Power Control via Novel 2-wire Interface for future Industry 4.0 Applications
Technical Data

- Only 2 wires to control, supply and program intelligent power modules
- Safe galvanic isolation
- 8 Channels (easy control of 32 power switches)
- Easy to extend
- 500 kbit per channel
- ca. 5W per channel auxiliary power supply for gate drive, measurements, microcontroller
- 16.7 kHz refresh rate
- Noise immunity > 100 kV/us
- Lowest possible parasitic capacitive coupling by using only 2-wires
- Full duplex (integrated feedback channel)
- Graphical user Interface (for converter type and basic settings)

Realized Applications

- **Intelligent Power Unit (IPU)** for variable use in power converters (AC/DC, DC/DC, buck, boost, resonant …)

- **DC Micro Grid Control System** for optimized usage of renewable energy in buildings

  1x 3.7 kW bidirectional AC/DC
  2x 3.7 kW MPPT DC/DC
  1x 7.4 kW bidirectional DC/DC

- **Multiport DC/DC Converter** for complex energy distribution

  6x independent buck/boost DC/DC

Example:

full bridge 650V IGBT power module safe insulated controlled and auxiliary supplied and programmed via novel 2-wire control technique