

## Control solution for high-precision weighing applications



→ Sonner Machinery Co., Ltd., located in Shanghai, China, specializes in dosing and blending products. In long-term cooperation with Beckhoff, the company provides system solutions for the plastics, fiber, food and chemical industries.

Due to the complexity and versatility of the material weighing and dosing process, Sonner had been faced with the problem of meeting different customer requirements as quickly as possible, while at the same time addressing the demand for customized solutions. The customized Beckhoff control solution fully meets Sonner's requirements in terms of product size, function and design. With support from the Beckhoff technical team, Sonner developed their own fieldbus control system, Flex-Control-LW, based on a BC7300 Bus Terminal Controller with Modbus interface. The controller monitors and controls the process parameters such as weighing and dosing and ensures general monitoring of limit values.

"Our weighing apparatus is very compact. The reasons why we chose Beckhoff products are their outstanding performance and compact housing design. Last, but not least, the Beckhoff I/O system includes the high-precision KL3356 Bus Terminal for precise resistance bridge analysis", said Pai Peng, general manager of Sonner. "Before we started using Beckhoff products, we used a PLC system with a weighing transmitter. However, this combination was unsatisfactory in applications requiring high precision. In addition, the Beckhoff control system not only saved costs, but we were also able to reduce the control cabinet size."



The KL3356 analog Bus Terminal permits direct connection of a resistance bridge. The ratio between the bridge voltage  $U_D$  and the supply voltage  $U_{REF}$  is determined in the input circuit. In order to achieve good long-term stability, the complete circuit is re-calibrated at least every 3 minutes. This procedure can be synchronized by the control in order to prevent the calibration leading to a delay in the production process.

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