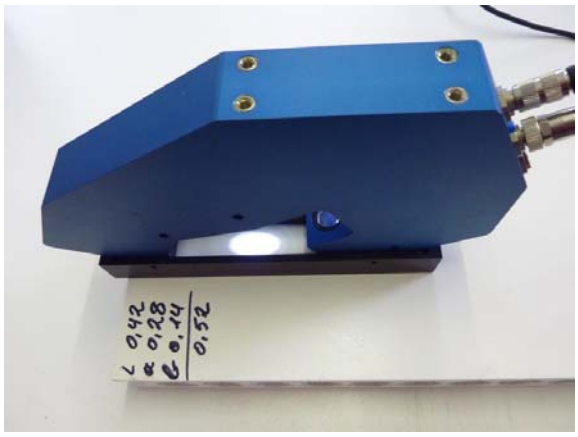
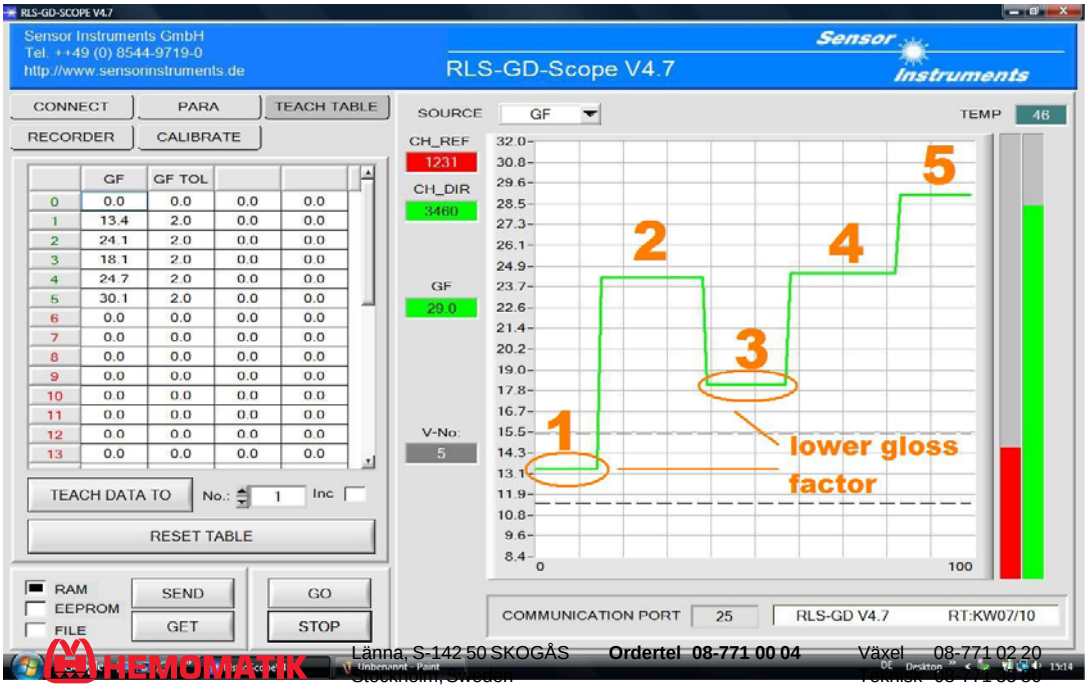
Application - News
N°67 RLS-GD series

