



# DC *point2point*

## *point2point* DC-coupled fibre optic link

- 2.5 MHz, 20 MHz and 40 MHz upper 3 dB points
- 14 bit ADC/DAC
- Optional remote control over separate link
- Allows transmission of true DC signals over 10 km

### Key military test standards

The DC *point2point* link supports standards testing for EMC, EMP, HIRF, NEMP etc., including key standards such as:

- MIL-STD-188-125
- MIL-STD-461G
- DEF STAN 59-188
- DEF STAN 59-411.

The DC *point2point* link transmits analogue signals of up to 40 MHz over single mode fibre. Equivalent rise times of as low as 10.3 ns are ideal for measuring transients on HVDC transmission lines. The modules are available in a fully EM shielded casing or as a plug-in module for use with *point2point*.

Battery power units can be controlled using the *point2point* battery switch and controller to optimise the operational lifetime.

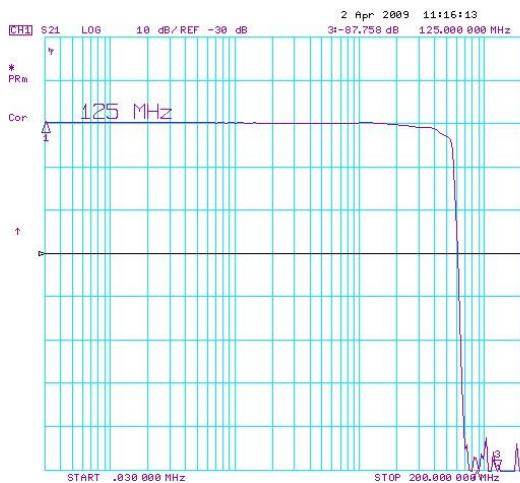
- Input voltage ranges from +/-2 V to +/-150 V
- 2.5 MHz units have a +/-10 V output option



Due to our policy of continuing product development, these specifications are subject to change and improvement without notice.

# SPECIFICATIONS

| DC Coupled Links  |         | 2.5 MHz   | 20 MHz                             | 40 MHz                             |
|---|---------|---|------------------------------------|------------------------------------|
| Passband  |         | 0 Hz to 2.5 MHz   | 0 Hz to 20 MHz                     | 0 Hz to 40 MHz                     |
| Gain Flatness   | Typical | ±0.5 dB to 1 MHz  | ±0.25 dB to 2 MHz                  | ±0.25 dB to 10 MHz                 |
|   | Maximum | ±1 dB to 2 MHz<br>±3 dB to 2.5 MHz  | ±1 dB to 15 MHz<br>±3 dB to 20 MHz | ±1 dB to 30 MHz<br>±3 dB to 40 MHz |
| Phase flatness  |         | < ±10 °   |                                    |                                    |
| Rise time   |         | <135 ns   | <20.5 ns                           | <10.3 ns                           |
| Output Noise (Full band, all values are V <sub>rms</sub> )<br>For +/- 2 V output<br>For +/- 10 V output |         | 0.3 mV (0.02% FS)<br>1.5 mV (0.02% FS)  | 0.8 mV (0.06% FS)<br>N/A           | 0.7 mV (0.05% FS)<br>N/A           |
| Signal latency (1 m fibre)  |         | 350 ns  | 280 ns                             | 210 ns                             |
| Transmitter input impedance   |         | 1 MΩ / 25 pF typ.   |                                    |                                    |
| Receiver output impedance   |         | 50 Ω @2 V standard<br>300 Ω @ +/- 10 V optional (2.5 Hz limited)  |                                    |                                    |
| Output DC offset (worst case)   |         | 0.3% of FSD   |                                    |                                    |
| Non-linearity   |         | 0.1% of FSD   |                                    | 0.06% of FSD                       |
| Operating temperature<br>(NOTE: Specifications quoted at 25°)   |         | -20 to +60 °C   |                                    |                                    |
| Optical path length (single mode)   |         | <1 m to 10 km   |                                    |                                    |
| Electrical Connectors   |         | BNC 50 Ω  |                                    |                                    |
| Optical Connectors  |         | Single mode FC/APC  |                                    |                                    |
| Current Consumption @ 12 V  | Tx      | <240 mA   | <240 mA                            | <210 mA                            |
|   | Rx      | <350 mA   | <315 mA                            | <280 mA                            |
| Supply Voltage Range  |         | R version, Plug-In Module: 7 to 30 V.<br>H version, Shielded Module: 13.2 to 20 V.                                |                                    |                                    |
| Front Panel Indication  |         | Transmitter Module: Power supply status & ADC overflow<br>Receiver Module: Power supply status & link lock status |                                    |                                    |



Freq. response for DC to 40 MHz links (10 dB/div)



Phase response for DC to 40 MHz links (10 deg/div)

N.B. For information on dimensions, see the "casings and housing" section of the **point2point** accessories datasheet.