



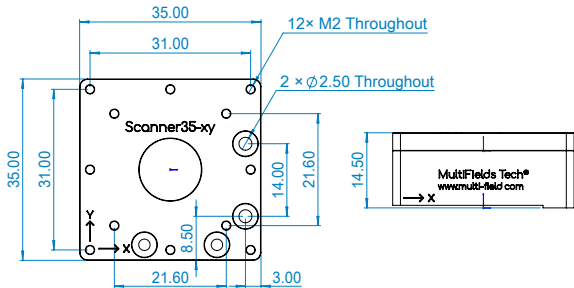
2025  
New

# "Closed-Loop Scanner Series" – Scanner35-xy.Ultra

Scanners with sub-nanoscale resolution capacitive displacement sensors for closed-loop control

- ➔ Features
- 优于5nm空间运动可重复性
  - 拥有光学通孔设计

➔ Picture & dimensions



➔ Specifications

| Optional Versions ⇨ |                      | .HV (default)                                                                                                                                  | .ULT | .UHV    | .ULT.UHV |
|---------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|----------|
|                     |                      | .HV version, compatible with 1E-7 mbar<br>.ULT version, used at He3 or dilution cryogenics systems<br>.UHV version, compatible with 2E-11 mbar |      |         |          |
| 1                   | Footprint × hight    | 35 × 35 mm × 14.5 mm                                                                                                                           |      |         |          |
| 2                   | Weight               | 110 g                                                                                                                                          |      |         |          |
| 3                   | Work environment     | Temperature range: 1.4 ~ 400 K, Max. Magnetic field: 35 Tesla                                                                                  |      |         |          |
| 4                   | Option1 - 30 mK      |                                                                                                                                                | ✓    |         | ✓        |
| 5                   | Option2 - 2e-11 mbar |                                                                                                                                                |      | ✓       | ✓        |
| 6                   | Mainbody             | Pure Ti                                                                                                                                        | BeCu | Pure Ti | BeCu     |
| 7                   | Wires                | twisted paired wire & triax cable                                                                                                              |      |         |          |
| 8                   | Connectors           | 2 head pins + 1 triax connector (for each dimension)                                                                                           |      |         |          |
| 9                   | Scanning Axis        | X, Y                                                                                                                                           |      |         |          |
| 10                  | Travel range         | @300 K: 100*100 μm; @4 K: 60*60 μm                                                                                                             |      |         |          |
| 11                  | Drive Voltage        | Max. 75 V @300 K; Max. 150 V @4 K                                                                                                              |      |         |          |
| 12                  | Max. Load            | 500 g                                                                                                                                          |      |         |          |
| 13                  | Capacitance @300 K   | 7 uF                                                                                                                                           |      |         |          |
| 14                  | Sensor               | Capacitive displacement sensor                                                                                                                 |      |         |          |
| 15                  | Resolution           | 0.5 nm                                                                                                                                         |      |         |          |
| 16                  | Linearity error      | Typical ~ 0.1 %                                                                                                                                |      |         |          |
| 17                  | Repeatability        | < 5 nm                                                                                                                                         |      |         |          |

For detail drawing and 3D model please contact us.

Piezoelectric Motion - LT

N7

Specifications subject to change without notice.