Sensor Instruments — Let's make sensors more individual

1. Inline gloss control in the furniture industry

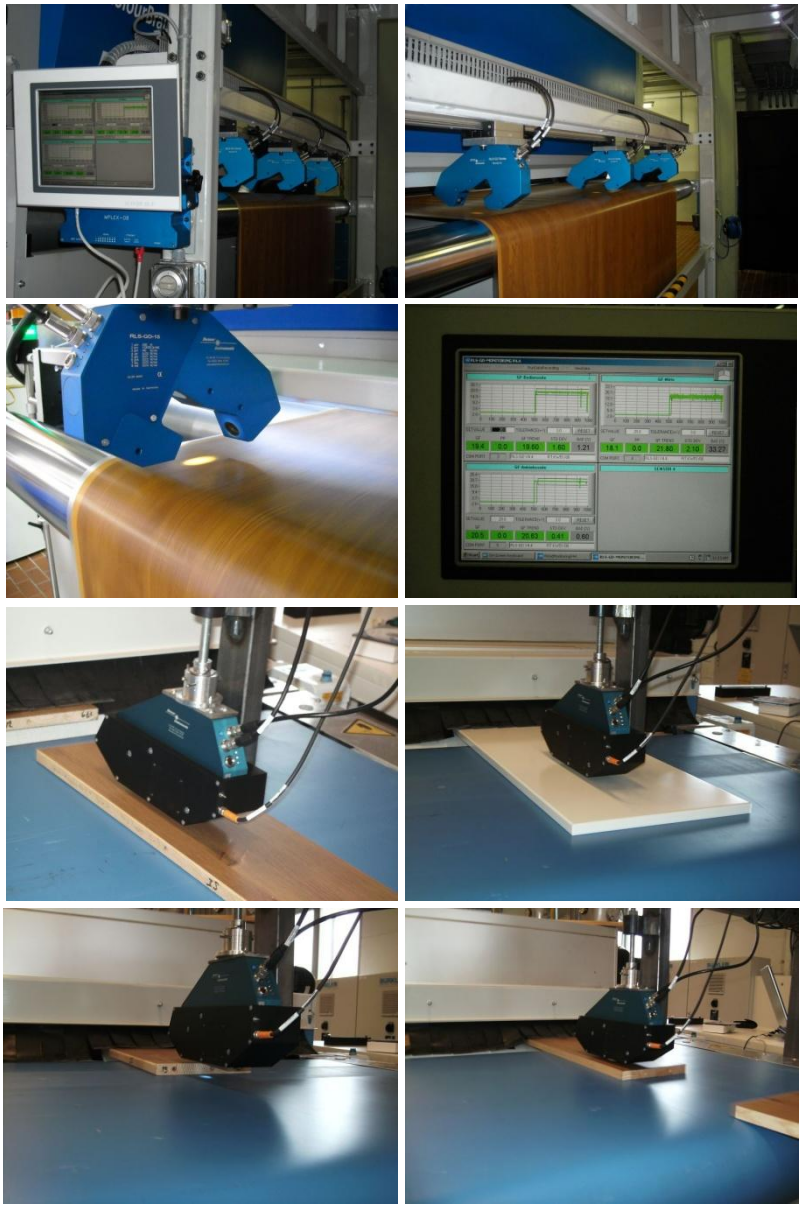
During the manufacturing process of doors just after the painting line the amount of color must be controlled. If insufficient color will be used, the coating becomes uneven e.g. like the surface from an orange, see also sample N°1 and sample N°3. This leads to a lower gloss factor compared to the even coatings (sample N°2, sample N°4 and sample N°5). With the gloss sensor **RLS-GD-15/60°** these differences can be proper detected.





1. Inline gloss measurement of plastic films and laminated plates

During the production of plastic films as well as of laminated plates the gloss factor should be measured. Furthermore the values of the gloss factor should be documented and stored together with parameters from the machine as well as of the product (operator name, factory, line, machine number, order number, customer name, date, time …).

