

Contact-Type Smart Sensor E9NC-T

Advanced, Durable, Space-saving Contact Sensors.



- OMRON's unique ball spline mechanism for resistance to vibration and shock.
- Employs a robot cable that withstands bending. *1
- Slim, short Sensor Heads and slim Amplifier Units to save you space.
- A flanged type that does not require mounting brackets and is easy to replace.
- Transmits high-precision data with a resolution of 0.1 μm across a network (E9NC-TA0 only).

*1. Robot cable specifications apply to the Sensor Head cable and the Connection Cable between the Preamplifier and the Amplifier Unit.

Refer to Safety Precautions on page 8.



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Features

Handles Diverse Measurement Applications

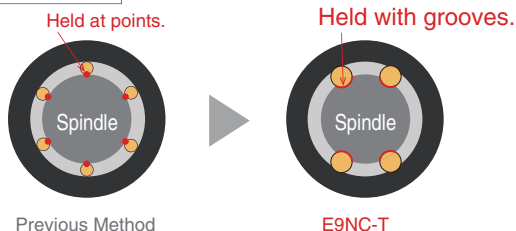
- Handles Measurement Applications in Harsh Environments

Durable

Tough under Vibration and Shock

Ball Spline Mechanism

Cross-sectional Area



- Handles Advanced Measurement Applications*2

Advanced

Data Communications via Field Networks

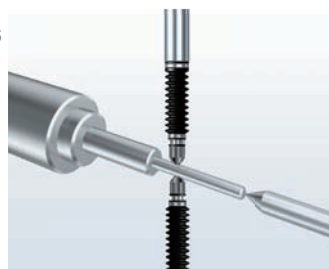
High-precision Data Transmission
(0.1- μm Resolution)

Connect Many Sensors

Connect Up to 30 Sensors with
Reduced Wiring *3

Eight Calculation Functions *4

Maximum Value, Minimum Value, Flatness,
Average, Step, Twist, Warp, and Thickness



Measurement of Machined Part Precision

*2. E9NC-TA0 only.

*3. You can connect up to 30 Sensors to an E3NW Sensor Communications Unit with EtherCAT (when an OMRON NJ-series Controller is used) or up to 16 Sensors with CC-Link.

*4. Calculations are performed on the host controller. Special function blocks are available separately. For details, please contact your OMRON sales representative.

- Handles Measurement Applications with Limited Space

Space-saving

Slim, Short Sensor Heads

8-mm outside diameter

Slim Amplifier Units

Slim Body Only 10 mm Wide

107.8 mm* even including
the bending radius
*For permanent bend

Save more space
and design
more freely with
the right-angle
air type.

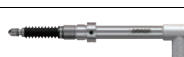


E9NC-TH5S (on the left) and E9NC-TH5L (on the right)

E9NC-T

Ordering Information

Sensor Heads (Dimensions → page 10 and 11) (Connection Cable between Preamplifier and Amplifier Unit is not provided with the Sensor Head. Be sure to have the Connection Cable ready when using the Sensor.)

Type	Appearance	Measuring range (Moving range)	Resolution	Model
Straight type		5 mm	0.1 μm	E9NC-TH5S 2M
Right-angle air type				E9NC-TH5L 2M
Flanged type/ Straight type				E9NC-TH5SF 2M
Flanged type/ Right-angle air type				E9NC-TH5LF 2M
Straight type		12 mm		E9NC-TH12S 2M
Right-angle air type				E9NC-TH12L 2M
Flanged type/ Straight type				E9NC-TH12SF 2M
Flanged type/ Right-angle air type				E9NC-TH12LF 2M

Amplifier Units (Dimensions → page 12)

Type	Appearance	Model	
Communications*		E9NC-TA0	
ON/OFF output		NPN output E9NC-TA21 2M	PNP output E9NC-TA51 2M

* A Sensor Communications Unit is required if you want to use the Amplifier Unit on a network.

Connection Cable between Preamplifier and Amplifier Unit (Dimensions → page 13)

Cable length	Model	Quantity
0.5 m	E9NC-TXC05	1
5 m	E9NC-TXC5	1
10 m	E9NC-TXC10	1
20 m	E9NC-TXC20	1

Accessories (Sold Separately)

Sensor Head Accessories

Probe (Dimensions → page 13)

The E9NC-TB1 is provided with the Sensor Head. Order replacements as required.

Type	Appearance	Model	Quantity
3-dia. probe		E9NC-TB1	1
Nylon probe		E9NC-TB2	1
Probe for flat surfaces		E9NC-TB3	1