Scanner25-z



Scanner35-xy-Optic



Scanner35-z-Optic

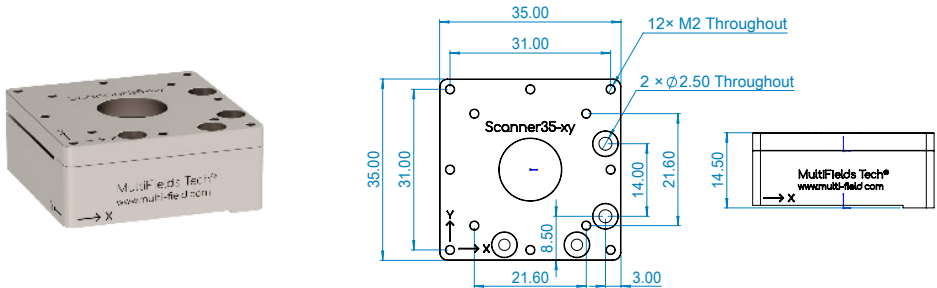
| "25mm Series"                                                                                                                                          | "35mm Series"     |                   | Series defined by size |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|------------------------|----|
| Default: 1.4 K ~ 400 K; 1e-7 mbar; 35 Tesla<br>Option1 - .ULT, lowest use temperature 30 mK;<br>Option2 - .UHV, highest vacuum environment 2E-11 mbar; |                   |                   | Work Environment       | 1  |
| Z                                                                                                                                                      | X, Y              | Z                 | Scanning Axes          | 2  |
| 25 × 25 × 12 mm                                                                                                                                        | 35 × 35 × 14.5 mm | 35 × 35 × 14.5 mm | Dimensions             | 3  |
| 55 μm                                                                                                                                                  | 100 × 100 μm      | 100 μm            | Travel Range           | 4  |
| 200 g                                                                                                                                                  | 500 g             | 500 g             | Max. Load              | 5  |
| < 10 nm                                                                                                                                                |                   |                   | Repeatability          | 6  |
| Max. 75 V @300K; Max. 180 V @4K                                                                                                                        |                   |                   | Drive Voltage          | 7  |
| 0.8 nm                                                                                                                                                 | 2 nm              | 2 nm              | Resolution             | 8  |
| 2 pins                                                                                                                                                 | 4 pins            | 2 pins            | Pins                   | 9  |
| Default: Pure Ti; ULT: BeCu                                                                                                                            |                   |                   | Main Body              | 10 |
| 20 g                                                                                                                                                   | 65 g              | 65 g              | Weight                 | 11 |

# "35mm Series" – Scanner35-xy-Optic

High-performance scanning stage of x & y direction with long travel range

- ➔ Features
- Compact design
  - Sub-nm resolution
  - 100 × 100 μm travel range at room temperature
  - Ultra-high vacuum & low temperature compatible

➔ Picture & dimensions



➔ Specifications

| Optional Versions ⇨ |                      | .HV (default)                                                                                                                                  | .ULT | .UHV       | .ULT.UHV |
|---------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------|------------|----------|
|                     |                      | .HV version, compatible with 1E-7 mbar<br>.ULT version, used at He3 or dilution cryogenics systems<br>.UHV version, compatible with 2E-11 mbar |      |            |          |
| 1                   | Footprint × hight    | 35 × 35 × 14.5 mm                                                                                                                              |      |            |          |
| 2                   | Weight               | 65 g                                                                                                                                           |      |            |          |
| 3                   | Work environment     | Temperature range: 1.4 ~ 400 K, Max. Magnetic field: 35 Tesla                                                                                  |      |            |          |
| 4                   | Option1 - 30 mK      |                                                                                                                                                | ✓    |            | ✓        |
| 5                   | Option2 - 2e-11 mbar |                                                                                                                                                |      | ✓          | ✓        |
| 6                   | Mainbody             | Pure Ti                                                                                                                                        | BeCu | Pure Ti    | BeCu     |
| 7                   | Wires                | Phosphor Bronze Twisted Paired Wires, 20cm                                                                                                     |      |            |          |
| 8                   | Pin materials        | Polyster (glass fiber filled), BeCu                                                                                                            |      | Peek, BeCu |          |
| 9                   | Pins number          | 2 pins for each axis                                                                                                                           |      |            |          |
| 10                  | Scanning Axes        | X, Y                                                                                                                                           |      |            |          |
| 11                  | Travel range @300 K  | 100 × 100 μm                                                                                                                                   |      |            |          |
| 12                  | Drive voltage        | Max. 75 V @300 K, Max. 180 V @4 K                                                                                                              |      |            |          |
| 13                  | Max. Load            | 500 g                                                                                                                                          |      |            |          |
| 14                  | Capacitance @300 K   | 8 uF                                                                                                                                           |      |            |          |
| 15                  | Resolution           | 2 nm                                                                                                                                           |      |            |          |
| 16                  | Repeatability        | < 10 nm                                                                                                                                        |      |            |          |

For detail drawing and 3D model please contact us.