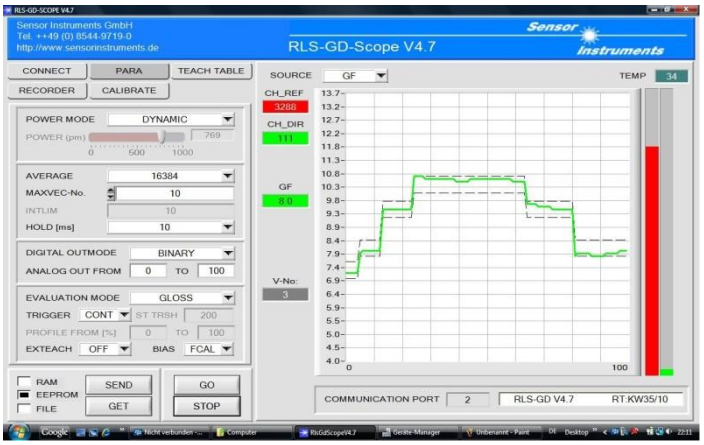


For this task a gloss sensor type **RLS-GD-15/60°** is used and the monitoring software **RLS-GD-Monitoring V4.7** is used for documentation. For the laminated plates the software of the **RLS-GD-15/60°** is working with the **SELF** trigger mode, which can be selected in the windows® - software of the sensor. The sensors are connected via a multiplexer unit type **MPLEX-08** to a panel PC. For the application with the laminated plates a blowing unit is used to avoid dirt accumulation onto the optical windows of the gloss sensor.

HEMOMATIK
Länna, S-142 50 SKOGÅS
Stockholm, Sweden
Ordertel 08-771 00 04
Växel 08-771 02 20
Teknisk 08-771 35 80
Email info@hemomatik.se
Internet www.hemomatik.se

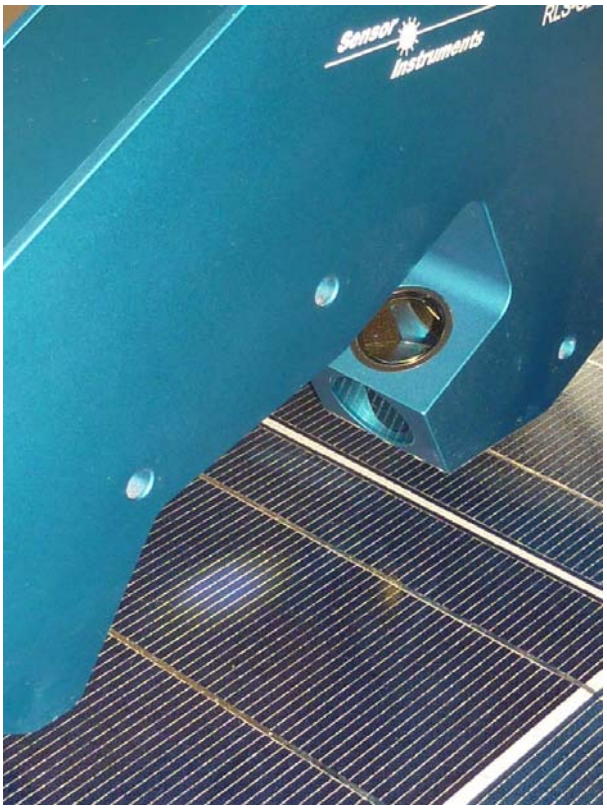
1. Inline gloss measurement on abrasive belts

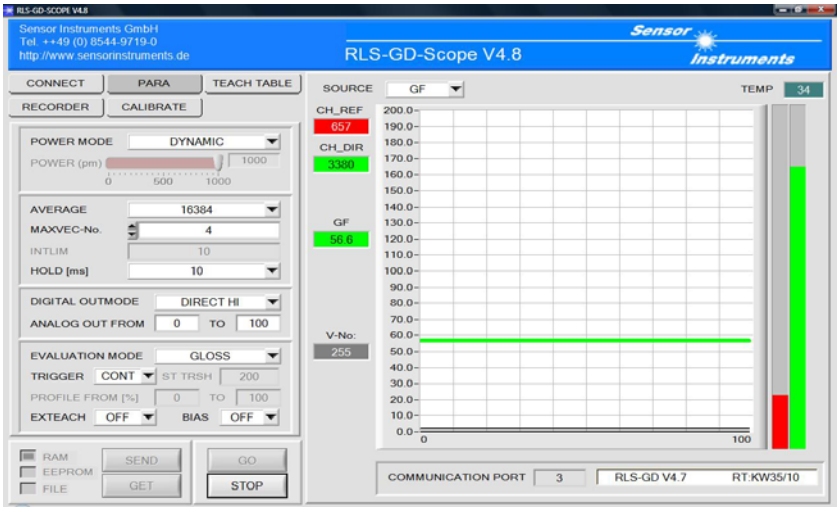
The gloss factor is a significant parameter for the surface quality, the roughness, of an abrasive belt. Typical gloss values are between a GF of 0.1 and a GF of 5. Thus a special set of calibration shells is available to adjust the gloss sensor especially for abrasive surface measurements (spread out the GF 0.1 to 5 to a GF* from roughly 1 to 50). The sensor delivers an analog signal, which is proportional to the gloss factor. Furthermore up to 31 different products can be stored, each with an individual tolerance window; at this a quality control of one product surface in 31 individual steps is also possible, five digital outputs are available for this task. For data monitoring the **RLS-GD-Monitoring** software can be used, which allows to store additionally to the gloss factor the order number, date, time, operator name, line number as well as the product number. The distance from the sensor **RLS-GD-15/60°** to the product surface is approximately 15 mm. As shown in the screen shots, there is a proper differentiation between different products as well as a quality control of one product possible.

