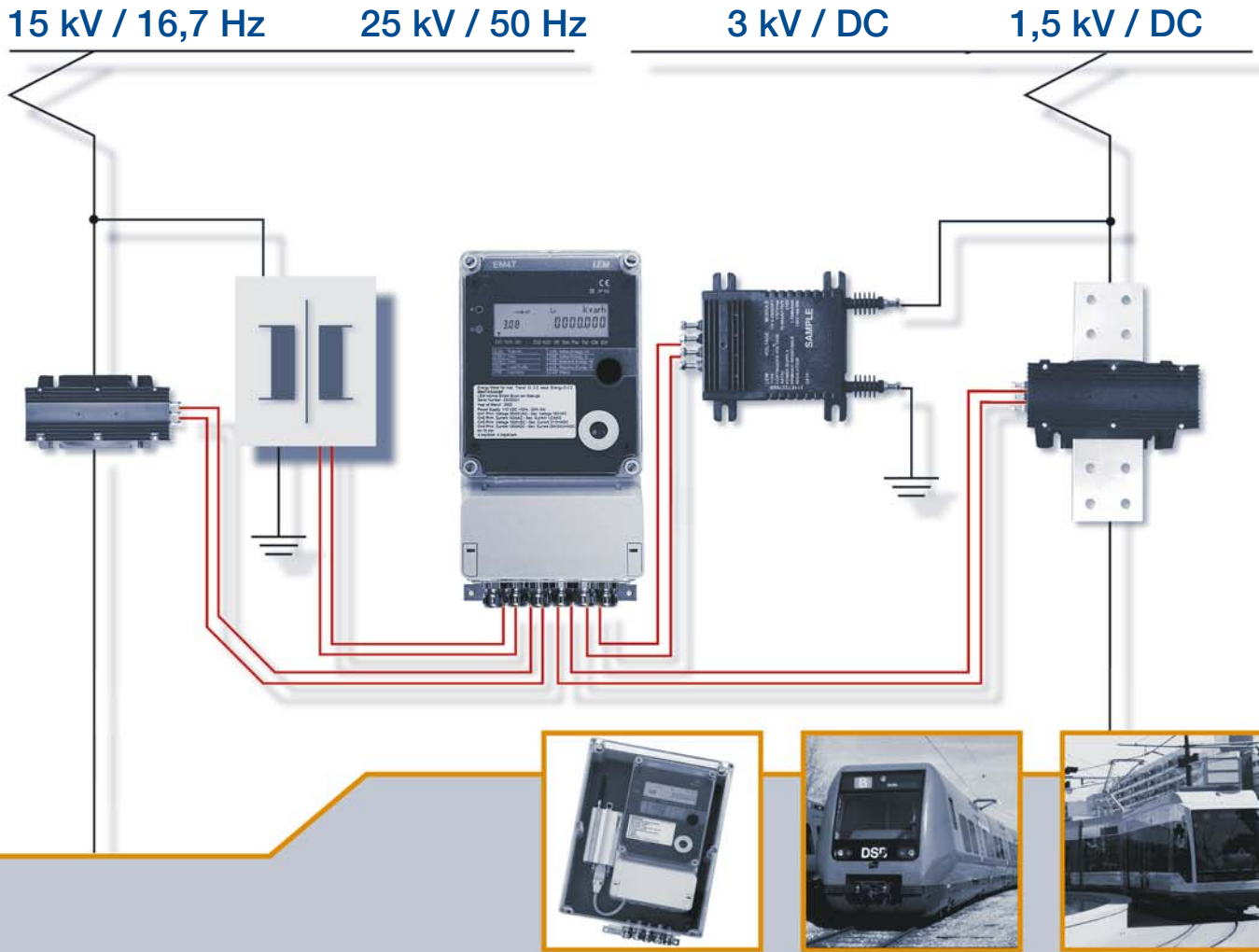


EM4T

Energy Meter for Traction usable on each network





ENERGY MEASUREMENT FOR ON-BOARD APPLICATIONS

- not electrified
- electrified (DC) tracks
- 1,5 kV DC
- 3 kV DC
- 15 kV 16,7 Hz
- 25 kV 50 Hz
- 3 kV DC / 25 kV 50Hz

Main technical parameters

Measuring ranges:

Nominal voltage:
 V AC: 90 V to 333 V
 V DC: 25 mA to 100 mA

Nominal current:
 I AC: 25 mA to 1 A, 5 A
 I DC: 25 mA to 1,5 A

Accuracy:

Class 1; 0,5; 0,2; according to EN 62052-11

Frequency range:

Fundamental: DC, 16,7 & 50 Hz
 Harmonics: up to 1.000 Hz

Power supply from 19,2 V to 31,2 V
 & 77 V to 143 V

PTB Approval

Designed and tested in accordance with any valid traction and accounting standards

Why energy measurement is needed ?

- To know exactly the consumed and regenerated energy by the train
- To pay only the consumed energy
- To answer to the demand for competitiveness between railway companies by the European Union.

Why EM4T from LEM is the solution ?

- Independent accounting, certified measuring system
- 4 input channels for metering of both DC and AC signals of any existing traction network (600 V DC to 3 kV DC, 15 kV AC, 16,7 Hz, 25 kV AC, 50 Hz) essential for multi network trains
- LEM has more than 30 years of experience in supplying products for traction applications
- The EM4T is a single-phase energy meter especially designed for on-board application
- Sample rate of the load profile can be set between 1 and 60 minutes
- Records include date, time, events, train numbers and absolute energy values for consumption and recuperation
- Transfer of the data via insulated, serial interfaces or via an optical interface according to EN 61107 mounted at the front panel
- One of the serial interfaces can be used to equalize the EM4T's internal time with an external source
- A built-in flash memory allows data storage over a period of 300 days at a 15 minute sampling rate
- In compliance with the final draft (issue 5) of the CENELEC - TC9X working group 11 (Railway Applications - Energy metering on-board trains) and with pr EN50463: 2005 CENELEC standard.