

REFUSE COLLECTING VEHICLES

CleANopen goes East

At the IFAT tradeshow in Munich, Moba presented its load measuring system for integration into CleANopen networks. The CANopen application profile for refuse collecting vehicles is also installed in some Middle East countries.

The trend to pay only for the waste that you produce is going strong. This means refuse collecting vehicles need to measure the garbage when loading it. The weighing system for refuse collecting vehicles by Moba consists of the SC-106 signal conditioner and the CP-100 weighing terminal. Both units come with CAN interfaces. The company also provides load cells and acceleration cells to be connected to the junction box. The entire load control system is compatible with CleANopen specified in the CiA 422 series. The supplier presented its solution with partners in the open-air area of the [IFAT exhibition](#).



Load cells installed on a rear loader truck (Photo: Moba)

The success of the CANopen application profile for refuse collecting vehicles keeps also going. Most European OEMs are using CleANopen in their garbage trucks. About 400 refuse collecting trucks in Saudi Arabia are equipped with CleANopen products from Moba. Recently, three vehicles have started operation in Hongkong. C-Trace, another provider of the CleANopen standard, reported that about 100 trucks in Abu Dhabi have been equipped with its CiA 422 devices. Remondis, a German refuse collecting and recycling service provider, requires CleANopen systems for its new trucks.

Load control system

Integrated into the vehicles, the truck load scale by Moba controls the weight determination of the charge without using a stationary floor scale. Loading and unloading are recorded directly. For front loaders the lifter scale measures the weight of the waste container before emptying it. For rear and side loaders the weighing takes place during the emptying process of the waste container. The lifter units are also connected to the CleANopen network. For trucks with a crane hook the load measuring system can be used as well.



The SC-106 junction box with CAN interface connects up to six load cells (Photo: Moba)



The CP-100 display shows the measured weight of the garbage (Photo: Moba)

The IP67-rated SC-106 module links up to six load cells. The load cells allow an automated weighing of containers during the tipping process. They are usable on 0,5-kg steps for 2-wheel containers and in 2-kg steps for 4-wheel containers. The CP-100 weighing terminal stores the data received via CAN on USB memory.

International standardization

The CiA 422 series has been submitted to CEN for publishing as a Technical Report. Submitted many years ago, the CiA 422 documents were lost within CEN. After resubmission, the French secretariat finally edited the documents. The PD CEN/TR 16815 was released in November 2015. The final report was due in March 2016, but has not been published yet. Technically the CleANopen specifications have been ready for many years and have proofed themselves in several applications. Within the CiA organization, the CiA 422 series has already been updated with some additional functions. The application profile specifies all parameters in detail.

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