

# Rail & Mass Transportation



## FELSIC HV

160 - 450 V<sub>DC</sub>  
1 500  $\mu$ F - 47 000  $\mu$ F  
200,000h @ 70°C  
-55°C +105°C



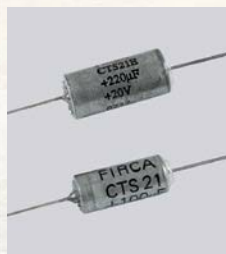
## SNAPSIC HV

16 - 500 V<sub>DC</sub>  
47  $\mu$ F - 2 200  $\mu$ F  
-55°C +105°C  
8 000h @105°C



## ROTARY WIREWOUND POTENTIOMETER

Resistance 1000 $\Omega$   $\pm$  10%  
Linearity  $\pm$  0.5%  
Power Rating 6W  
-55°C +125°C  
Vibrations CEI 61373



## CTS 21

### Solid tantalum capacitors

Hermetic metal cases  
6.3 - 50 V<sub>DC</sub>  
5.6  $\mu$ F - 330  $\mu$ F  
-55°C +125°C

As a recognized worldwide market leader in the design and manufacture of components for severe environments Exxelia has developed several dedicated product series for the railway market.

Exxelia's wide selection of products for rolling stock are commonly used on high-speed trains, subways and tramways around the world and service all functions of the train, from powering the passenger cabin to the traction inverter.

Performance, lifetime, reliability and resistance to extreme mechanical environments are the key criteria guiding the development of these products.



## DUAL TRANSFORMER

Ventilation channel - 2 x 125 kV<sub>A</sub>  
125kW - 4 kHz  
500V / 940V  
1132 x 348 x 500 mm  
Weight 190kg



## WRFT 4 Series

### Wide Band RF Transformer

Impedance ratio 50:50  
Bandwidth 0.35 - 200MHz  
1dB: 2-50  
Weight 1g

## TYPICAL APPLICATIONS

- CVS, HVAC
- Cockpit electronics
- Automation and safety control
- Traction and auxiliary inverters
- Train detection
- Pantograph
- Break and speed handles
- Relays

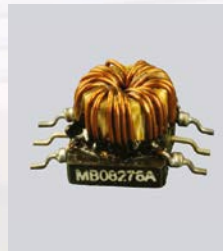
## ON-BOARD

- High-speed trains: French TGV, German ICE, Korean KTX
- Subways: Hong-Kong, London, Hyderabad and many more



## TFPP TRANSFORMER

Frequency 50hz  
Primary 100V  
Secondary 5V  
Weight 0.43kg  
Norm. UL94V0



## STANDARD MAGNETICS

### Inductors & Transformers

Toroid, PQ32/30 package  
Powder core, Ferrite core,  
Tape wound core available



## PP series

### Metallized PP

300 - 4 000 V<sub>DC</sub> / 120 - 2 000 V<sub>AC</sub>  
0.1  $\mu$ F - 300  $\mu$ F  
-40°C +100°C  
Flame retardant resin



## PLP Series

### PP / Paper

160 - 10 000 V<sub>DC</sub>  
75 - 3 600 V<sub>AC</sub>  
22nF - 30  $\mu$ F

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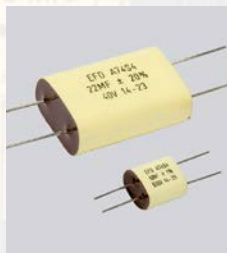
## SNAPSIC 125

16 - 100 V<sub>DC</sub>  
470 μF - 47 000 μF  
-55°C +125°C  
32 000h @105°C



## PRORELSIC 125

10 - 450 V<sub>DC</sub>  
470 μF - 47 000 μF  
-55°C +125°C  
20 000h @105°C



## A74 S4

### Polyphenylene sulfide

Safety Capacitor  
40 - 100 V<sub>DC</sub>  
1nF - 33 μF



## SENSING COILS

Ruggedized packaging  
High-precision detection



## TUNABLE INDUCTOR

Precise tuning over temperature  
Pot core Shielding



For more than 50 years, Exxelia has become a trusted name by major railway equipment manufacturers as well as signaling and infrastructure companies.

Signaling is often related to safety and Exxelia's capacitors and magnetics products are designed to offer the best compromise between technology, safety, reliability and cost. They can be found at key functions such as switch controls, cross-roads and train detection systems.



## CH/SH Series

### HiQ Ceramic Capacitors

P100 & NPO dielectrics  
25 - 1 500 V<sub>DC</sub>  
0.1pF - 1 000pF

### TYPICAL APPLICATIONS

- Track Communications
- Train Positioning Sensing
- Train Detection Beacons
- Cross-roads
- Switch Controls
- Safety systems
- Anomaly detection
- Relays



## 30 S4 Series

### Class 1 & 2 dielectrics

Safety capacitors  
40 - 100 V<sub>DC</sub>  
470pF - 560nF



## FP Series

### EMI-RFI Filters

50 - 1 000 V<sub>DC</sub> 50 - 115V<sub>RMS</sub>  
Max current 0.1 - 15A  
IL @50Ω 0.5 - 100dB  
Glass or resin sealed



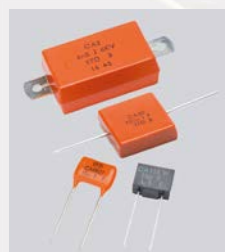
## AUDIO-FREQUENCY TRACK CIRCUIT

Self 63,6 μH - 48A 3kHz  
Selfs 2.5mH,  
Format RM5 64 μH  
Transformer Vprim 0.2V - 2kHz

## STANDARD MAGNETICS

### Inductors & Transformers

RM, ETD, EQ, ER, EP package  
-40°C + 100°C



## CA Series

### Silver coated mica

63 - 5 000 V<sub>DC</sub>  
4.7pF - 100nF