

Low Noise Distribution Amplifier

- Excellent short term stability and phase noise
- Comprehensive specification & options
- 1MHz – 100MHz Bandwidth
- Two years warranty



Description

The E5-6 Distribution Amplifier is a 1U Rack Mount unit. The E5-6 allows a cost and space efficient way to distribute reference frequencies throughout a system or lab with virtually no signal degradation. The standard E5-6 accepts input frequencies of 1MHz to 100MHz and provides twelve outputs of the same frequency.

Features

- Multiple inputs & outputs
- -130dB phase noise at 1Hz offset at 10MHz
- >80dB at 10MHz isolation
- Unity gain
- 0 dBm to +12dBm input
- Internal battery backup
- High isolation & Low distortion

Applications

- Industrial calibration laboratories
- Telecom applications
- Laboratories reference distribution
- Production Test Reference for instrumentation

Included with shipment:

Calibration certificate, Certificate of Conformance, and 24 month warranty.

Available products in the same family

- **A5000P** : Pulse, CMOS, TTL distribution amplifier. 1, 2 or 3 inputs and 12, 24 or 36 outputs.
- **E5000** : 1 input 12 outputs distribution amplifier
- **E5-6P** : 1 input 6 outputs Pulse, CMOS, TTL distribution amplifier

Specification

Outputs <i>See options</i>		
See options 11, 12 & 13		
No of inputs	1	Multiple inputs available
No of outputs	6	Multiple of 6 outputs available
Connector	BNC	SMA (Optional)
Input characteristics		
Options A		
Impedance	50Ω	75Ω
Input level range	0 to +12dBm	
Input SWR	<1.2:1 at 10MHz	
Input return loss	>21dBm	
Output characteristics		
Options B		
Impedance	50Ω	75Ω
Output level range	+5 to +12dBm (max) into 50 Ω at 10MHz	
Output SWR	<1.2:1	
Frequency response		
Range	1MHz to 100MHz	
Harmonics	Source harmonics <-60dBc 2 nd Harmonic <-50dBc 3 rd Harmonics <-50dBc	
Isolation		
Output to output	>80dB at 10MHz	
Output to input	>80dB at 10MHz	
Non- adjacent output	>80dB at 10MHz	
Frequency Stability <i>Allan Deviation</i>		
Frequency	10MHz	
$\tau = 1s$	2x10 ⁻¹³	
$\tau = 10s$	2x10 ⁻¹⁴	
$\tau = 100s$	5x10 ⁻¹⁵	
Phase Noise (SSB)		
Frequency	10MHz	
1Hz	-130 dBc	
1Hz	-144 dBc	
100Hz	-153 dBc	
1 kHz	-158 dBc	
10KHz	-160 dBc	
Spurious		
Spurious	<-100dBc/Hz	
Broadband Noise	<-155dBc/Hz	

Included with shipment: Calibration certificate, Certificate of Conformance, product test report and 24 month warranty.

Environmental

Temperature :	Operating	-20°C +60°C
	Storage	-40°C +80°C
Temp stability :	-20°C +60°C	1x10 ⁻⁹
Relative humidity :	95% non-condensing	
Magnetic Field sensitivity :	2x10 ⁻¹¹ Gauss	
Approximate MTBF :	200,000 Hrs, Stationary	
Dimensions :	See page 3	

Power supply

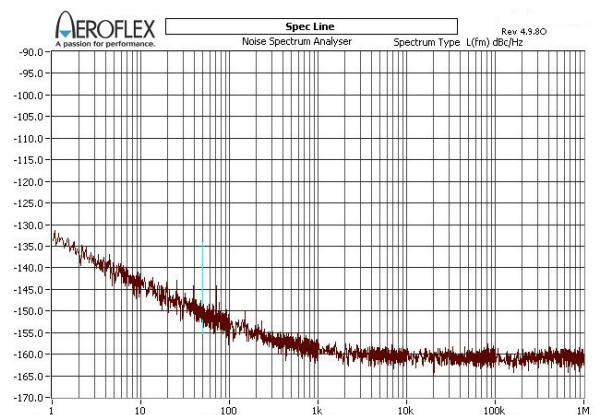
AC power: 90-245V AC, 50Hz

Optional redundancy switch: see option 00

Seamless battery back-up switch

Built-in options

- Option 00:** Redundant switchover for external power back-up
- Option 11:** 1 input 12 output
- Option 12:** 2 inputs 6/12 outputs
- Option 13:** 3 inputs 6/12/18 outputs
- Option 18:** Extended warranty to 3 years
- Option 51:** Rack Mount 19" 1U
- Option 52:** Rack Mount 19" 2U
- Option 53:** Rack Mount 19" 3U
- Option 62:** AC Input 110V
- Option 64:** DC input: Specify +12V, +24V, +48V or +60V
- Option 75:** Add internal battery, up to 24 hours of battery life.
- Option 91:** 10MHz input 1MHz output
- Option 92:** 10MHz input 5MHz output
- Option 93:** 10MHz input 1PPS output



