

X252 Forward Clamp Out Sensor Setup Stuertz Infeed

Setting the laser distance sensor for the forward clamp out input (Vorlaufwagen)

 Difficulty **Hard**

 Duration **10 minute(s)**

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Introduction

The out sensor used for the vorlaufwagen cannot be a standard reed switch because the cylinder that drives this output is a telescoping version. It is impossible to detect the out position.

Therefore, a sensor is fitted that must be programmed to set a high output when it detects the full range has been reached

The sensor is a Pepperl+Fuchs VDM28-8-L

Datasheet can be downloaded [here](#)

Function

The distance measurement device contains one transmitter and one receiver incorporated into a single housing. The transmitter light is reflected back to the receiver from a target. The sensor determines the distance to the target and triggers a switching function or supplies the relevant measured value for processing.

Assembly instructions

The sensor can be mounted by means of through holes or by using a mounting bracket or mounting clamp

Ensure that the surface is level in order to prevent the housing from becoming distorted when the fittings are tightened. It is advisable to secure the nuts and screws using spring washers in order to prevent the sensor from being incorrectly adjusted.

Connection

Connect the device in accordance with the connection diagram in the datasheet.

Adjustment

The green LED lights up when the operating voltage is switched on.

Adjust the sensor so that the laser point is on the gripper body

Step 1 - Ensure this input is Inverted in IODef

See Technical Bulletin - Inverting Inputs

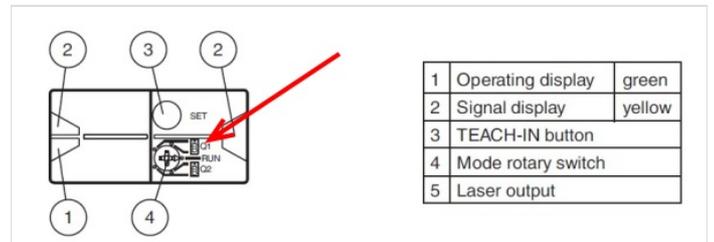
Inputs	
X4 InA_GZHome	X46 InA_ButStart
X7 InA_GYHome	X47 InA_ButStop
X10 InA_GXHome	X48 InA_ButReset
X41 InA_24vBusOk	X49 InA_ESConsole
X42 InA_24vModO	X160 InA_ButAuto

Step 2 - Move the Clamp assembly to its out position

Via IO screen

Step 3 - Select Rotary switch Q1

Select Q1

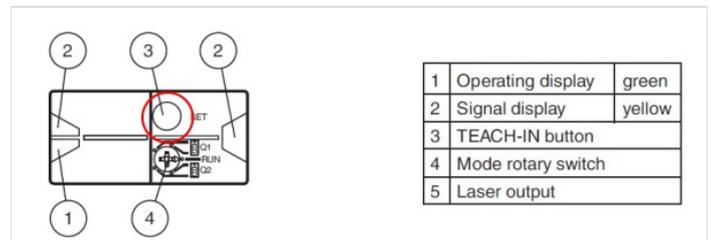


Step 4 - Set threshold

Temporarily place a length of profile offcut of 70mm thickness in front to the laser dot (you will need another pair of hands to help)

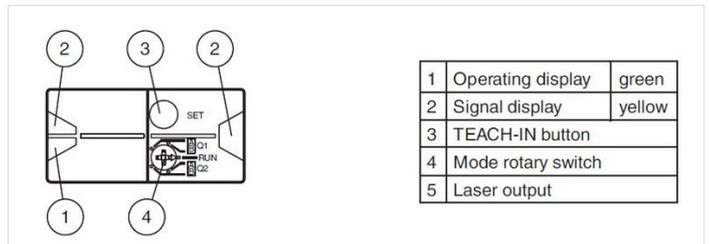
i ...This shortens the laser distance to give us an "off threshold"

- To store a switching threshold (distance measured value), press and hold the "SET" button until the yellow and green LEDs flash in phase (approx. 2 s).
- Teach-In starts when the "SET" button is released.
- A successful Teach-In is indicated by rapidly alternating flashing (2.5 Hz) of the yellow and green LEDs.
- An unsuccessful Teach-In is indicated by alternating flashing (8 Hz) of the yellow and green LEDs.



Step 5 - Select Run Mode

Rotary switch (4) to centre

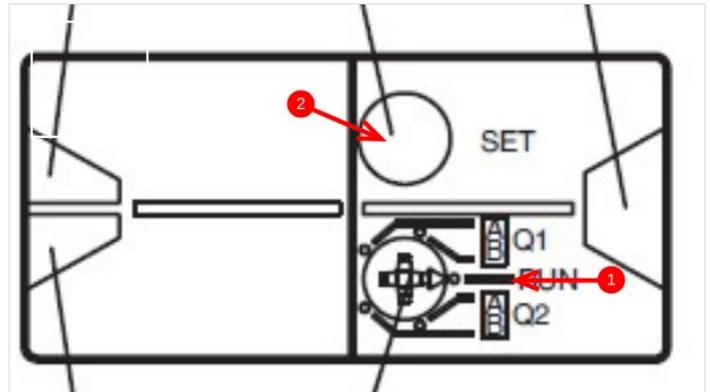


Step 6 - Test

! ...The Input is the reverse of expectation - low when assembly is in the out position

Step 7 - If you need to reset default settings

1. Set the rotary switch to the "RUN" position
2. Press and hold the "SET" button until the yellow and green LEDs stop flashing in phase (approx. 10 s)
3. If the green LED lights up, the procedure is complete



Step 8 - Error messages

- Short circuit: In the event of a short circuit at the sensor output, the green LED flashes with a frequency of approx. 4 Hz.
- Teach error: In the event of a teach error, the yellow and green LEDs flash alternately with a frequency of approx. 8 Hz

💡 ...Note!

The difference in the taught-in distance measured values for the switching thresholds A and B must be greater than the switching hysteresis set in the sensor. On delivery, the switching hysteresis is 15 mm. If the difference in the taught-in measured values is the same as or smaller than the set switching hysteresis, the sensor will visually signal an unsuccessful Teach-In. The last distance measured value that was taught in will not be adopted by the sensor. Select a new distance measured value for switching threshold A or B with a greater difference between the switching thresholds.

Teach in this distance measured value on the sensor again.