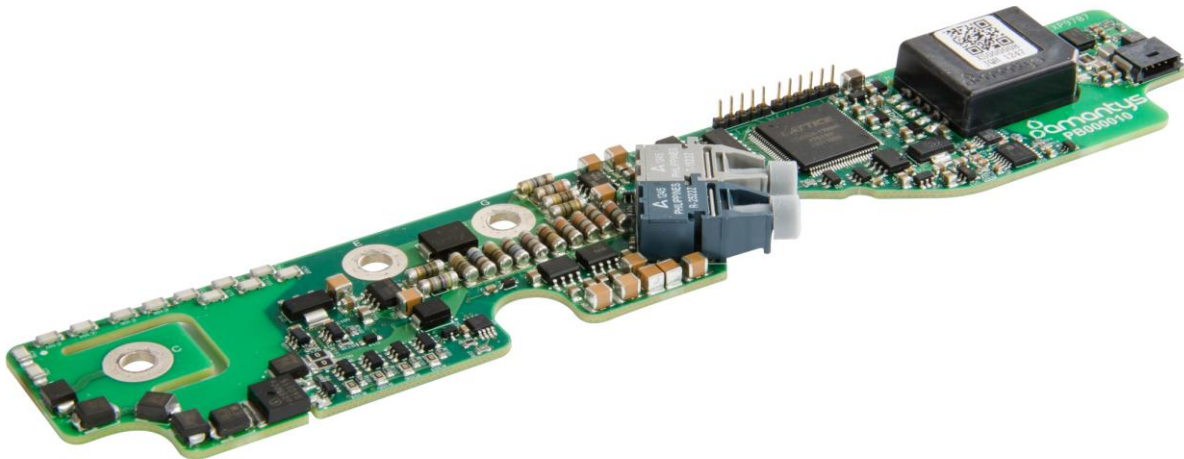


The AP12 and AP17 Amantys Gate Drives incorporate Amantys Power Insight technology to allow remote configuration of the IGBTs in a converter system. Capable of driving IGBT modules from different manufacturers, these gate drives reduce inventory for users who want flexibility in design and sourcing. The gate drives are suitable for 2-level and multi-level converters in a wide variety of applications.



## Key Benefits

- Software configurable
  - Reduced inventory as one gate drive can support IGBT modules from multiple vendors
  - Simplified design and commissioning
- Improved converter management
  - Multiple fault codes for error detection
- Fault code tracking
  - Monitor key parameters remotely and safely
  - Download fault codes from the gate drive
- Compatible with commercial alternatives
  - Drop in replacement with same fibre-optic and power interfaces
- High reliability design and testing
  - Manufactured to ISO9001
  - Designed and tested to international standards for rail and motor drives
  - Conformal coating option available

## Outline Specification

- Single channel Plug & Play solution for 190x140mm and 190x140mm packages
- Software configurable parameters
  - Turn on and turn off resistors ( $R_{gon}$ ,  $R_{goff}$ )
  - Soft turn off resistor ( $R_{goffsoft}$ )
  - Fault lock out time ( $t_{lock}$ )
  - Two level or three level mode
  - Feedback protocol can be modified to be compatible with legacy systems
- On board isolated DC-DC power supply
- Protection features
  - IGBT short circuit protection through desaturation protection
  - Under voltage lockout
  - Monitors all power rails for safe start-up with IGBT held off
  - Active clamping mechanism (two zone)
- Insulation designed for rail traction and variable adjustable speed drive applications



Medium voltage motor drives



Locomotive traction & marine drives



Wind turbine & solar inverters



High voltage DC infrastructure

## Standards Compliance

The 1200 / 1700V gate drive is designed and tested to meet the following standards:

- Designed to EN 50155 for railway applications
- Designed to IEC 61800-5-1 for variable speed drives
- Mechanical shock and vibration tested to IEC 61373
- EMC tested to EN 50121-3-2, EN 50121-5, IEC 61800-3
- Flammability rating to UL94V-0

## Amantys Power Insight

Amantys Power Insight technology provides two way communication from the central controller or Power Insight Adapter to the gate drive. The converter designer can perform the following functions:

- Remote configuration of the gate drive
- Condition monitoring of key IGBT parameters
- Examine a wide range of fault code outputs
- Monitor faults codes during the lifetime of the converter

## Applications

Amantys gate drivers are suitable for all high power converter applications. Typical uses include:

- Railway traction applications
  - Traction motor drives
  - Trackside converters
- Low and medium voltage converters
- Low and medium voltage motor drives
- Solar inverters
- Wind turbine inverters



Medium voltage motor drives



Locomotive traction & marine drives



Wind turbine & solar inverters



High voltage DC infrastructure

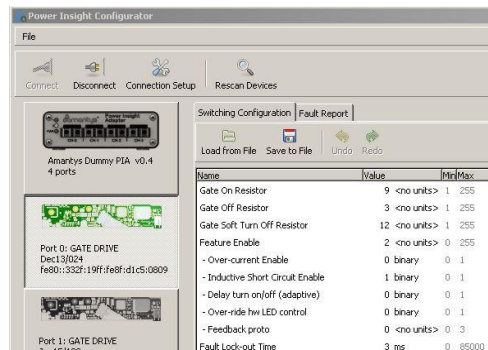
## Supporting Products

### Power Insight Adapter



The Power Insight Adapter allows a Windows based PC to interface to four Power Insight enabled gate drives.

### Power Insight Configurator



The Power Insight Configurator is a Windows PC based software tool that can be used to configure a Power Insight enabled gate drive and monitor the fault reports generated by the gate drive.