Instruction for thread sensor 15960
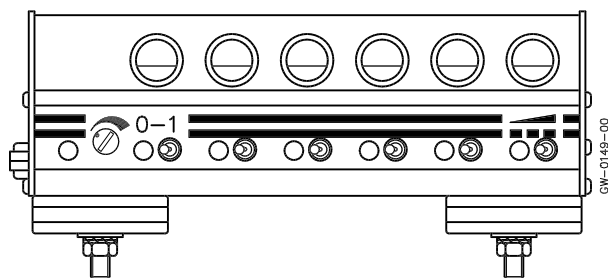
Fitting

Position the thread sensor after the thread brake. The thread motion is detected most effectively when the thread deviates about 10–15° from the horizontal, when it passes over the ceramic bar. Threads should not touch the aluminium housing.
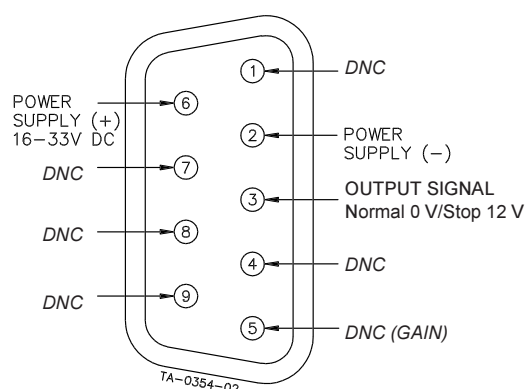
Connection

The thread sensor is designed to operate with an Eltex central control unit, e. g. 15761.
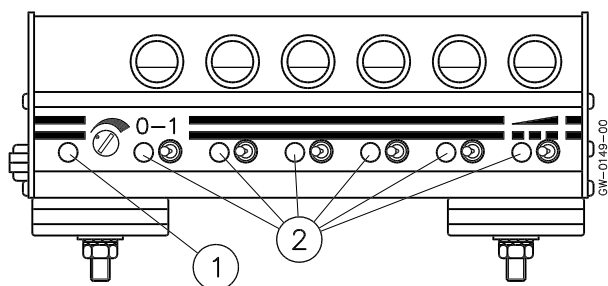
If more than one thread sensor is used, they should be connected in parallel.

Eltex cable, part no. 15902, can be used.

The GAIN (pin 5) should not be connected, as 15960 is equipped with a potentiometer to set the sensitivity (gain). The gain setting in the central control unit is not used.


DNC = Do not connect!

Indication

① The green LED indicates when the thread sensor is in run mode, sensing the movement of the threads.

② The 6 red LED's indicate in which position the thread sensor detected a fault.

The LED will light continuously when the thread is broken.

The LED will flash when the thread has been moving continuously. In normal operation the thread moves intermittently.

How to open and close the lid
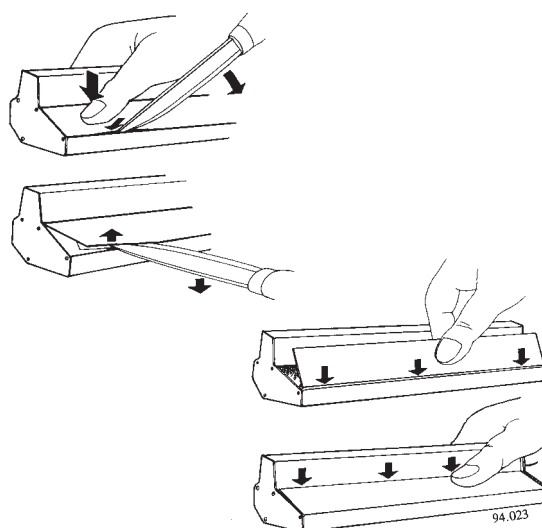
Switches

③Each thread position has a switch, setting the corresponding eyelet ON or OFF (OFF = 0, ON = 1).

Adjustments

④The sensitivity can be changed with the GAIN potentiometer. Maximum setting (clockwise) for thin threads or thread with low tension or small thread movement.

⑤The delay time of the detector circuit can be adjusted by moving a connection shunt on a pin strip inside the thread sensor. The delay time normally must be longer than the time for two stitches.

If the delay is set too short, the thread sensor will stop for no apparent reason, indicating thread break. If the delay is set too long, the stop signal at a broken thread will be delayed many stitches before operating. The thread sensor is delivered with a default setting in position 5, which is suitable for speeds above 1200 rpm.

Shunt position	Delay (ms)	
1	Not used	
2	40	
3	60	
4	80	
5	**100**	(factory setting)
6	120	
7	140	
8	160	
9	180	

⑥ON: the thread sensor will stop if the yarn moves continuously instead of stitchwise. OFF: the thread sensor will not stop if the yarn moves continuously.

⑦The 6th eyelet (with symbol: ▄▄▄) can be made more sensitive than the other eyelets to detect a slower moving or a thinner thread. The sensitivity is changed for this eyelet by a potentiometer located inside the thread sensor. When this potentiometer is in fully counter-clockwise position, the sensitivity is equal to the other eyelets. When this potentiometer is in fully clockwise position, the sensitivity is maximised for this eyelet. This setting effects this eyelet only.

⑧A small LED inside the thread sensor indicates when the thread sensor is sending a stop signal to the central control unit.
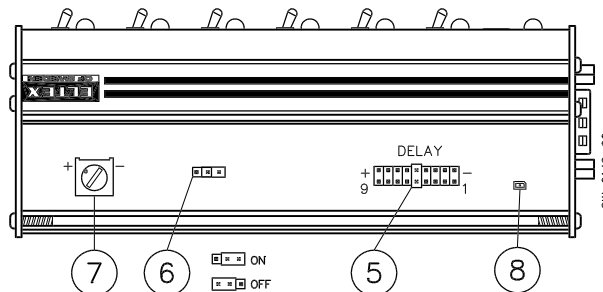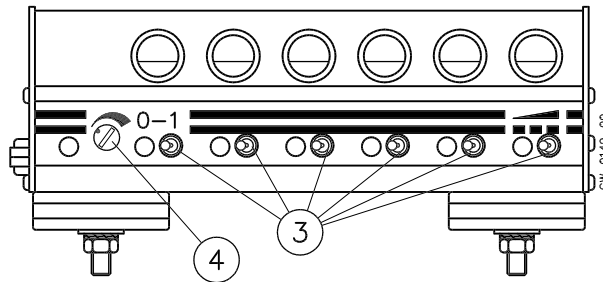
Trouble shooting

• Thread sensor stops for no reason, indicated by continuous light at any red LED (indicating broken thread):
  – Increase the sensitivity setting clockwise.

• Thread sensor stops for no reason, indicated by flashing light at any red LED (indicating continuously moving thread):
  – Decrease the sensitivity setting counter-clockwise.

• The sensitivity is difficult to set, increasing causes stops with flash indication and decreasing causes stops with continuous indication:
  – Increase the delay time of the detector circuit. Try to set the sensitivity again.

• Thread sensor does not stop and no indication:
  – Check that green LED is ON when the SENSE LED in the central control unit is ON. If not, check connection cables.

No ANTI-CHECK function

The anti-check function, mentioned in the instruction for the central control unit, is not available on the 15960 thread sensor .