The optoNCDT 1700 is designed for use in industrial areas. It is used for measuring displacement, distance, position and elongation for in-process quality control and dimensional testing. The sensor may only be operated within the limits specified in the technical data, see instruction manual, Chap. 3.4. The sensor should only be used in such a way that in case of malfunctions or failure personal or machinery is not endangered. Additional precautions for safety and damage prevention must be taken for safety-related applications.

**Warnings**

Connect the power supply in accordance to the safety regulations for electrical equipment. The power supply must correspond to the specified limits.

- Damage of injury, damage to or destruction of the sensor.
- Avoid continuous exposure to spray on the sensor. Avoid exposure to aggressive materials (washing or cleaning agents) that can damage the sensor. The switching inputs for laser on/off and setting masters/mid-point are similarly released, the laser is deactivated. If the connection is wired. Connect pin 9 with pin 6 in order to activate the laser. If the connection is not made within the last 30 seconds or longer, the laser is deactivated.

**Power Supply**

Use power supply only for measurement devices. MICRO-EPSILON recommends the use of the option available power supply PS2020 for the sensor.

- **Voltage**: nominal voltage, DC 11...30 V (± 10 %)
- **Current**: max. 0.5 mA
- **Power**: max. 0.2 W

**Inputs and Outputs**

The switching inputs for laser on/off and setting masters/mid-point are inactive. Forcing Pin 6 to the LOW state activates the laser. To deactivate the laser, Pin 6 must be set to the HIGH state. The switching inputs for laser on/off and setting masters/mid-point are inactive. Forcing Pin 6 to the LOW state activates the laser. To deactivate the laser, Pin 6 must be set to the HIGH state.

**Use**

- **Pin 1**: FSM or Trigger input (symmetrical synchron output 0...10 V, master output). Connect pin 1 with pin 8 or pin 12 in order to set the laser to the target.設定 masters/mid-point are similarly inactive. Connect pin 9 with pin 6 in order to activate the laser. If the connection is not made within the last 30 seconds or longer, the laser is deactivated.

- **Pin 2**: Current to Master (Current: 4...20 mA or Analog output B)
- **Pin 3**: Sensor master or input (Slave)
- **Pin 4**: Laser Output
- **Pin 5**: Reference potential for analog output
- **Pin 6**: Laser on/off
- **Pin 7**: Power Supply (11...30 VDC)
- **Pin 8**: Power supply (11...30 VDC)
- **Pin 9**: Power supply (11...30 VDC)
- **Pin 10**: Power supply (11...30 VDC)
- **Pin 11**: Power supply (11...30 VDC)
- **Pin 12**: Power supply (11...30 VDC)
- **Pin 13**: Power supply (11...30 VDC)
- **Pin 14**: Power supply (11...30 VDC)
- **Pin 15**: Power supply (11...30 VDC)
- **Pin 16**: Power supply (11...30 VDC)
- **Pin 17**: Power supply (11...30 VDC)
- **Pin 18**: Power supply (11...30 VDC)
- **Pin 19**: Power supply (11...30 VDC)
- **Pin 20**: Power supply (11...30 VDC)
- **Pin 21**: Power supply (11...30 VDC)
- **Pin 22**: Power supply (11...30 VDC)
- **Pin 23**: Power supply (11...30 VDC)
- **Pin 24**: Power supply (11...30 VDC)
- **Pin 25**: Power supply (11...30 VDC)
- **Pin 26**: Power supply (11...30 VDC)
- **Pin 27**: Power supply (11...30 VDC)
- **Pin 28**: Power supply (11...30 VDC)
- **Pin 29**: Power supply (11...30 VDC)
- **Pin 30**: Power supply (11...30 VDC)

**Precautions**

- Never deliberately take into the laser beam! Gently close your eyes or turn away immediately if ever the laser beam shall hit your eyes.

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**Measurements**

- **Measurement mode (normal operation):**
  - Sets the analog output to the value for the midrange, i.e. 5 VDC or 12 mA.
  - Pressing the once again resets the function.
  - Switches the sensor to setup mode.
  - Pressing and holding the actuates the key for longer than 5 seconds.
  - Overwrites all the parameter values with the factory settings (default values).

- **Setup mode (key actuated):**
  - For running through the levels and parameters.
  - For 10 second.
  - To open the selection list and select the parameter value in sequence.
  - For saving the selected parameter value and returning to measurement mode.

- **Power supply (11...30 VDC):**
  - System ground for power supply and switching signals (Laser on/off, 24V, limits).

- **Analog output 1:**
  - 4...20 mA or voltage 0...10 V

- **Switching output 1:**
  - 1) Enable: 0..5 V control voltage, 2) Int. power (Slave) 65 VDC, 0 (Slave)

- **Sync +/−:**
  - Symmetrical synchronous output (Master or Slave), 0 (Slave)

- **T+/-:**
  - 95442 - output (symmetrical), 0 (Slave)

- **IL:**
  - Output limit, 0 (Slave)

- **Limit output function**
  - Failure of the function.

- **Outputs**
  - Switching Inputs Laser On/Off, Setting Masters and Mid-point

- **Switching Inputs Laser On/Off, Setting Masters and Mid-point**
  - ...
Components, Typical Application with Analog Output
Components, Typical Application with RS422 and IF2008

Switching on the Power Supply Respectively PC

1. Power supply sensor
2. Synchronization sensors
3. Laser on/off

Switching Outputs

You can read more information about the sensor in the instruction manual. You will find these online at: www.micro-epsilon.de/download/manuals/man-optoNCDT-1700-en.pdf or on the delivered CD.