

1. Safety notes

1.1 Installation and startup

The rotary sensor must be installed by qualified personnel in consideration of all relevant safety regulations.

In case of unauthorized modifications, non-permitted usage or non-observance of installation instructions, the warranty and liability claims will be lost.

All personal protection measures must be taken before startup in case of a sensor defect or failure.

1.2 Electrical connections

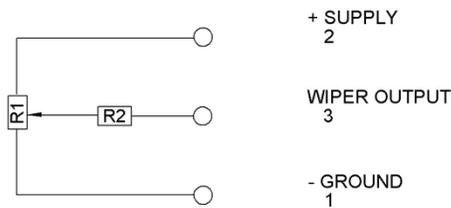
The specified supply voltage is to be applied only at the terminals provided.

Non-observance of the pin configuration will result in destruction of the device and loss of warranty. Please always check the connections carefully before turning on the system.

For a proper function the appropriate combination of male-/female contact material is to be observed.

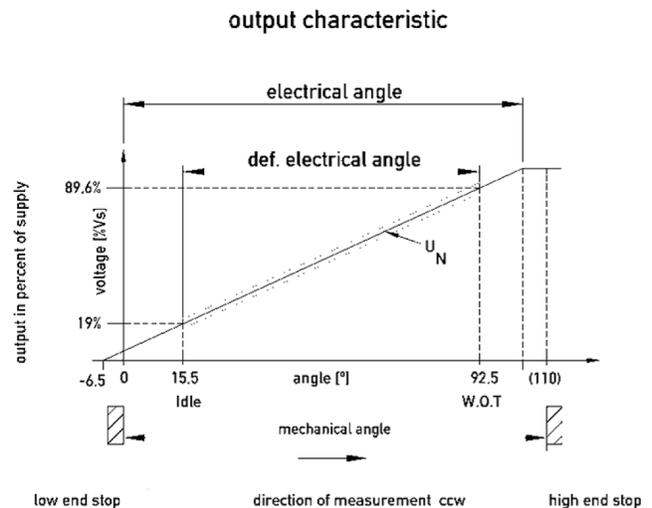
2. Installation

2.1 Terminal diagram



Voltage divider free of load!
Wiper current
 $I_e \leq 1\mu A$

2.2 Output Signal



3. Types

Article Code	Resistance	Electrical Angle	Def. electrical Angle	max. Voltage	Connector type	Output connector		
						PIN 1	PIN 2	PIN 3
SP 4001 101 001 001	1.2 kOhm	101°	77°	16 VDC	Delphi Metri Pack P/N 12162182	GND	supply	signal

4. Installation Instructions:

Mount the sensor in such a way that the blade of the throttle body is solidly engaged by pressing the SP40 parallel down until the o-ring is fully embedded in bore hole (if necessary turn SP40 slightly to assist).

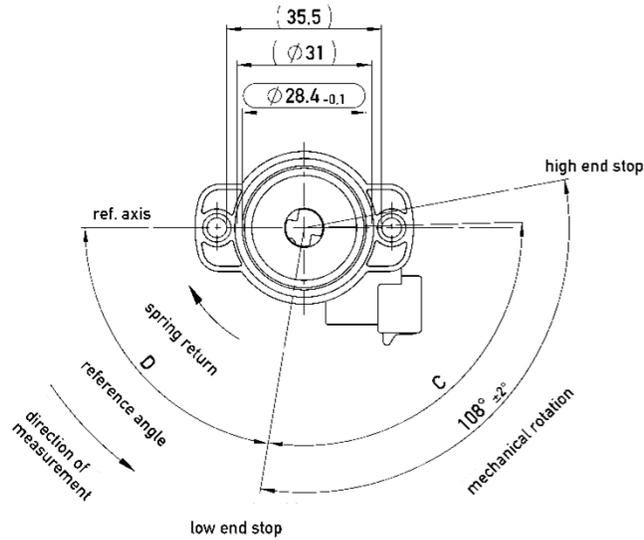
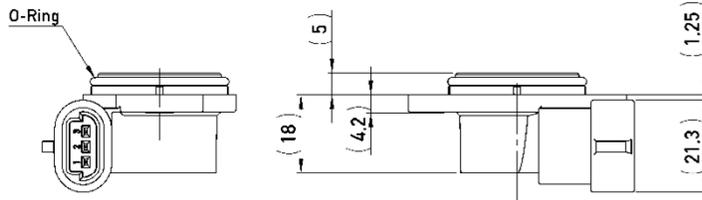
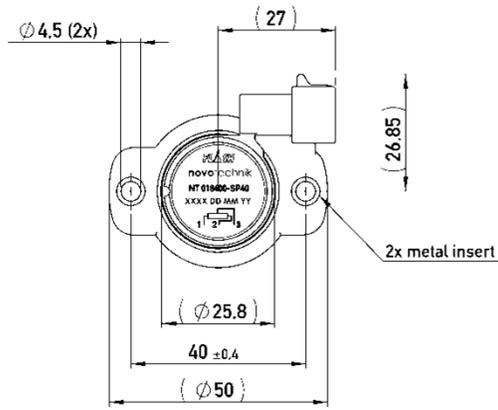
Bring SP40 into reference position .
Tighten screws with torque of 2,5 +/- 0,5 Nm.

To ensure proper sealing, presence and correct position of O-ring on the sensor has to be checked before assembly.

After disassembly of the sensor the o-ring must be replaced, otherwise the sealing function can not be guaranteed.

SP 4001 Assembly Instruction

5. Dimensions



6. Mounting Interface :

