PROFINET System Redundancy

S1
High-availability CPUs
Primary
Backup
Device
Sync

S2
High-availability CPUs
Primary
Backup
Device
Sync

R1
High-availability CPUs
Primary
Backup
Device
Sync

R2
High-availability CPUs
Primary
Backup
Device
Sync

S1: Describes the normal Profinet communication without redundancy.

S2: This is the most frequently used form of system redundancy. It describes the physical redundancy on the controller level and a logical redundancy on the level of the field devices through communication relations to the primary controller and backup controller.

R1: Describes the physical redundancy on the level of the controllers and field devices.

R2: This is the most complex form of system redundancy. It describes both the logical as well as the physical redundancy on the controller level and field device level.
High-Availability – PROFINET System Redundancy and IO-Link

Measuring, controlling, monitoring, indicating – the digital way

The PROFINET extension for system redundancy now makes the benefits of Industrial Ethernet also available for the process industry. Turck goes one step further and additionally integrates IO-Link in the world of high-availability systems.

This means that nothing now stands in the way of implementing the end-to-end digital linking of smart field devices, such as position indicators, valve manifolds, sensors or I/O hubs. In terms of installation time, IO-Link is highly efficient and straightforward since data and power supply are transferred via a single unshielded standard cable.

Standard signals are efficiently processed via IO-Link I/O hubs from the TBL-I and TBL-S series.

The range of IO-Link devices is enormous – RFID transceivers, pressure, temperature and level sensors are just some examples.

Use of the profile for system redundancy enables PROFINET field devices to communicate with high-availability controller systems.

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