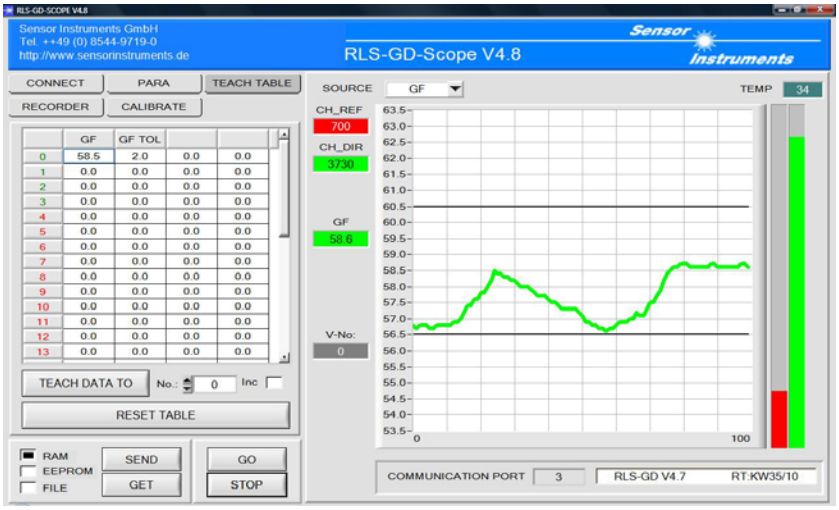


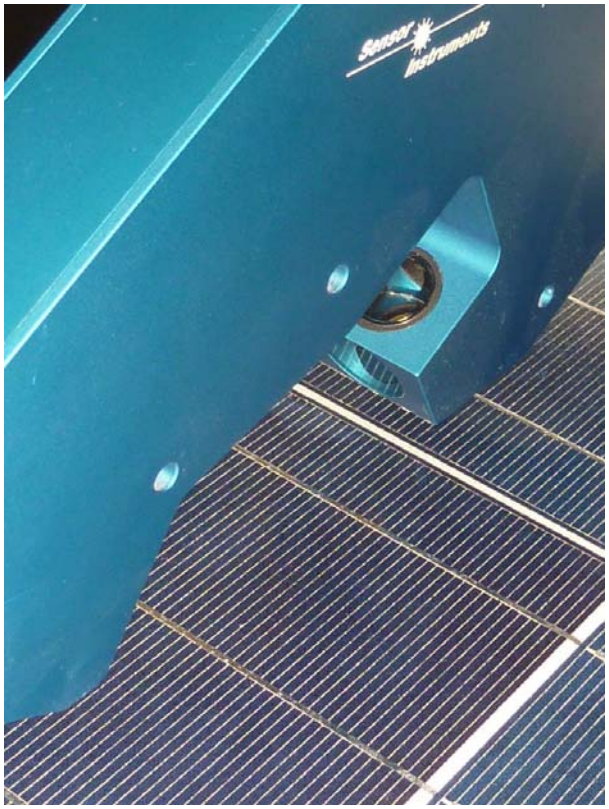
1. Goss measurement of the glass surface of a photo voltaic panel

The gloss factor of the glass cover of a photo voltaic panel should be measured during the production. For this purpose a gloss sensor type **RLS-GD-15/60°** is used. The distance to the glass surface is approximately 15mm. A proper detection of the gloss factor of this glass surface is possible.



