



▶ Piezo Z-Stage P-737

for High-Resolution Sample Positioning

- ▶ High-speed Piezo Z-motion with travel ranges to 250 μm
- ▶ Nanometer resolution
- ▶ Clear aperture to accommodate specimen holders
- ▶ Sub-millisecond response times

The piezo-actuatorbased P-737 moves the sample along the optical axis to quickly and precisely adjust the focus, while the XY stage positions the sample. Vertical stepping with an accuracy in the nanometer range takes only a few milliseconds. The large aperture is designed to accommodate a variety of specimen holders including slides or multiwell plates.

Order Information

Part No. P-737.1SL: 00-55-551-0000, 100 μm
Part No. P-737.2SL: 00-55-550-0000, 250 μm

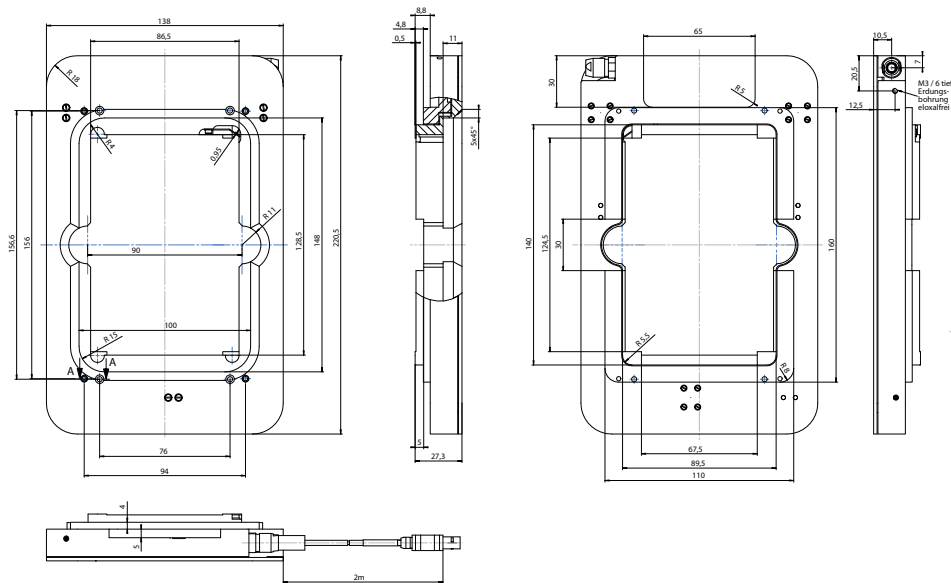
Accessories

Controller E-665.SR (included in delivery)
Part No.: 00-55-600-0800

Stage insert for one slide 3" x 1"
Part No.: 00-55-500-1000

Stage insert for petri dish, \varnothing 36 mm
Part No.: 00-55-500-1010

For high stability and repeatability, P-737 stages are equipped with position sensors. High-resolution, absolute measuring strain gauge sensors (SGS) are applied to appropriate places on the drive train and feed the platform position information back to a piezoelectric controller. The sensors are connected in a full-bridge configuration to eliminate thermal drift, and assure optimal position stability and rapid response with nanometer resolution.



▶ Piezo Z-stage P-737 for high-resolution sample positioning

Specifications

Motion and positioning

Integrated sensor:

Closed-loop travel:

Closed-loop resolution:

Open-loop resolution:

Closed-loop linearity:

Repeatability:

Mechanical properties

Unloaded resonant frequency

Resonant frequency under load

Push/pull force capacity
in motion direction

Load

Drive properties

Piezo ceramic type:

Electrical capacitance:

Dynamic operating current
coefficient:

Miscellaneous

Operating temperature range:

Material:

Dimensions:

Mass:

Cable length:

Voltage connection:

Sensor connection:

P-737.1SL

SGS

100 μ m

2,5 nm

0,3 nm

0,2 %

6 nm

400 Hz

350 Hz (100 g)

100/20 N

20 N

PICMA®

4,5 μ F

6,2 μ A/(Hz x μ m)

-20 to 80 °C

Aluminium

220,5 x 138 x 27,3 mm

0,7 kg

2,0 m

LEMO connector (low voltage)

LEMO connector (SGS sensor)

P-737.2SL

SGS

250 μ m

4 nm

0,5 nm

0,2%

12 nm

250 Hz

210 Hz (100 g)

100/20 N

20 N

PICMA®

9,3 μ F

5,8 μ A/(Hz x μ m)

-20 to 80 °C

Aluminium

220,5 x 138 x 27,3 mm

0,7 kg

2,0 m

LEMO connector (low voltage)

LEMO connector (SGS sensor)

