

EPCOS Product Brief 2017

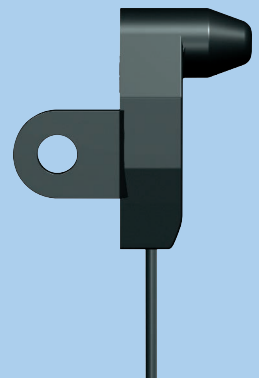
NTC Thermistors

Temperature Sensors for Selective Catalytic Reduction (SCR) Tanks

The new temperature sensors for selective catalytic reduction (SCR) systems are either used as integrated temperature sensors in the SCR tank or as an outside tank temperature sensor to protect the urea from freezing. With their compact design, high reliability and accuracy, EPCOS sensors help SCR manufacturers make their products more reliable, effective and safe.

Features

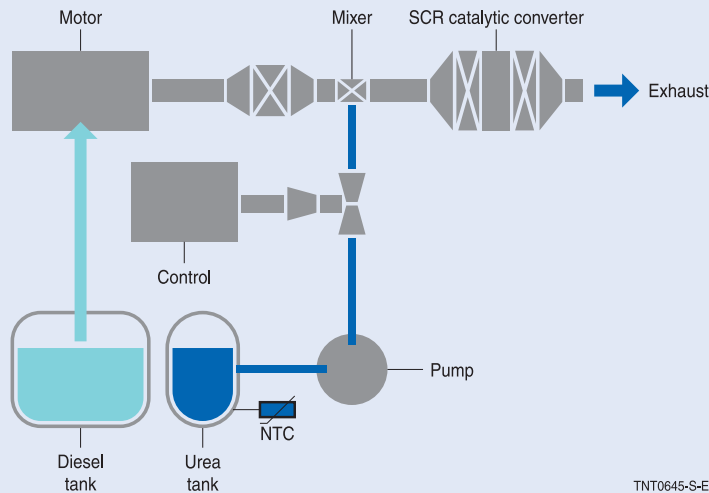
- Urea resistant (ISO 22241-1)
- Temperature range from $-40\text{ }^{\circ}\text{C}$ up to $+85\text{ }^{\circ}\text{C}$
- Short response time
- Leak-tight seal is provided by an O-ring
- Reduced height for full scale tank level measurement
- Customer-specific solutions such as optimized connector or bayonet mount design



NTC Thermistors

Temperature Sensors for Selective Catalytic Reduction (SCR) Tanks


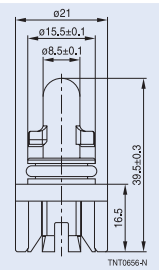

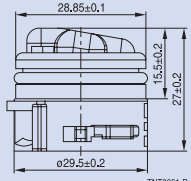

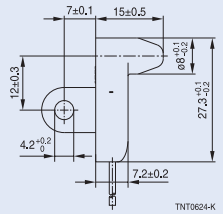
Thermal control of the urea



Effective SCR systems convert the nitrogen oxides (NO_x) of the exhaust gas from diesel engines into diatomic nitrogen (N₂) and water (H₂O), which helps to reduce the NO_x emissions by up to 90% as a requirement for the mandatory Euro 6 emission standard. The urea has to be liquid in order to enable the SCR process. Because urea has a freezing temperature of approximately -11 °C, the heating system has to be switched on to protect the SCR system from freezing. Effective, reliable and fast EPCOS temperature sensors are key components for fulfilling Euro 6 requirements and thus protecting the environment.



Technical data

| Type | Characteristics | Features | Dimensional drawing |
|---|--|--|---|
| Integrated urea temperature sensor  | <ul style="list-style-type: none"> Temperature range: -40 °C ... +80 °C Compliant with ISO 22241-1 Customer-specific solutions | <ul style="list-style-type: none"> Response time: < 60 s Urea resistant (ISO 22241-1) Leak-tight seal with an O-ring Connector-based design |  <p style="text-align: right;">TNT0656-N</p> |
| Integrated urea temperature compact sensor  | <ul style="list-style-type: none"> Temperature range: -40 °C ... +80 °C Compliant with ISO 22241-1 Customer-specific solutions Compact design for the measurement of small amounts of urea | <ul style="list-style-type: none"> Response time: < 60 s Urea resistant (ISO 22241-1) Leak-tight seal with an O-ring Connector-based design |  <p style="text-align: right;">TNT0661-P</p> |
| Outside temperature sensor  | <ul style="list-style-type: none"> Temperature range: -40 °C ... +85 °C Compliant with IP6K6 and IPX9K for 30 s Customer-specific solutions | <ul style="list-style-type: none"> Humidity resistant: 2000 h immersion test at +80 °C Thermal cycling: 480 cycles with applied voltage 120000 cycles on/off Thermal shock: 200 cycles in air transition time < 30 s Cable-based design |  <p style="text-align: right;">TNT0624-K</p> |

Important information: Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products. We expressly point out that these statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. It is incumbent on the customer to check and decide whether a product is suitable for use in a particular application. This publication is only a brief product survey which may be changed from time to time. Our products are described in detail in our data sheets. The *Important notes* (www.epcos.com/ImportantNotes) and the product-specific *Cautions and warnings* must be observed. All relevant information is available through our sales offices.