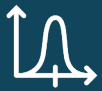


MICI 140

Micrometer Screw Piezo Drive



Motion up to 140 μm



**High resonant frequency
of 630 Hz**



Resolution to 0.3 nm



**Functions in cryogenic
environments**



The micrometer screw drive MICI 140 is compatible with the micrometer screw types G 7.5 x 24, G 7.5 x 16.5, G 10, G 15, G 25, and G 50 from Qioptiq Photonics GmbH & Co KG.

The systems offer outstanding features, especially concerning design and resonant frequency: The micrometer screw drive MICI 140 systems offer a small and compact design, while capable of a range of motion of 140 μm in open-loop at resonant frequencies of 630 Hz.

The use of the optional positioning sensor guarantees extremely high positioning stability and high reproducibility. Piezo actuators also function in cryogenic environments which are associated with decreasing extension behavior.

Variants:

- MICI 140
- MICI 140 SG

Recommended Controller:

NV 200/D NET



E-730-820

Applications

- Quality Control
- Automation
- Fine adjustment of optical components
- Micro assembly

MICI 140

Technical Data

| | | <i>Unit</i> | <i>MICI 140</i> | <i>MICI 140 SG</i> |
|--|------------------------------|------------------|-----------------|--------------------|
| Part # | | - | S-705-00 | S-705-01 |
| Axis | | - | Z | |
| Motion | Open-loop ($\pm 10\%$)* | μm | 140 | |
| | Closed-loop ($\pm 0.2\%$)* | | - | 100 |
| Capacitance ($\pm 20\%$)** | | μF | 1.7 | |
| Integrated measurement system | | nm | - | strain gauge |
| Resolution | Open-loop*** | nm | 0.3 | |
| | Closed-loop*** | | - | 5 |
| Typ. repeatability | | nm | - | 5 |
| Typ. Non-linearity | | | - | 0.1 |
| Resonant frequency (w/o microm. drive) | | Hz | 630 | |
| Stiffness | | N/ μm | 0.3 | |
| Max. push forces | | N | 42 | |
| Max. pull forces | | N | 4 | |
| Voltage range | | V | -20...+130 | |
| Connectors | Voltage | - | LEMO 05.302 | |
| | Sensor | | - | LEMO 05.304 |
| Cable length | | m | 1 | 1.2 |
| Material | | - | stainless steel | |
| Dimensions (l x w x h) | | mm^3 | 47 x 14 x 30.4 | |
| Weight (without micrometer drive) | | g | 120 | 125 |

* typical value measured with 0.3mV noise controller

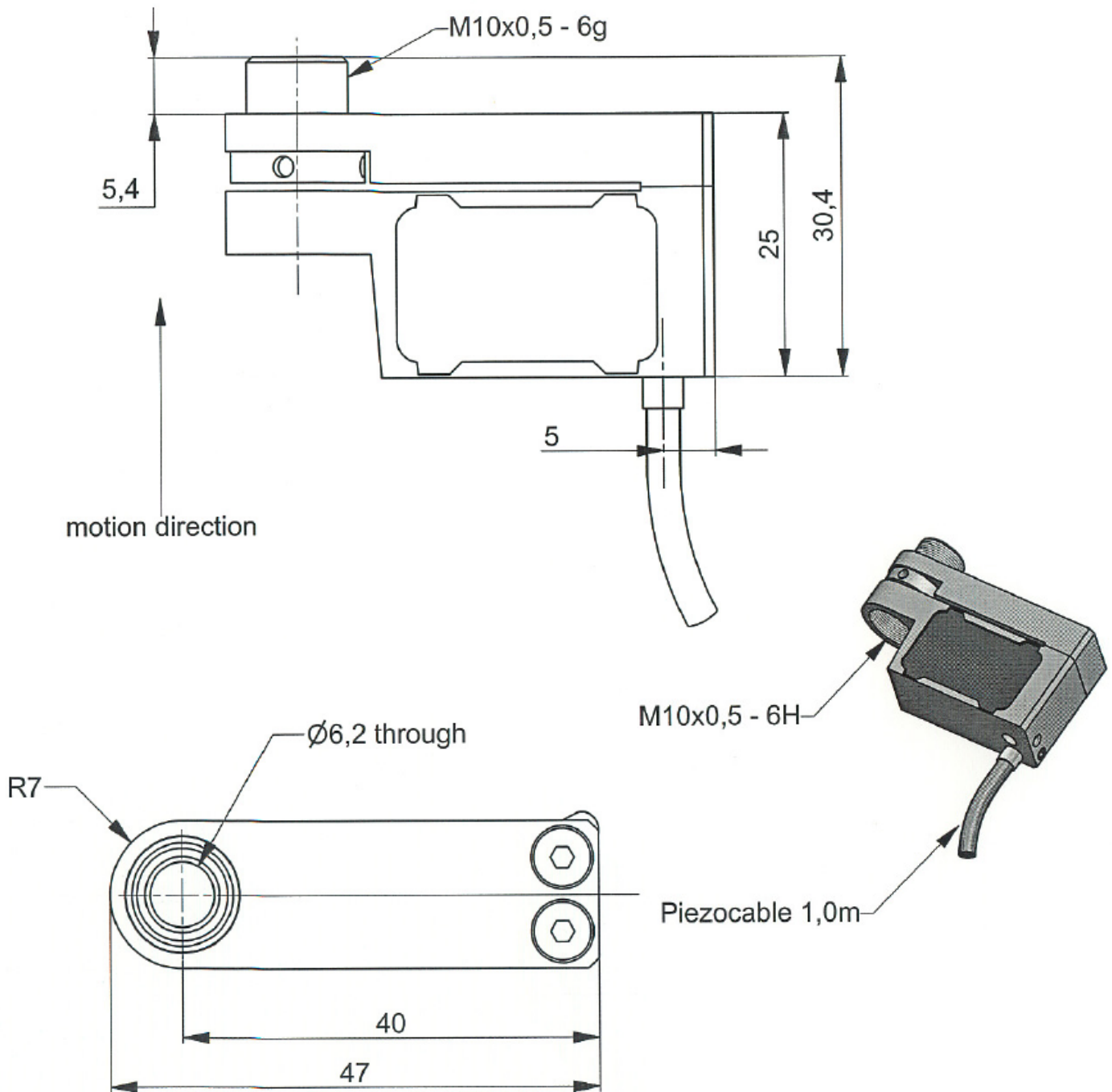
** typical value for small electrical field strength

