



## ASTECH ELECTRONICS LTD PRODUCT DATA

### RE STYLE DEMODULATOR/DECODERS



After being received by the inductive head, loop or pickup, the transmitted measurement data is transferred by cable to the demodulating/decoding sub-system for conversion into analogue outputs or serial data. Analogue output controls include zero, output level and various functional indicators.

There are inductive or non-inductive power options available.

The Rugged Enclosure (RE) style units can house up to 3 channels. Please see separate Product Data Sheet for rack-mounted, multi-channel versions.

Depending on the requirement there are two “operating systems” available, FM/PCM and FM/FM. The digital FM/PCM system offers a bandwidth dependent on the operating frequency and number of channels. For the single channel version operating at 10.7MHz the bandwidth is DC - 340Hz (-3dB) and for 44MHz the bandwidth is DC – 10kHz.

The FM/FM system is used where bandwidths up to 30kHz are required, for example, turbo-charger and gas-turbine applications.

Both zero offset and output levels are adjustable by front panel locking controls.

Analogue voltage output and (PCM version only) transmitter power supply volts are available through front panel BNC sockets. The latter is useful for monitoring inductive power transfer efficiency and to aid optimisation.

A remote shunt calibration facility is also available from the front panel. This applies a resistor across one arm of the strain gauge bridge which offsets the strain signal. This can be used to scale the analogue output voltage.

Red and green LEDs indicate power and reception of valid data.

#### Basic Specifications:

Maximum Analogue Output Range:  $\pm 5\text{VDC}$

Resolution & Linearity :  $\pm 2048$  bits,  $\pm 1$  bit

Zero Stability RTO:  $\pm 0.5$  mV/°C

Output Noise Level: 3.5mV RMS at maximum output level setting (? 5V output setting).

Operating Temperature Range: -20 °C to +65 °C.

Power: 12-15VDC. Typical 1A Powered for use with vehicle batteries

Optional 24-30VDC or mains power pack module available.

Rugged extruded aluminium enclosure: 105 x 60 x 170mm, Wt (typ) 0.7kg

### Standard FM/PCM Versions:

(10.7MHz Standard, 44MHz Optional)

RE1D/IFM/1: Single Channel	RE2D/IFM/1: Single Channel + Inductive Power Transfer
RE1D/IFM/2: Two Channel	RE2D/IFM/2: Two Channel + Inductive Power Transfer
RE1D/IFM/3: Three Channel	RE2D/IFM/3: Three Channel + Inductive Power Transfer

RE2C/IFM/3: Demodulator with serial output for PC or laptop. Includes software and serial cable. Suitable for 1, 2 or 3 channels.

### Standard FM/FM Versions:

(40 – 180MHZ)

RE1B/IFM/1: Single Channel	RE2B/IFM/1: Single Channel + Inductive Power Transfer
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### Radio Telemetry Option:

RE1D/RFM/1: Single channel receiver/decoder. Narrowband 433MHz, maximum 16 channels. Includes antenna and cabling. With companion transmitter it combines rotary telemetry technology and radio transmitter/receivers to extend the physical range to several hundred metres.



RE2C Front Panel



Typical rear panel view.

Custom versions of these systems can be produced, please call Astech Electronics to discuss.