Sensitive 2019

The magazine for non contact measurement gauges

ASTECH

If the gauging office is knocking on the door

The new length measuring device VLM500-MID

Dear readers,

The ASTECH Team is very delighted to present you the latest edition of our *Sensitive*, with news about our speed- and length measuring device VLM500 and our color sensor CR200.

The focus of this edition is on the new VLM500-MID. It is the well-known VLM500, but in a special version meeting the valid MID guideline of gauging.

Gauged length measurements are required by law in industrial branches like foil production, cable- and textile industry. This affects e.g. production machines, inspection systems and recoiling machines.

Furthermore we introduce the new compact distance measuring gauge LDS70A – with longer measurement range, higher measurement rates, interference suppression and extended temperature range.

We hope you enjoy reading our *Sensitive*

Your ASTECH Team

In this edition

The new VLM500-MID for verified length measurement tasks

Various branches of trade like cable, plastic, non-woven, transparency film or textile goods are often settled on the basis of length. If the application requires a contactless length measurement additionally, the new VLM500-MID is the best solution.

If measuring instruments are used in the public interest or in commercial or official traffic, the German law Mess- und Eichgesetz (MessEG), must be considered. In addition to the known measuring devices in the field of weighing, the flow rate control or the serving dimensions, the obligatory calibration also concerns length measurement devices.

For the purpose on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments the European parliament adopted the Measuring Instruments Directive (short MID) 2004/22/EC and 2014/32/EU respectively.

If a meter is newly commercialized, it must first undergo a conformity assessment procedure. Depending on the selected module, a type examination is carried out with a subsequent product testing or testing of the production process. The task of the type examination is supervised by the conformity assessment body responsible for Germany, the Physikalisch-Technische Bundesanstalt (PTB). The local authorities monitor the calibration and the enforcement of the calibration law.

Counter with a parts certificate

ASTECH GmbH is the supplier of non-contact length measurement gauges. In the sense of a type approval, the devices of the VLM500 series are considered as counters. So they are part of a length measuring device. A type approval for the counter itself cannot be obtained. Rather, an independent examination must be considered with the aim of being able to offer a pre-tested counter (certified by a parts certificate) on the market. In this case, customers are the manufacturers of length measuring machines that require a non-contact counter for their system.

The examination was carried out successfully by ASTECH GmbH together with the PTB. The exam consists of a theoretical and a practical part. Conformity to the software guide WELMEC 7.2 and fulfilment of the metrological properties of the MID have been certified.

The parts certificate DE-19-PC-PTB009 for the VLM500-MID was issued to ASTECH GmbH on 6th August 2019.

VLM500 with display CDB

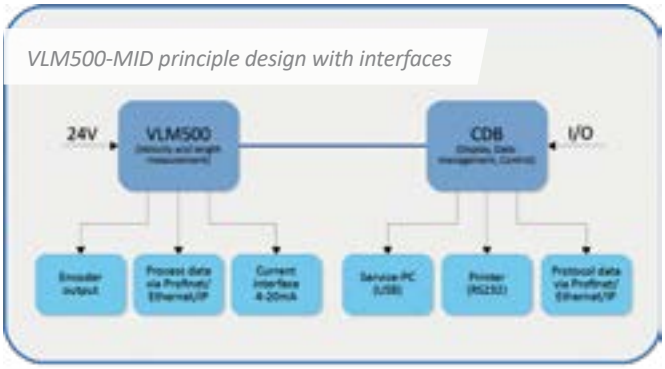
The VLM500-MID consists of two units, the measuring device VLM500 and the display and storage unit CDB. Both are connected by a cable (length up to 15 m). The VLM500 is available in the existing variants A, D, L and E and can be equipped with optional pulse outputs (encoder signals), one analog output or field bus interfaces (Profinet or EtherNet / IP). The internal software deviates from the software of a standard VLM500 only in terms of the requirements for the WELMEC 7.2. Deviating from this is that the programming interface is only indirectly accessible. Due to the wiring, the VLM500 is parameterized via the CDB.

The CDB represents the interface to the user of the VLM500-MID. The length and speed values determined by the VLM500 are shown on the display. Once a length measurement has been completed, the measured value is stored in the integrated, non-volatile memory inside the CDB. A real-time clock supplies the date and time for the storage process. There are four buttons below the display to navigate through the user interface. A two-colour LED provides information about the operating status. The CDB can also be equipped with an optional interface. This is the so-called protocol interface, which transmits the measured value acquired at the time of saving, together with metadata, to an external data evaluation / data management system. Here you can choose between digital serial interfaces (USB, RS232, RS422/485), Profinet or Ethernet/IP. A printer port is also available. Thus, a label can be printed about the length measuring process. The internal memory of the VLM500-MID can accommodate nearly two million records. These are secured for at least 90 days. If there

is still space left on the memory after this time, the storage time will be extended until the capacity limit is reached. Once reached the limit the oldest records will be overwritten (principle of a „rolling memory“).

