



Laser copy counter

SCATEC-10



Your benefit!

- **Fast and easy to mount**

Fast initial startup due to easy mounting without mechanical adjustment and a preset sensor function.

- **Highly accurate counting**

The highly accurate counting provided as a preset may be further optimized for your production conditions via the available programming options. This results in perfectly optimized, reliable copy counts, even in cases of multi-color and high gloss media.

- **Easy, flexible settings**

An optimized parameter setting can be achieved either by means of the on – board LCD and 4 programming buttons or by using the **ScaDiag** programming software.

- **Remote control**

All functions can be controlled via a remote programming interface.

- **Fast error diagnostic**

If you ever suspect an error, the **ScaDiag** diagnosis software can help pinpoint the source, saving significant time, effort and money usually wasted in traditional troubleshooting.

The sensors of the **SCATEC**-family were specifically developed for non-contact counting of printed matter in a lap stream.

In terms of performance, the new **SCATEC-10** is a major contribution to the **SCATEC**-family, a family with more than 10 years of unrivaled excellence in industrial applications. The **SCATEC-10** is a complete redesign of the **SCATEC-1**. The keypad with an LCD-display and an additional connector not only changed the appearance but profoundly increased the range of potential applications. The keypad, together with the display, allows the customization and retrieval of all relevant parameters, and the additional connector allows the sensor to be connected to a computer for remote parameter setting. Only the sensitivity of 0,1 mm and the counting rate of up to 1,5 million copies per hour remain the same as with the **SCATEC-1**.

Application hints

The sensor should be mounted parallel to the conveyor at a distance of 70 mm. The edge of a sheet or of a newspaper moving through the laser beam is counted if the edge is facing the laser beam. Thanks to the laser line, small cracks or wrinkles do not create false counts.

Multiple pulse suppression:

A dead-time function eliminates false counts as a result of multiple edges. For example: a notch of a leaflet or bent edges. Depending on the program option, the duration of the dead-time can be adjusted or it is automatically adapted to the actual shingle stream.

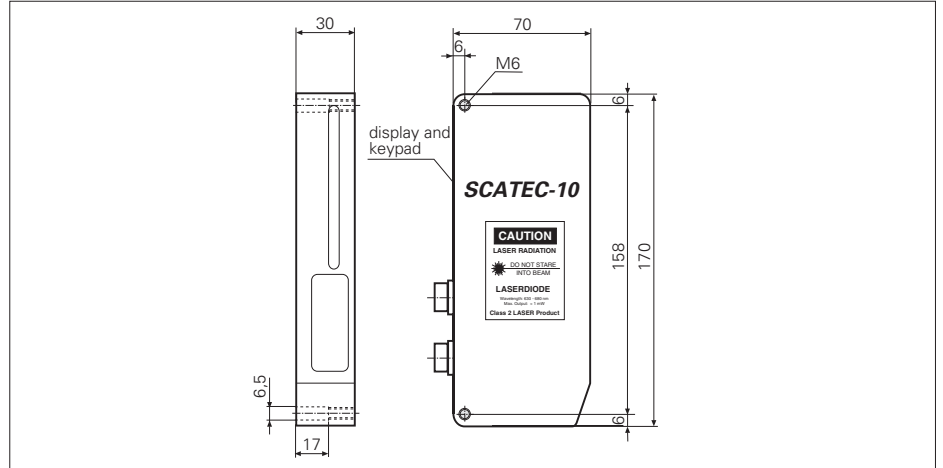
- Dynamic dead-time detection (standard setting). The dead-time is equivalent to a percentage of the mean distance between copies.
- A static dead-time can be set in millisecond increments.
- Dead-gaps in mm: Ideal in applications where conveyor speed is irregular or frequent stops and starts occur. In this case the sensor has to be connected to an encoder.
- No false counts due to wrinkled trailing edges. They will be efficiently suppressed using a delayed pulse output instead of a direct output.

Additionally, a flexible diagnosis and parameter setting software called **ScaDiag** is available. Using this software, the sensor can be controlled via USB or RS232 interface. Furthermore **ScaDiag** allows remote access to the counter value (totalizer), sensor information and error codes. A graphic diagram of the signal characteristics helps analyzing critical applications.

Laser copy counter SCATEC-10

FLDM 170G1011/S42
FLDM 170C1011/S42

- position detection and counting of newspaper and magazines
- objects may overlap
- counting magazines with the folded edge leading
- display, keypad or USB-interface for programming
- high counting precision



technical data	
range	0...90 mm below the sensor
sensitivity	single sheet detection down to 0,1 mm (90 g/m2)* is possible in the range of 68 - 72 mm below the sensor (* test object: neatly cut, matte white paper)
color insensitivity	multi colored objects like magazines and other printed objects with a color range from black to shiny white are recognized, even if the bright / dark transitions are near to the edge
integrated copy counter	0 to 99,999,999 indicated on the display
counting rate	max. 1,5 million copies/h
object speed	0 to 2 m/s with edge thickness 0,2 mm 0 to 1 m/s with edge thickness 0,1 mm
distance between objects	min. 1 mm (for single sheets)
stream condition	folded or cut edges leading
double pulse suppression	via microprocessor, 3 program options
light source	laserdiode 670 nm, visible red, mean output power < 1 mW, laser class 2
size of laser spot	laser line, 5 mm long
interface	USB or RS232 for programming and for the diagnostic software <i>ScaDiag</i>
operating voltage	10 - 30 V (limiting values)
current load	< 150 mA
output	push - pull output (FLDM 170G1011/S42) opto-isolated open collector (FLDM 170C1011/S42)
output pulse duration	selectable 0,3...500 ms, standard 10 ms
input for encoder	opto-isolatec; A-channel, alternatively A/B channel adjustable
connector output	1x DIN 45322, 6 pin, for sensor operation, connector is supplied (part number 104236) 1x DIN 45322, 8 pin, interfaces
housing dimensions	170x70x30 mm
housing material	die-cast zinc
weight	approx. 700 g
temperature range	0...+50 °C (non condensing)
protection class	IP 54
recommended mounting	parallel, 70 mm above them