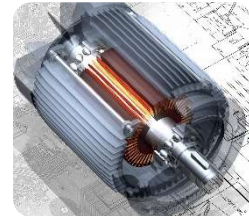
NTC chip can be packaged by glass or epoxy. TWC NTC series resistance thermometers comprise of a protect housing, NTC sensor chip and connecting wire or cable. Plastic protect housing can have excellent high voltage performance. Stainless steel protect housing has more faster response time.

With so small size of housing package, it can be easy mounting at almost any applications, even with very limited space. Meanwhile, small size of the sensors can achieve high measuring accuracy.

Application

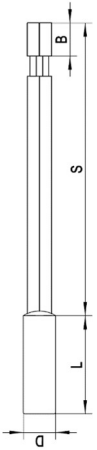
Because NTC ships are made of semiconductor material, its price can be very cheap to be competitive in almost every fields, such as industrial field, automotive of E-Mobility, engineering applications, appliance industry, and so on.

It can be embedded in the copper coils for any size of motors to monitor the temperature of motor working. Also, it can be potted or over molded in charging sockets and pistols for E-mobility.



NTC SERIES resistance thermistors

With stainless steel housing


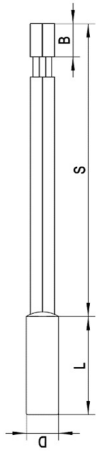
	Potting housing made of 1.4301 (SS304), Temperature range: -40~200°C, HV test: 3.0kVAC. Insulation Test: >100MΩ@100VDC Single wire connection, Potting Process with IP 68 Grade.					
	Mode NO.	HOUSING Diameter	Sensor type	Wiring	Wire Spec	Wire length S
TWC-N3	D=Ø4.0mm L=12mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k	..2..= 2-wire	..A..= Single wire, Teflon insulation ..E..= Cable, 2 cores, Teflon jacket non-shield ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-N4	D=Ø 5.0mm L=14mm	..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option				
TWC-NX	Customized by special request					



NTC SERIES resistance thermometers

With Plastic housing

Potting housing made of PPS GF30,
Temperature range: -40~200°C, HV test: 4.0kVAC. Insulation Test: >100MΩ@500VDC
Single wire connection, Potting Process with IP 68 Grade.






Mode NO.	HOUSING Diameter	Sensor type	Wiring	Wire Spec	Wire length S	Connection B
TWC-N1	D=Ø3.4mm L=14mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k ..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option	..2..= 2-wire	..A..= Single wire, Teflon insulation ..E..= Cable, 2 cores, Teflon jacket non-shield ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-N2	D=Ø 5.0mm L=14mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k ..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option	..2..= 2-wire	..A..= Single wire, Teflon insulation ..E..= Cable, 2 cores, Teflon jacket non-shield ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-N7	D= 6.0x3.0 L=14mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k ..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option	..2..= 2-wire	..A..= Single wire, Teflon insulation ..E..= Cable, 2 cores, Teflon jacket non-shield ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-NX	Customized by special request					

NTC SERIES resistance thermometers

With O-Terminal housing

Potting housing made of brass
Temperature range: -40~125°C, HV test: 3.0kVAC. Insulation Test: >100MΩ@500VDC
Ribbon cable connection.

Mode NO.	HOUSING Diameter	Sensor type	Wiring	Cable Spec	Cable length	Connection
TWC-NA	D=Ø4.2mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k ..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option	..2..= 2-wire	..B..= Single wire, XLPE insulation.. ..C..= Ribbon wire, 2 cores, PVC insulation ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-N8	D=Ø5.2mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k ..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option	..2..= 2-wire	..B..= Single wire, XLPE insulation.. ..C..= Ribbon wire, 2 cores, PVC insulation ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-N9	D=Ø6.3mm	..E..= 1xNTC, R25=10kΩ±1%, B25/50=3950k ..F..= 1xNTC, R25=100kΩ±1%, B25/50=3950k ..G..= 1xNTC, R25=10kΩ±1%, B25/50=3380k ..X..= Special option	..2..= 2-wire	..B..= Single wire, XLPE insulation.. ..C..= Ribbon wire, 2 cores, PVC insulation ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
TWC-NX	Customized by special request					



NTC SERIES resistance thermometers

With TPE over molding housing

	Over molding housing made of TPE Temperature range: -30~105°C. Over molding with IP68 HV test: 3.75kVAC. Insulation Test: >100MΩ@500VDC.						
	Mode NO.	HOUSING Diameter	Sensor type	Wiring	Cable Spec	Cable length	Connection
	TWC-NB	D=Ø5mm L=16	..E..= 1xNTC, R25=10kΩ±1% , B25/50=3950k	..2..= 2-wire	..B..= Single wire, XLPE insulation.. ..C..= Ribbon wire, 2 cores, PVC insulation ..X..= Special option	..00500.. =500mm ..xxxxx.. =Special length	..A..=Half Stripping, 6mm ..B..=Full Stripping TIN coating, 6mm ..X..= According to specifications with specifying terminals or connectors.
	TWC-NC	D=Ø5mm L=20	..F..= 1xNTC, R25=100kΩ±1 %, B25/50=3950k				
	TWC-ND	D=Ø6mm L=16	..G..= 1xNTC, R25=10kΩ±1% , B25/50=3380k				
TWC-NX	Customized by special request						

NTC SERIES resistance thermometers

Other customized sensors are also can be available to design to meet customer request.