

PSM – PIEZO SCANNING MODULE



Features

- A/B topology voltage amplifier
- 3 independent high voltage output channels
- High bandwidth, low noise outputs
- Over temperature protection
- Current protection
- Status LEDs on front panel
- Fits in Base Cabinet (CAB)

Description / Applications

The Piezo Scanning Module (PSM) can drive up to 3 piezo's individually by using 3 separate voltage amplifiers, for use with JPE positioners that have a (optional) scanner function (for example CLS, CS02 or CPSHR). A user supplied analog input voltage will be amplified to generate a bipolar high voltage output. The module needs to be installed in the Base Cabinet (CAB) for its power supply.

Specifications

General info	
Output channels	3 (parallel operation)
Compatible with	Piezo stacks used in JPE positioners
Power supply via	CAB
Dimensions	3U / 14HP
Weight	1550 g
Amplifier	
Topology	A/B
Input voltage range	-10 V ... +10 V
Voltage Gain	15 V/V $\pm 1\%$
Output voltage range	Nominal: -150 V ... +150 V Maximum: -180 V ... +180 V
Output noise (DC to 50 kHz)	≤ 3 mV _{pp}
Output current	≤ 100 mA
Capacitive load	≤ 5 μ F
Bandwidth	$V_{out} < 10 V_{pp}$, 100 nF load: 5 kHz $V_{out} < 300 V_{pp}$, 100 nF load: 1 kHz
Dynamic range	≥ 103.5 dB
Slew rate (100 nF load)	10 V/ μ s
Output offset (static)	≤ 5 mV
Non-linearity (full scale)	$\leq 0.05\%$
Sensitivity (d_{gain} / d_{vin})	0.015 (1/V)
Input impedance	100 k Ω
Connector	
Input	BNC
Output	LEMO EPG.1B.303.HLN
Functional Safety	
Over temperature protection	Automatic Off/On
Current protection	Fuse 100 mA
Control	
Modes of operation	Flexdrive

Ordering Information

Available models

PSM Piezo Scanning Module

Available Options

None

Accessories

PSMIL PSM Input Limiter (prevents PSM output accidentally exceeding -30V to +120V)
ACL Ambient Cable, 3m with connector for CADMz or PSM
I1-ACL Ambient Connector Kit for 6x ACL to 15 pins D-sub feedthrough

Mechanical and electrical information

Download 3D step files and manuals from:
<https://www.jpe-innovations.com/cryo-nano-products/>

Contact

For quotations, specials, or engineering services, please contact us at:
<https://www.jpe-innovations.com/contact/>