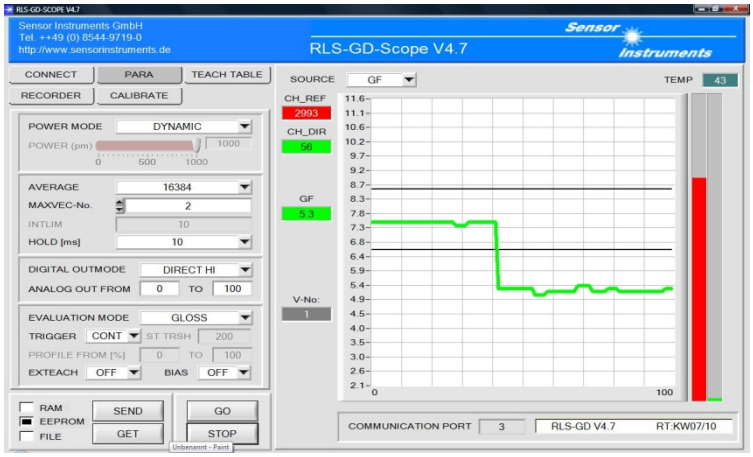


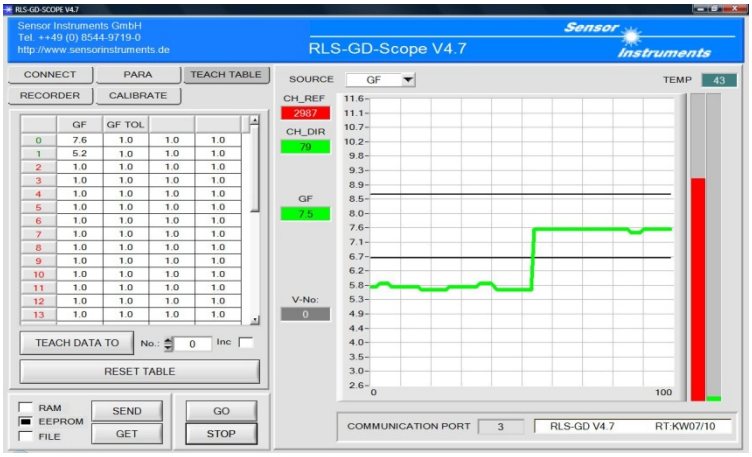


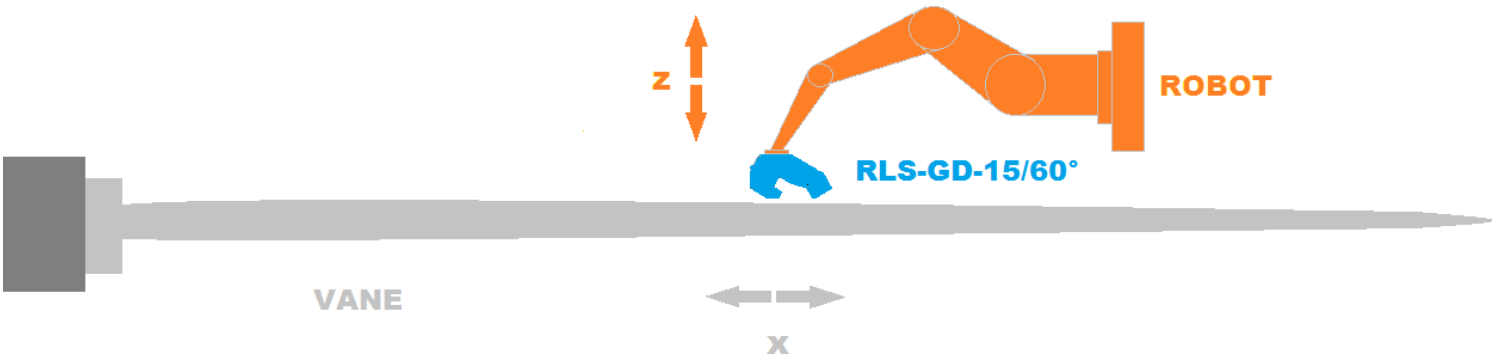


1. Gloss measurement of the primer surface on a vane

The gloss factor of the primer surface of vanes from wind turbines should be measured contactless. For this purpose a gloss sensor type **RLS-GD-15/60°** is used at a distance of 15mm to the respective primer surface. At this, the gloss sensor is mounted on a robot and will be moved vertically to make sure, that the distance to the primer surface of the vane remains approximately at 15mm, simultaneously the vane will be