

Standard I/O components with extended product specifications

# For extreme temperatures and environments

Beckhoff offers a wide range of products for harsh operating conditions, such as extreme temperatures or mechanical stresses due to shock and vibration. The most significant benefit is that these higher requirements can be met with standard Beckhoff I/O components without added costs. This allows the exceptionally versatile standard portfolio of Bus Terminals, EtherCAT Terminals, and EtherCAT Box modules to be used in difficult environmental conditions.

Many industries and areas of application place increased demands on the load capacity of automation components, due to difficult environmental conditions. Examples include presses, wind turbines, and all applications in which shock and vibration stresses or high temperatures can occur during day-to-day operations.

Such demanding applications require a suitably robust I/O system, as well as the flexibility that a standard portfolio offers with its variety of components and signals. Beckhoff has implemented this level of performance with extended specifications for a large number of the company's Bus Terminals, EtherCAT Terminals, and the IP 67 rated EtherCAT Box modules from the EP and ER series.

## Extended temperature range and increased mechanical load capacity

Even in standard versions, Beckhoff I/O components are designed for extended temperatures, ranging from -25 to +60 °C. The I/O system can thus withstand extreme heat and cold, and provide increased climatic resistance.

The "Extended" components also offer greater mechanical load capacity. For instance, the IP 20 terminals are vibration-proof up to 5 g (according to EN 60068-2-6) and shock-resistant up to 25 g (continuous shock for 6 ms, EN 60068-2-27). The Extended EtherCAT Box modules can even withstand continuous shocks up to 35 g for 11 ms.

Optional coating of the PCBs in Beckhoff IP 20 terminals and Embedded PCs is also available at a minimal cost. This coating offers the electronic sub-assemblies of the IP 20 I/O components improved protection against harmful environmental influences.



Through the extended properties of the standard portfolio of EtherCAT Terminals from Beckhoff, high-performance EtherCAT communication can be used under challenging mechanical loads and extreme environmental conditions without added costs.

Further information:

[www.beckhoff.com/Extended-IO](http://www.beckhoff.com/Extended-IO)