

Plantguard

20 Features that make Plantguard unique

1 Plantguard is safe "out of the box"

Unlike other systems, Plantguard is certified safe without the need to configure any further software diagnostics as part of the system configuration.

2 HIFT (Hardware Implemented Fault Tolerance)

Plantguard fault tolerance is implemented in hardware. Other TMR systems use software voting and dual (Quad) systems rely on software diagnostics. HIFT allows the operating system to be smaller, more efficient and safer, because system diagnostics are handled, in a large part, by the distributed HIFT architecture.

3 TUV certified Operating System (OS)

Because the Plantguard OS is HIFT based, it is actually less than 64 KB in size (compared to a SIFT OS, which is typically 2 MB in size). Such a small OS means that it can be effectively tested. The Plantguard OS is certified by TUV to the IEC 61508 standard. Not only does Plantguard carry a system TUV certification, it also carries an OS certification.

4 Built in IRIG-B Time Signal Decoding

Plantguard provides for decoding of the IRIG-B time signal protocol in each TMR Processor. This means that in various locations around the plant each Plantguard can log events to the millisecond and be synchronised with other control system devices through a master clock.

5 Smallest footprint

240 TMR I/O in a single chassis system, 480 I/O in each Expander chassis, 1500+ I/O in a single cabinet.

6 All Five IEC 61131 Programming Languages

Plantguard stands alone in providing all five of the IEC 61131 programming languages. While other systems can only provide some of the languages, the Plantguard has Ladder Logic, Function Block, Structured Text, Instruction List, and Sequential Function Chart.

7 Force Preview

Any operator knows that forcing an I/O point is a necessary part of plant operation but forcing the safety system has its dangers. Often the operator is required to release the force with little information as to the actual "live" value. Plantguard provides the technology to reduce the risk in forcing points. When an I/O point is forced, Plantguard will display the "live" value, alongside the forced value.

8 The only 3-3-2-0 Degradation

Only Plantguard provides for an extra level of Fault Tolerant system degradation. Other TMR systems provide 3-2-1-0 scenarios whilst Dual (Quad) systems only degrade 2-1-0. For Safety systems, TUV requires a 3-2-0 degradation for TMR. Plantguard provides for an extra level of fault tolerant degradation even in safety applications. Which would you rather have?

9 World-wide Internet diagnostics

Password protected access to the Plantguard system via Ethernet gives the opportunity to diagnose and configure the Plantguard system from anywhere in the world.

10 The Most Powerful Processor

The Plantguard controller is based on a 64-bit 100 MHz processor. It is the fastest and most powerful processor in the fault tolerant controller market. Even when other systems are supplied with new faster processors, they still fail to match the power built into each Plantguard system.



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11 1msec SOE

Every point in the Plantguard system can be set to log all events with a true resolution of 1msec. This is achieved with no extra hardware or software.

12 Every point measures Voltage

Every field I/O point provides a real time measurement of voltage for either continuous monitoring or diagnosis of field faults

12 Every output measures Current

Every field output point provides a real time measurement of current for either continuous monitoring or diagnosis of field faults.

14 SmartSlot Hot Swap

Not only does the Plantguard fault tolerant controller have the traditional adjacent or companion slot for on-line hot swapping of modules, it can also utilise a single slot to spare many modules. Using SmartSlot, the user can reduce the system footprint even further.

15 User-defined front panel LED colour

Ever wanted the front panel indicator a different colour? With Plantguard, you can configure 12 different LED colour actions unique to each module.

16 Remote & local I/O without special modules

When expansion is needed, Plantguard excels. Plantguard uses the same interface modules for both local, as well as remote fibre-linked expansion chassis. Simply add a set of Plantguard fibre transceiver modems and connect up your remote chassis.

17 Universal I/O configurable per point for Fire & Gas systems

Using the technology at the heart of Plantguard, we have developed a single TMR module that is user-configurable for AI, DI & DO all within the same module, configurable on a per-point basis. Connect all your signals from a fire zone to one fault tolerant interface which includes line monitoring, fire loop reset and a host of other special features.

18 Three separate A/D's per point – no mux's

Each AI and DI point in the Plantguard I/O module has three separate A/D converters. Gone are the days when a system had to rely on a single multiplexer and A/D converter for each input slice. Each Plantguard input module contains 120 A/D converters for maximum fault tolerance and hence availability.

19 Automatic shutdown valve testing

The Valve Monitor module with its embedded test and monitoring routine provides an automatic means of partial stroke testing of all safety shutdown valves and reports their performance. Regular partial-stroke testing will raise the system integrity and extend the mandatory full-stroke testing interval.

20 Fuseless Outputs

All outputs in the Plantguard I/O range include fuseless output protection. In less than 1 microsecond, the Plantguard outputs will sense an over-current condition and switch the output off. This feature provides the user an additional layer of protection against unforeseen and unplanned events.



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