

CONTROLLER WITH I/O

## For harsh environments

The Wago-I/O-System 750 XTR can for example be used in renewable energy systems. It was designed for extreme environments.



*The XTR series features CANopen connectivity (Photo: Wago)*

Boasting twelve additional components, the XTR series is ready for renewable energy systems and local area networks. According to the company, the Wago-I/O-System 750 XTR combines the benefits of the Wago-I/O-System with the key features for dependability in tough environments.

These include resistance at temperatures from -40 °C and +70 °C, immunity to interference up to 1 kV (< 60 V, Class VW1) and 5 kV (≥ 60 V, Class VW3), as well as vibration resistance up to 5 g. The company also added that the system requires minimal space and is distinguished by low energy and maintenance costs.

The core product of the system is the CANopen [PFC200 controller](#) with a real-time-capable Linux operating system. The 750 XTR controllers are available in two versions with different numbers of communication interfaces including CANopen and CAN layer-2. With the PFC200, users have the option of planning their projects using the e!Cockpit Engineering Software in a Codesys 3 environment or via Wago-I/O-Pro in the Codesys 2 environment. Both versions of the PFC200 are also available for the 750 XTR series as tele-controllers that support DNP3 in addition to the IEC 60870-5-101, -103 and -104, IEC 61850, IEC 61400-25 tele-control protocols.

The tele-control versions have only been configured in a Codesys 2 up to now. The PFC200 tele-controllers also command IPsec and OpenVPN. Featuring SDHC memory, the fan- and battery-free PFC200 is maintenance-free and robust, said the company. The 3-Phase Power Measurement Modules expand the application range. It is available for the 750 XTR series in three versions: for measuring using current transducers at a maximum measuring current of 1 A or 5 A, as well as for measuring with Rogowski coils.

All relevant measured values (e.g., reactive/apparent/effective power, energy consumption, power factor, phase angle, frequency, over-/under- voltage) are transmitted directly into the process image without requiring high computing power from the controller. With this information and an analysis up to the 41<sup>st</sup> harmonic, the 3-phase power measurement module provides network analysis.

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