*** The resolution is only limited by the noise of the power amplifier and metrology.

For further product variations and recommended configurations, please contact our sales representatives.

MICI 140

Part Drawing



Dimensions given in mm.

Rights reserved to change specifications as progress occurs without notice.

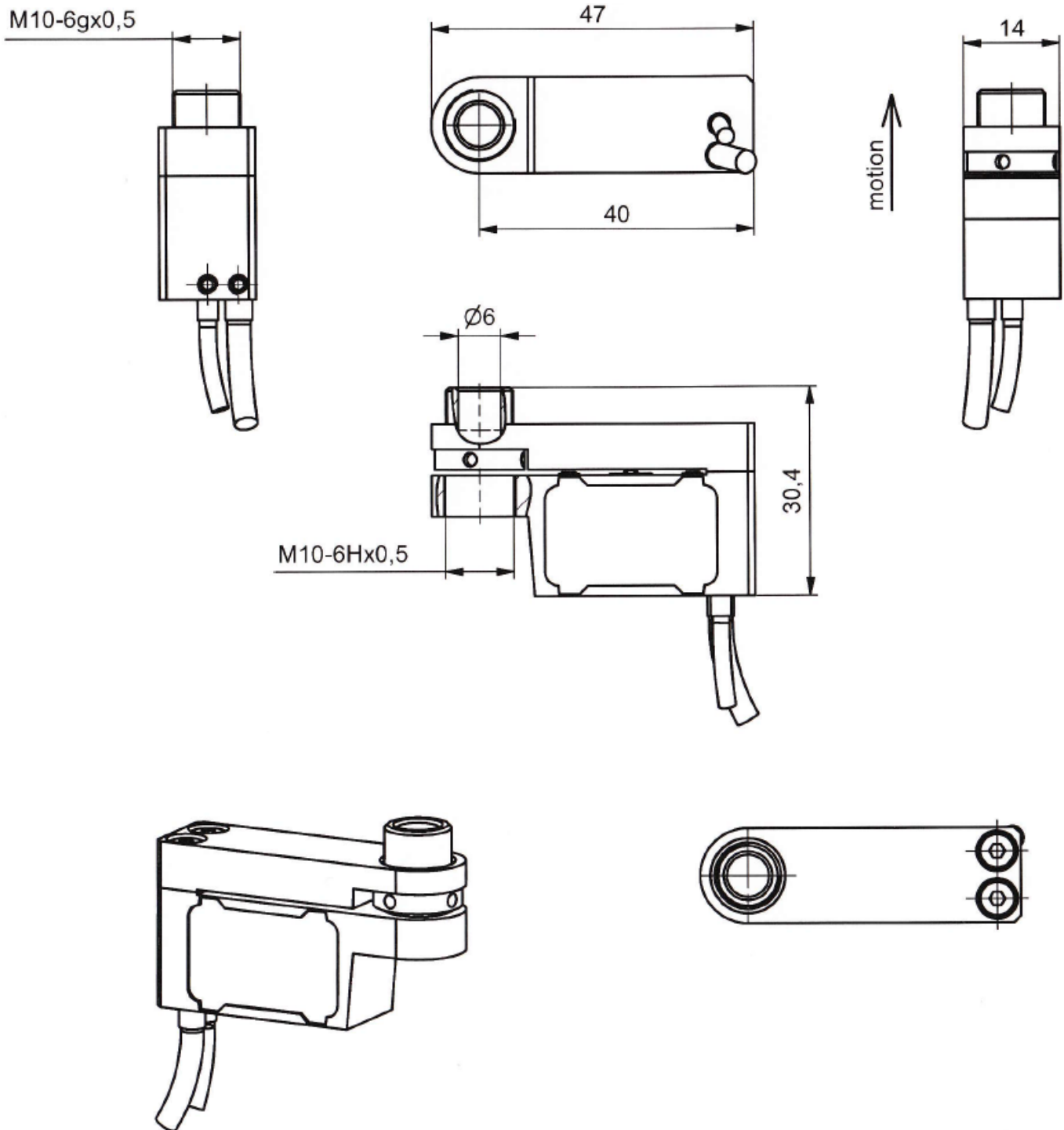
piezosystem jena GmbH
Tel: +49 (3641) 66880
E-Mail: info@piezोजना.com

piezosystem jena, Inc.
Tel: +1-508-634-6688
E-Mail: contact@psj-usa.com

www.piezosystem.com

MICI 140 SG

Part Drawing



Dimensions given in mm.

Rights reserved to change specifications as progress occurs without notice.

piezosystem jena GmbH
Tel: +49 (3641) 66880
E-Mail: info@piezोजना.com

piezosystem jena, Inc.
Tel: +1-508-634-6688
E-Mail: contact@psj-usa.com

www.piezosystem.com