NTSafetySolutions

Creating safety.
With passion.

NewTec

SAFETY PLATFORM

NTSafeDriveMonitor: Dual chip based add-on Safety Platform for Drives up to SIL 3 and PLe, Cat4

The NTSafeDriveMonitor is an add-on Safety Platform. It is enabling existing drives to be used in environments where functional safety is required. It supports encoder and encoderless operation.

The Safety Platform is based on a two FPGAs 1oo2 architecture. It is certifiable up to SIL3/SILCL3 according to IEC61508/IEC62061 and PLe, Cat 4. according to ISO 13849. The platform is monitoring speed, direction and position of motors. NTSafeDriveMonitor is proven in use by different customers.

Customer benefits

With the use of the NTSafeDriveMonitor platform you can focus on your core competence, functional safety is achieved by using the module and the support of NewTec.

The development approach that the NTSafeDriveMonitor promotes is designed to shorten development cycles. The objective of this approach is to effectively save development effort, improve consistency, and reduce the time to market.

Typical applications

AC Drives
Power Inverters

Support

It supports following functions according to the IEC61800-5-2/ IEC60204-1:

Safe torque off (STO)
Safe stop 1 (SS1)
Safe stop 2 (SS2)
Safe operating stop (SOS)
Safely-limited position (SLP)
Safely-limited speed (SLS)
Safe speed monitor (SSM)
Safe direction (SDI)
Safely-limited increment (SLI)
Safe brake control (SBC)

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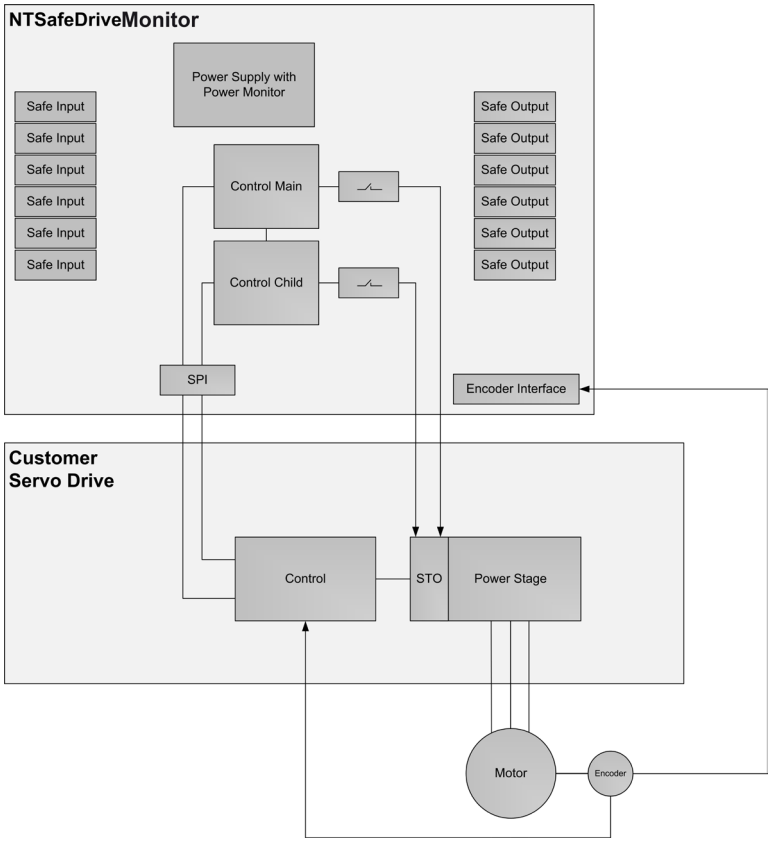
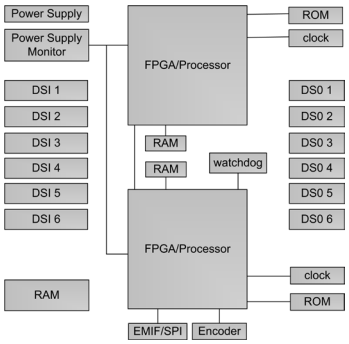
System Overview



Key Features



1oo2 Architektur
HFT = 1 (IEC 61508)
2 FPGAs
6 safe inputs (customizable)
6 safe outputs (customizable)
1 Encoder Interface
RAM
Watchdog
Monitored Power Supply

Drive Interface

A possible interface to your existing Drive is SPI.

Technical Data

Standard Operating Voltage (customizable)	24 VDC
Standard Input Voltage (customizable)	18-36 VDC
Control Main (customizable)	Spartan 7
Control Child (customizable)	Spartan 7
DSI - Signal 0	< 5V
DSI - Signal 1	> 11V
DSO continuous current	500 mA
DSO short circuit protection	external protection necessary
DSO switching frequency	10 Hz
Standard Digital I/O Pins (3.3V)	depends
Length	customizable
Width	customizable

Encoder Interfaces

There are several encoder interfaces for state of the art encoder sensors and safety encoder sensors implementable:

- Sin/Cos
- EnDat 2.2
- Hiperface DSL

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