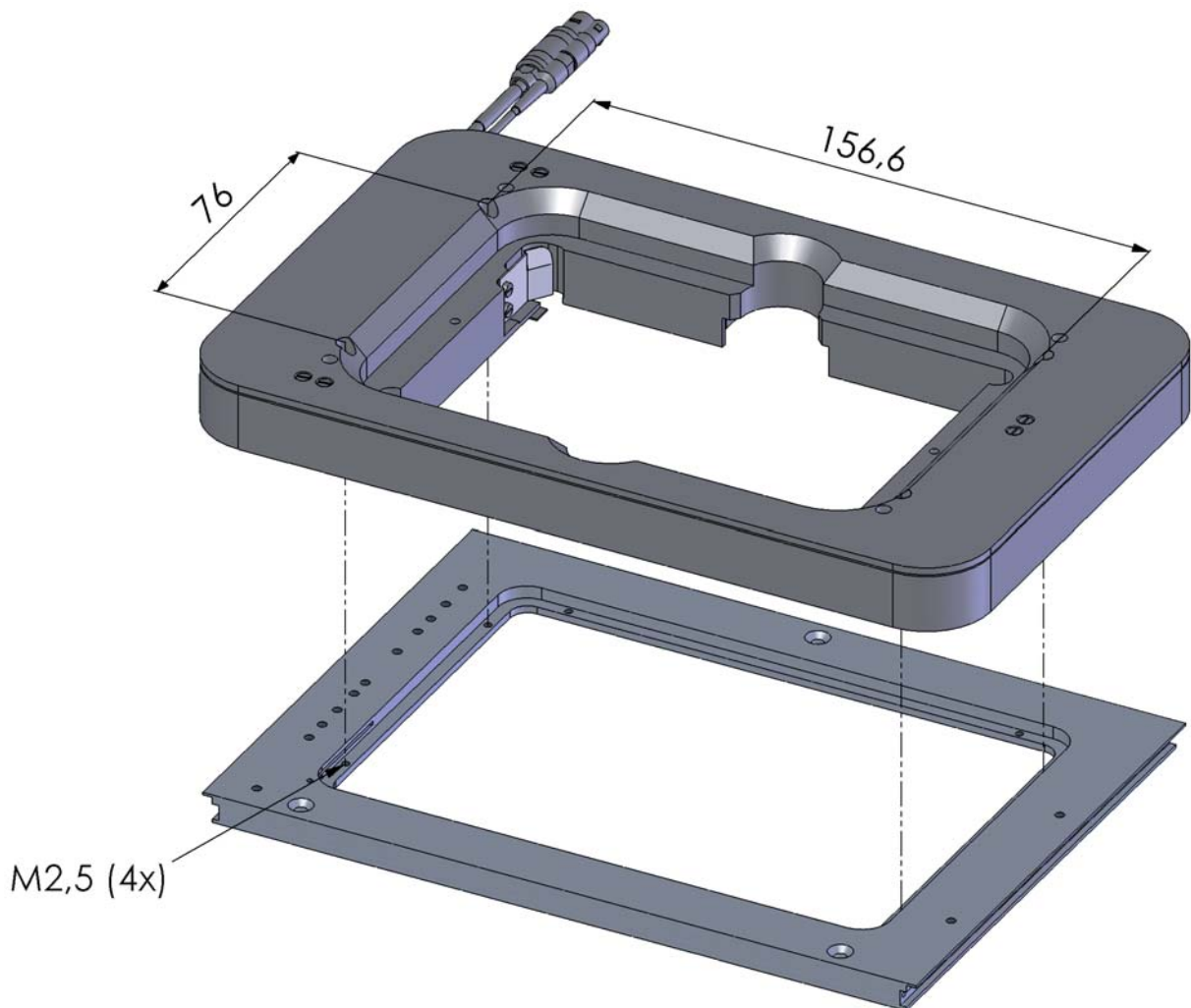


▶ Piezo Amplifier E-625.SR Servo-Controller with High-Speed RS-232 Interface

Specifications

E-625.SR

Part-No.	00-55-600-0800
Models	
Function:	Power amplifier & position servo-control of LVPZTs
Channels:	1
Amplifier	
Output voltage:	-20 to +120 V
Maximum output power:	11 W
Average output power:	6 W
Peak output current:	<5 ms 140 mA
Average output current:	60 mA
Current limitation:	short-circuit proof
Voltage gain:	10 ±0.1
Polarity:	positive
Input Impedance:	100 kΩ
Dimensions:	205 x 105 x 60 mm
Mass:	1.050 g
Operating voltage:	12 to 30 VDC, stabilized
Operating current:	2 A
Interface	
D/A converter:	20-bit resolution
A/D converter (sensor):	20-bit resolution
Networking:	4 channels, parallel
A/D-Konverter (Sensor):	20 Bit Auflösung
RS-232 baudrate:	9.6 kBaud–115.2 kBaud (default 115.2)
Wave table:	64 values, 100 Hz, externally triggered
Position Servo-Control	
Sensor types:	strain gauge
Servo characteristics:	P-I analog, notch filter
Connectors	
PZT connector:	LEMO ERA.00.250.CTL
Sensor connector:	LEMO EPL.0S.304.HLN
Analog input / Monitor output:	SMB
RS-232:	9-pin sub-D (male)



▣ Fixing Holes for Piezo Z-Stage P-737

For the adaptation of Piezo Z-stages onto inverted Märzhäuser stages, the fixing holes marked on the top plate of the scanning stages are required.

If these fixing holes are inexistent, please contact:

Märzhäuser Wetzlar GmbH & Co. KG
Customer Support

eMail: service@marzhauser.com

Tel.: +49 6441 9116-36