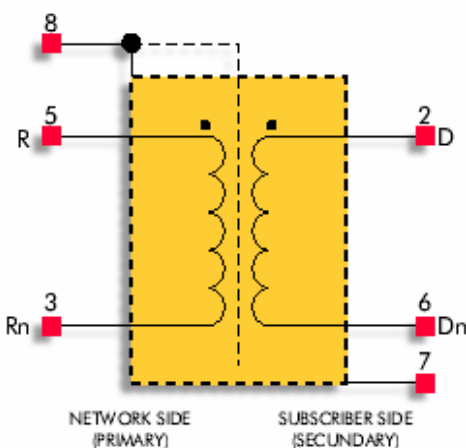


## FIELDTR®

FIPWARE®: ALSTOM technology for WorldFIP®

**FIELDTR chips are transformers to be used together with the FIELDRIVE® line driver in voltage mode coupling in order to supply high level insulation to EMC.**

There is one specific chip for each of the three IEC 61158-2 and EN 50170-3 (WorldFIP) lower standard speeds: FIELDTR31.25S, FIELDTR1S and FIELDTR2.5S. All the FIELDTR chips are pin-to-pin compatible, thus providing a well suited answer to integration needs by allowing designs that are independent from the speed.

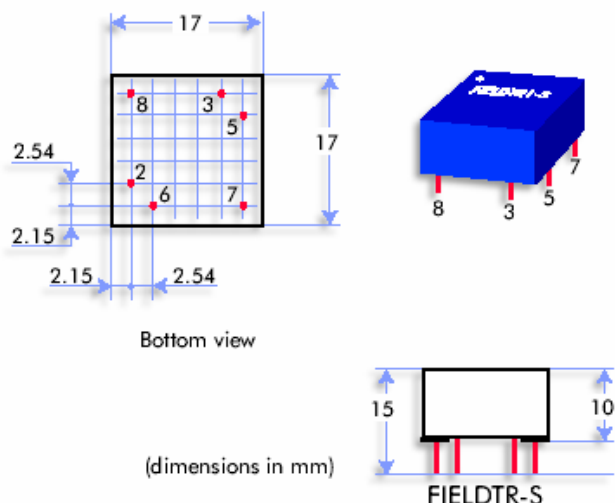


The FIELDTR transformer solution involves a magnetic core implementation. The voltage ratio between the network side (primary) and the subscriber side (secondary) is equal to  $1 \pm 1\%$  for the 31.25 kbits/s speed and is equal

to  $1.57 \pm 1\%$  for the 1 Mbit/s and 2.5 Mbits/s speeds. FIELDTR transformers are compliant with voltage mode operation of the IEC 61158-2 and EN50170-3 (WorldFIP) lower physical layer standards.

Functional diagram

# ALSTOM



Pin out and dimensions

Pinning information		
Pin	Name	Description
2	D	I/O pin to transceiver
3	Rn	I/O pin to fieldbus medium
5	R	I/O pin to fieldbus medium
6	Dn	I/O pin to transceiver
7		to connect 0V
8		Shield pin to connect 0V

### Recommendation for use

- The FIELDTR transformer needs to be connected to the fieldbus cable through a capacitor in order to insulate the equipment from the DC supply voltage in bus-powered applications.
- FIELDTR uses a shield for noise rejection. The shield should be connected to the ground.
- When used in applications together with the FIELDRIVE® line driver, it is recommended to use additional circuitry in order to protect the transceiver from overvoltage.

Specifications		
Electrical insulation	2kVrms/50Hz AC voltage 3kV peak/1.2/50µs shock wave	
Temperature range	nominal	0°C to +70°C
	extended	-40°C to +85°C
	storage	-40°C to +125°C
Manufacturer	JMF	
Type	Speed	Voltage ratio
FIELDTR31.25S	31.25 kbits/s	1 ± 1%
FIELDTR1S	1 Mbit/s	1.57 ± 1%
FIELDTR2.5S	2.5 Mbits/s	1.57 ± 1%

WorldFIP® is a registered trademark of WorldFIP Association.

