Safety Integrated in India Delhi Platform Screen Door Projects

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Outline
Main Points

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Delhi Metro Rail Corporation (DMRC) spokesman Anuj Dayal said, "The primary reason for the PSDs is SAFETY…"

- Safety and Reliability: EN 50126, EN 50128 and EN 50129
- Electronic system: EN 50155
- Electrical system: IEC 60364 and other relevant IEEE protocols
- Quality standard: ISO 9001
- RAMS analysis: EN 50126
- EMC tests: EN 50121-4 and IEC61000-5 series
- Climatic tests: EN 60068-2-1, EN 50125-3
- Vibration tests: EN 50125-3, EN 60068-2-27, EN 61373
- Software module test: EN 50128
Platform Screen Doors in Delhi Metro
Project Overview

- Project: Indian Delhi Metro Line 7 & Line 8 Platform Screen Door System
- EPC: KTK Group (KTK-AIKON Bidding Consortium)
- EU: Delhi Metro Rail Corporation (DMRC)
- SIMATIC CPU1515F (134 sets), ET 200SP Fail-Safe (268 sets), SIDOOR ATE530S (6500 sets), SIRIUS safety relays (644 sets), etc.
- Competitors: Faiveley, Westinghouse, STEE, HYUNDAI
SIDOOR Mobility - Platform Screen Doors
Top highlights

Self-learning commissioning and maintenance can be performed locally and centrally via Ethernet/ PROFINET.

Certified according to EN 62061 SIL2 (for functions stated)

EC technology for dynamic weights up to 280 kg

Enhanced energy efficiency due to high efficiency of motor MED280 (no gear losses)

Predictive maintenance and remote monitoring

Easy engineering with TIA Portal and PROFINET

Optionally with a protective coating and with an extended temperature range up to + 70°C

EN 50155 Parts

SIDOOR ATE530S / ATE531S

SIDOOR MED280

SIDOOR MEG251 L
Safety equipment

- Tried and tested components from automation technology. + robust and adapted SIPLUS extreme Rail versions
- Read-in of two safe signals (two-channel, antivalent) directly on the SIDOOR
- High level of system safety thanks to safe torque off (e.g. self-release in the event of a fault)
- Safe position determination
- Safe torque off, e.g. self-release in the event of a fault
Solution
Platform Screen Door (PSD) Control System

- CPU redundancy & I/O redundancy
- Standby & Switchover based on real-time monitoring of partner's hard-wired inputs and outputs
- If one S7-1500F fails, the partner will take over the control of the platform
- a SIL 2 system
Safety Certification Procedure

Preparation

Documentation (Key)

Inspection & Audit

Certification

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Safety Certification Impact on PSD Business

- Safety Certification in PSD industry based on Siemens solution
- More opportunities in overseas PSD markets
- Industrial upgrading in domestic PSD markets
  - Safety Integrated
  - Standards
  - TIA & PROFINET
  - Interconnection

PSD projects with safety solutions
PSD projects without safety solutions