moved horizontally so that the gloss factor can be measured along the long axis of the vane. Normally the gloss factor of the primer surface should be lower than 5, to guarantee that the following coating get a fix compounding to the primer surface.







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Växel 08-771 02 20
Teknisk 08-771 35 80
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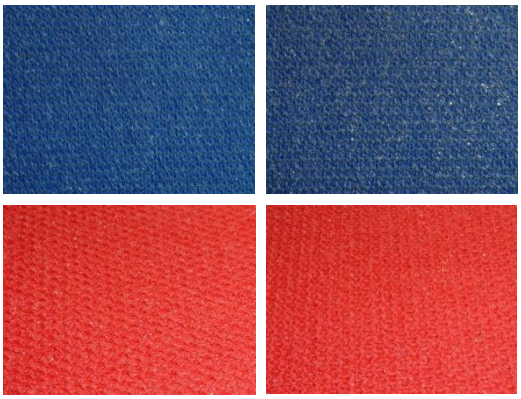
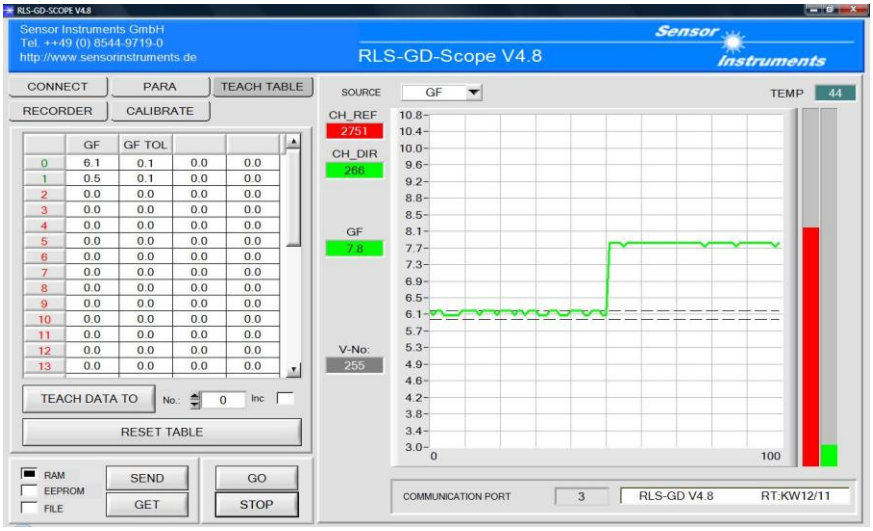
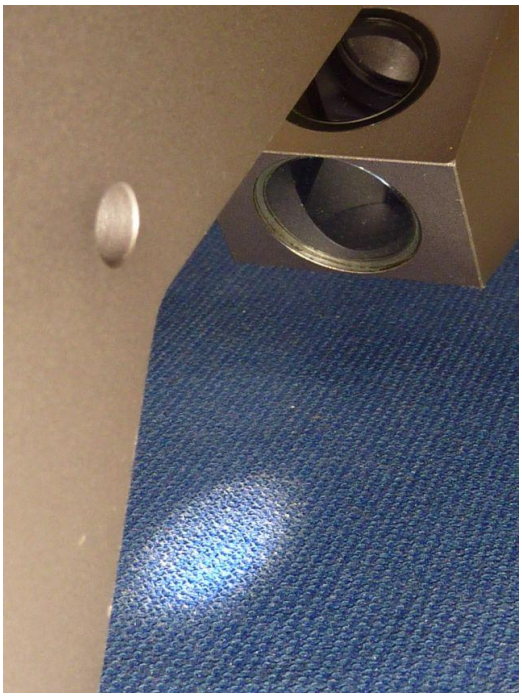
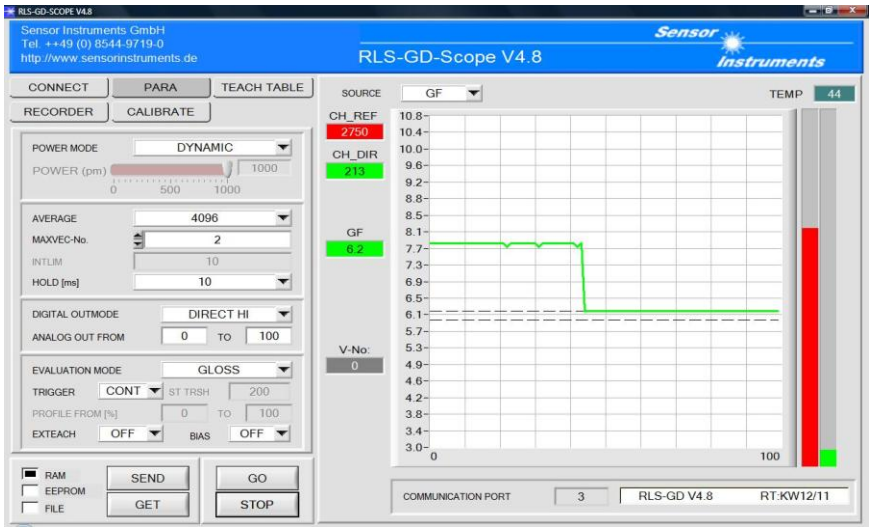
1. Gloss measurement on coated textiles

