



FERSIL, SAFETY RAILWAYS SYSTEMS

FERSIL is the Clearsy's railway product line and therefore enjoys its expertise in designing safety systems and software.

We offer scalable independent or integrated solutions that meet the highest standards. We control for this purpose B formal method tools and safety intrinsic hardware know-how. Our range of safety systems for the rail industry, combines both reliability and availability.

These systems can achieve levels of safety **SIL2, SIL3 or SIL4** according to your needs and they are, in all cases, turnkey.

We design custom systems based on your specific needs.



FERSIL

CATALOG 2016 - 2017
CLEARSY'S PRODUCTS



WWW.CLEARSY.COM
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ARTWORK - STUDIO HULKETTE.COM

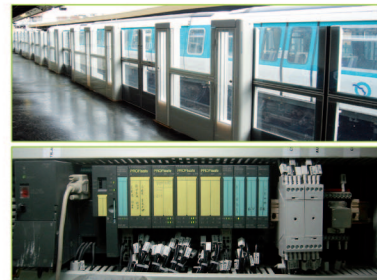
SAFETY RAILWAY SYSTEMS

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COPP DOF1

Device to open and close the platform screen doors, safety critical **SIL3** systems, currently on **the line 1 and line 13** of the Parisian subway



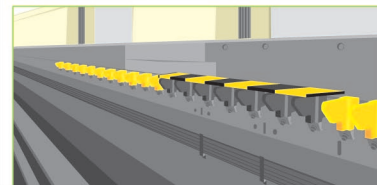
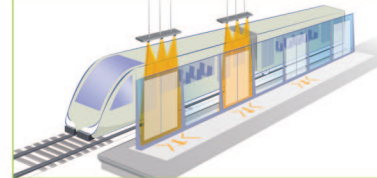
COPPILOT

Device to open and close the platform screen doors, **safety critical SIL3 system**, currently on the line 2 and 3 of the Sao Paulo subway. Los Stockholm subway. Just track side system



DIL

SIL3 system
Detection of a person in the gap zone between platform doors and train



Track safety monitoring

Platform Gap Filler

SATURN

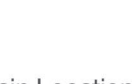


Safety remote controller and Mixed **SIL0, SIL2 SIL4** I/O network



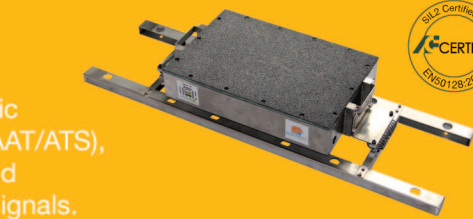
BLS

SIL4 System - Train Location
1/ Beacon
2/ Sensor



KFSV

SIL2 Automatic Train Stop (DAAT/ATS), Overspeed and overwarning signals.



KPVA



Independent **system control** of train **overspeed**, installed in Paris subway



CMSAS

SIL2 track/board communication



GAPS



SIL2 system
Platform detection, STI PMR Standard, opening and closing gap filler authorization



LP2S

SIL2 Platform detection system



SAS

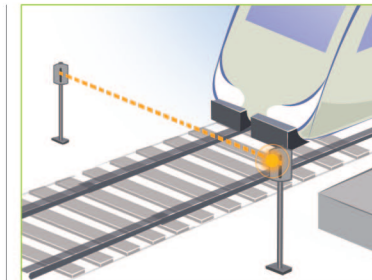


Train doors audio announcement system (Embedded)



DNH

SIL4 system,
Train passage detection
Hyper Frequency technology



DRF

SIL4 Axle Counter / Wheel sensor



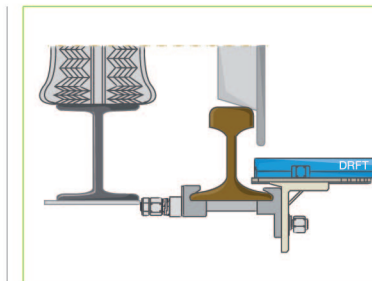
DRF MP

Wheel sensor dedicated to "pneumatic" train & streetcar



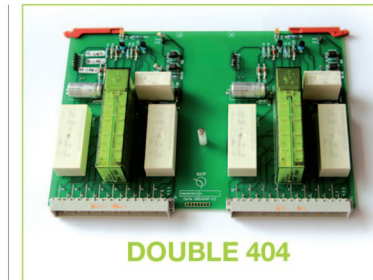
DRFT

Flat Tyre sensor



CRIS Technology

SIL4 Vital relays electronic board range
SIL4 Vital signaling relay, NS1



RS4 Technology

SIL4 Railway relays 24V, 72V, 110 V.
Embedded device available.



RS4 DIN

RS4 3U



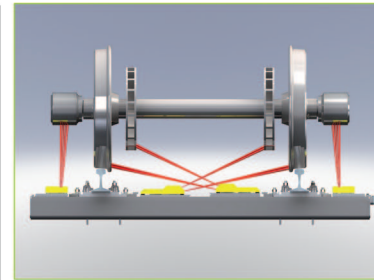
REFERENCE	NOMBRE CONTACT TRAVAIL GARANTI À L'OUVERTURE SIL4	NOMBRE CONTACT REPOS
RS4.DIN.202.24V	2	2
RS4.3U.202.24V	2*2 (2 relais 202)	2*2
RS4.DIN.304.24V	3	4
RS4.DIN.402.24V	4	2
RS4.DIN.406.24V	4	6
RS4.DIN.202.110V	2	2

DBC



Hot box and hot wheel detectors (FUES EPOS)

Dragging equipment detection



PN

SIL4 Level crossing and control system

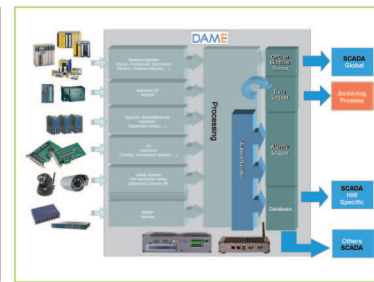


DAME



High-performance railway operation SCADA data logger

Master Monitoring System



BRAKING TEST BENCH

Checking the brake system on each wheel, temporal resolution, pressure, balancing indicator