Measures of protection

To protect a calibrated length measuring device against manipulation, the VLM500-MID is equipped with seals and leadings. The connection cable between VLM500 and CDB, for example, must not be removed in the safe operating mode. To ensure this inseparability, the screw connections are provided with a seal. In addition, the housing covers are provided with special screws that allow the attachment of a sealing thread and a leading. Parameter changes to the devices can only be made if



VLM500-MID principle design with interfaces

a so-called programming adapter is connected to the CDB. Then the system is in unsecured mode. But since the plug for the adapter is also sealed, the parameterization should be carefully considered before the system is backed up.

LDS70A – robust, compact, fast

ASTECH GmbH extends the product series of laser distance meters with the LDS70A. The new device type is a further development of the known LDS30A where special attention was paid on better ways of integration and usage in outdoor applications.

Therefore the LDS70A uses a new generation of time measurement circuit which increases the maximum measurement frequency to 40 kHz. The maximum range for measurements without reflector was extended to 70 m and the sensor firmware offers to choose between the strongest or the farthest target. This function may reduce chance for missed measurements due to influences caused by dust, fog or rain.

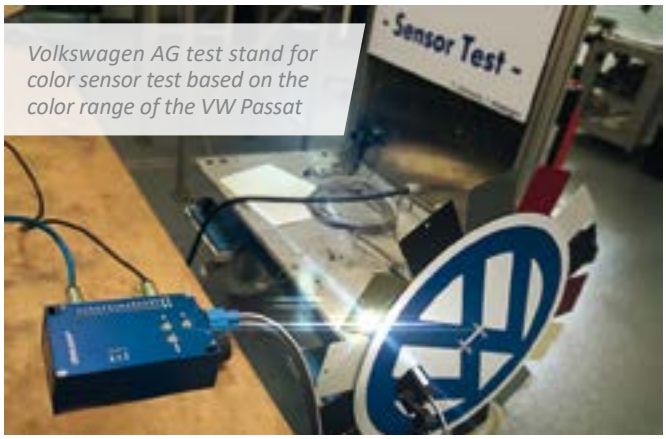

LDS70A for outdoor measurements up to 70 m

To be well equipped for outdoor applications all LDS70A have an internal, automatically controlled heating unit and a casing with protection class IP 67.
By this the minimum environmental temperature could be decreased down to -40 °C and the LDS70A is prepared to be used outdoors in cold Siberia or in cold storage facilities. Especially latter are getting more and more automated requiring sensor devices which detect the occupation of storage spots or the position of cranes.

Together with the new LDS70A ASTECH GmbH will also offer a set of useful accessories. Among others there will be a new adjustment bracket as well as a new Version of the successful parameterization software LDMTool. The new version 5.0 was completely rebuilt. Now it is also based on the development platform LabView and of course it also works with all other sensor devices of the LDM series. Version 5.0 of the LDMTool will be available for download on www.astech.de shortly. There are also all further information about the new LDS70A like datasheets, drawings and 3D models.

CROMLAVIEW® goes Automotive

Volkswagen AG sees a variety of application areas for the CROMLAVIEW® color sensors as part of its automation offensive. For this purpose, a CROMLAVIEW® CR210 color sensor was tested in advance at the Emden Volkswagen plant using the 15 colors of the VW Passat manufactured there. The sensor's perceptive operation, which is similar to the human eye, made it easy to distinguish in light and dark shades in a single setting. The robustness of the color detection was demonstrated by the sensor in different light conditions and speeds.



Volkswagen AG test stand for color sensor test based on the color range of the VW Passat

The application engineer, Hartmut Saathoff, from the Technikum in Emden is satisfied: „Even distance variations of 25 mm with a working distance of 100 mm are no problem. We tested over a period equivalent to a 20-week production." Specific applications sees Saathoff, for example, in the control of cameras, but also in the test of the application of primer, which, for example ensures the adhesion when gluing windows.

An important criterion is the integration of the sensors into the fieldbus environment. Although there are switching outputs (24 V/100 mA) that can be connected to a PLC, it is also worth using a fieldbus interface, which is available as an option for the CROMLAVIEW® sensors. For fieldbuses, the Profinet interface is the first choice at Volkswagen. The integration into the production environment is thus very easy and time-saving.

Internes

Mrs. Christine Schmidt covers for Mrs. Jahn within her maternity leave

She has been working as sales representative for many years now. After her training as commercial assistant and foreign language correspondent in English and French Mrs. Schmidt started her university studies parallel to her job at the Jade Hochschule in Wilhelmshaven, which she will complete in 2021. Among her financial and administrative duties she is the contact person for all issues of our clients and suppliers regarding the shipment and the necessary documents.

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