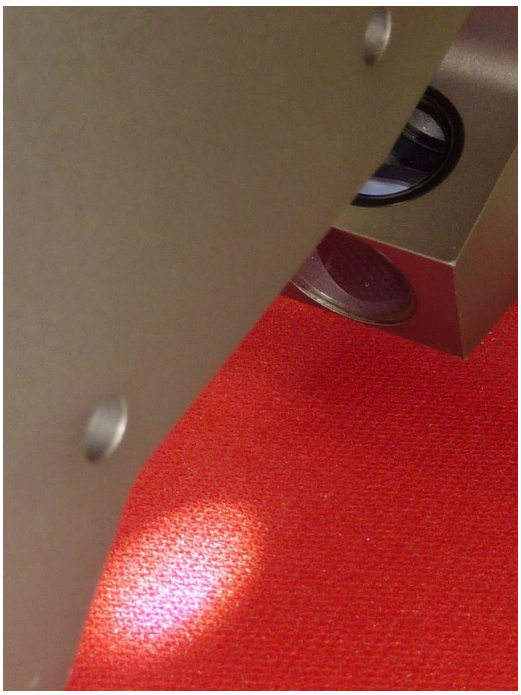
The gloss of fabrics will be influenced from a special coating and the task should be an inline measurement of the gloss value. For this purpose a gloss measurement sensor type **RLS-GD-15/60°** will be used. At this, the distance of the sensor to the textile surface is 15mm and the spot size at this distance is around 35mm x 18mm. As shown in the screen shots, the gloss of the fabrics can be proper measured.











1. Front side / backside differentiation of paper web

The backside of yellow and white paper web should be differentiated from the respective front side. For this purpose, a gloss sensor type **RLS-GD-15/60°** is used. At this, the distance to the object is approximately 15mm and the spot size is elliptical and about 20mm x 30mm.