Laser copy counter

SCATEC-15

The **SCATEC-15** is an enhancement of the highly successful, industry benchmark **SCATEC-1**, known for it's reliable, long term performance. The **SCATEC**-family, developed for non-contact counting of newspapers and magazines in a shingle stream, has set the standard for over 10 years. With a minimum sheet thickness sensitivity of 0,15 mm, the **SCATEC-15** detects sheets with a counting rate of up to 1,5 million copies per hour. Not a single sheet passes by without detection! As an additional feature, an LCD-display with 2 x 12 digits is now integrated into the sensor housing. The display indicates the current value of the copy counter and enables a user friendly, menu-guided programming interface during installation.

Application hints

The sensor should be mounted parallel to the conveyor at a distance of 100 mm. No further adjustments or settings are necessary. The sheets are counted as they move through the sensing field with the edges presented to the sensor face. 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) and the counting of bent edges. The duration of the dead-time can be set and is adapted automatically to the current shingle stream of product (depending on the program option).

- Dynamic dead-time detection (standard setting). The dead-time is commensurate to a percentage of the approximate gaps between target edges.
- A defined, static dead-time can be programmed in millisecond increments.
- Defined dead-gaps in mm. Ideal in applications where conveyor rate is irregular or frequent stops and starts occur. In this case a connection of an encoder is necessary.
- No false counts due to wrinkled trailing edges. They will be efficiently suppressed using a delayed pulse output instead of a direct output.
- Retro-reflective sensor operation for counting of separated sheets. Instead of edge detection, the integrated retro-reflective sensor can be analyzed. Ideal if newspaper surfaces have cracks or wrinkles.

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 analyze critical applications.

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 on multi-color and high gloss media.

• **High precision timing of pulse output**
  In CAN-mode, a high precision output pulse timing allows a perfect synchonization of machine interactions like inkjet printing for individual addressing of newspapers.

• **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.

• **CAN-interface connection to control system**
  The sensor can be automatically controlled via CAN-interface. Ideal for applications where settings frequently have to be changed due to major changes in production conditions. (thick newspapers - densely shingled thin newspapers).

Laser copy counter *SCATEC-15*

FLDM 170G1030/S42
FLDM 170C1030/S42

- position detection and counting of newspaper and magazines

- objects may overlap

- counting magazines with the leading edge folded or ...

- display, keypad or USB-interface and CAN-interface for changing parameters

- high counting precision

technical data	
range	0...120 mm below the sensor
sensitivity	single sheet detection down to 0,15 mm* is possible in the range of 97 - 103 mm below the sensor; in a distance of 120 mm, edges ≥ 0,4 mm will be detected (* 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 or on teh PC
counting rate	max. 1,5 million copies/h
object speed	0 to 1 m/s with thinnest edge; otherwise up to 5 m/s
distance between objects	min. 1 mm (for single sheets)
stream condition	folded or cut edges leading
double pulse suppresion	via microprocessor, 4 program options
light source	laserdiode 670 nm, visible red, average output < 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 *ScaDiag* and CANopen
operating voltage	10 - 30 V (limiting values)
current load	< 150 mA
output	push - pull output (FLDM 170G1030/S42) opto-isolated open collector (FLDM 170C1030/S42)
output pulse duration	selectable 0,3...500 ms, standard 10 ms
input for encoder	opto-isolated; 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, 100 mm above them