E5-6 phase noise measurement at 10MHz

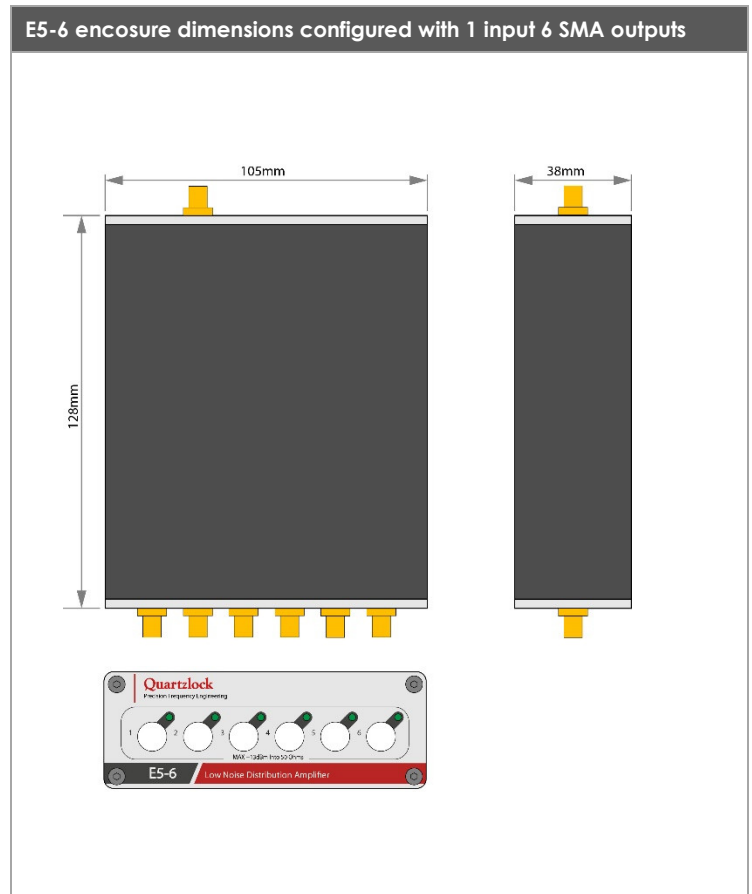
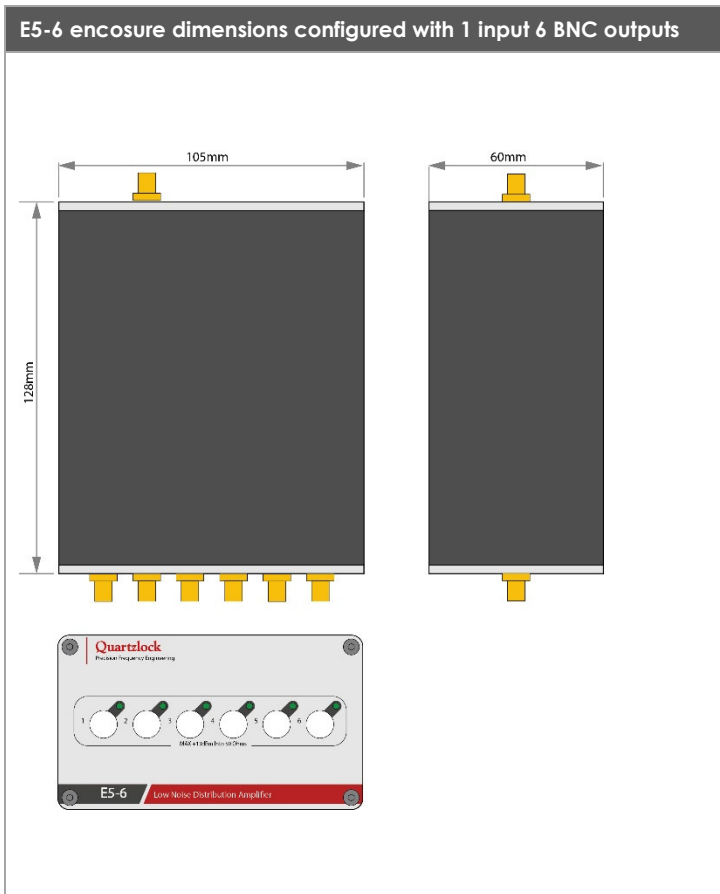
Contact us to configure this product to meet your requirement.
Designed and manufactured in the U.K.

Typical configuration

The E5-6 can be configured to multi input multi outputs frequencies from 1 to 100MHz.
Standard input & output connectors: BNC and SMA



Example of rear panel configuration



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