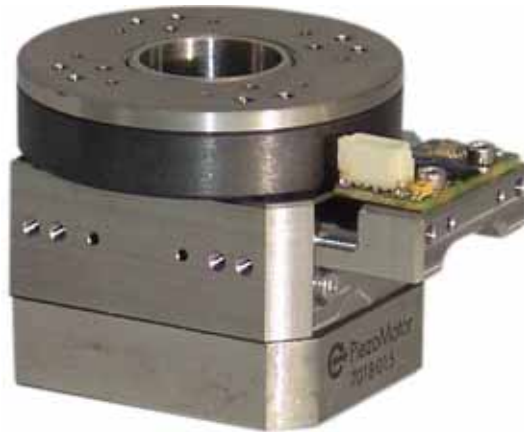


Rotation Piezo Stage → preliminary data sheet



RPS_LW20

- PiezoMotor driven system
- Travel range 360°
- Resolution up to 120mio counts
- Maximum operation speed 20 turns/min
- Force:strong 90 or 150mNm
- Ultra precise and robust design
- fast response.
- Material: Stainless steel,
- 12,8mm Apertur
- singel and dual head encoder
- desinged to transport other stages

The RPS_LW20 is a customized piezomotor with an adapted encoder systems developed by NANOS Instruments. The robust design with ball bearings guarantee a smooth and highly accurate movement in the range of sub nanometers. The low currend encoder with high resolution is monted outside. This results in practically zero drift with highest resolution. This stage is fitting with our other stages or goniometers, and can be combined as building blocks for a multi-axis stage. With it´s high force it is able to move also other stages with cabel and your probs.

Specifications

RPS_LW20			
Electronic	PMD101	MC101	LEGS-Drive®-Ultra
Travel range (°)	360	360	360
Force (mNm)	90	90	90
Load vertical on the center (kg)	5	5	5
max operation speed (°/s)	120	120	120
fast movement** (µm/ms)	on request	on request	on request
Hybrid encoder V2 (counts) with ABZ, 18mA @ 5V *	8192*240=1.966.080	1.966.080 or 12.000.000	1.966.080=12.000.000
Hybrid encoder V4 counts) with ABZ, 3mA @ 5V** zero drift System	15.728.640 max or 12.969.000 (1/10 arcsec) or 14.400.000 (1°/0,000025)	15.728.640 max or up to 49.152.000 36.000.000 absolut 120mio tango system	15.728.640 max or up to 49.152.000 36.000.000 absolut
accuracy	on request	on request	on request
Bidirectional Repeatability (Encodercounts)	on request	on request	on request

* the MC101 and the LEGS-Drive®-Ultra Controller are able to oversample and filter the encoder sensor to higher the resolution. In this case short fast steps takes longer.

** Fast movement is possible for a short time with the LEGS-Drive®-Ultra Controller
note the maximum encoder sending frequence at highest resolution

Rotation Piezo Stage → preliminary data sheet

Order code for this stage:

(please call for support, we will help you to find the right solution)

RPS_LW20-S-R-A

S = Sensors	1V2_61	61nm resolution(magnetic encoder)
	1V2_61	61nm resolution(magnetic encoder)
	1V2_O	Oversample function (LEGS-Drive®-Ultra Controller; magnetic encoder)
	2V2_O	Oversample function (LEGS-Drive®-Ultra Controller; magnetic encoder)
	Zero drift encoder options (in the moment without homing):	
	1V4	high resolution magnetic encoder
	2V4 DH	high resolution magnetic encoder dual head mounted
	2V4 D	high resolution magnetic encoder double sensor mounted
	2V4 DA	high resolution magnetic encoder double sensor with absolut encoder function
	1V4T	tango system with highest interpolation

Note that your electronic can support a dual head function. Our MC101 or Legsdrive ultra support this and reduce the eccentricity error significant. The repeatability and the resolution is the same as before or else the resolution will be doubled.

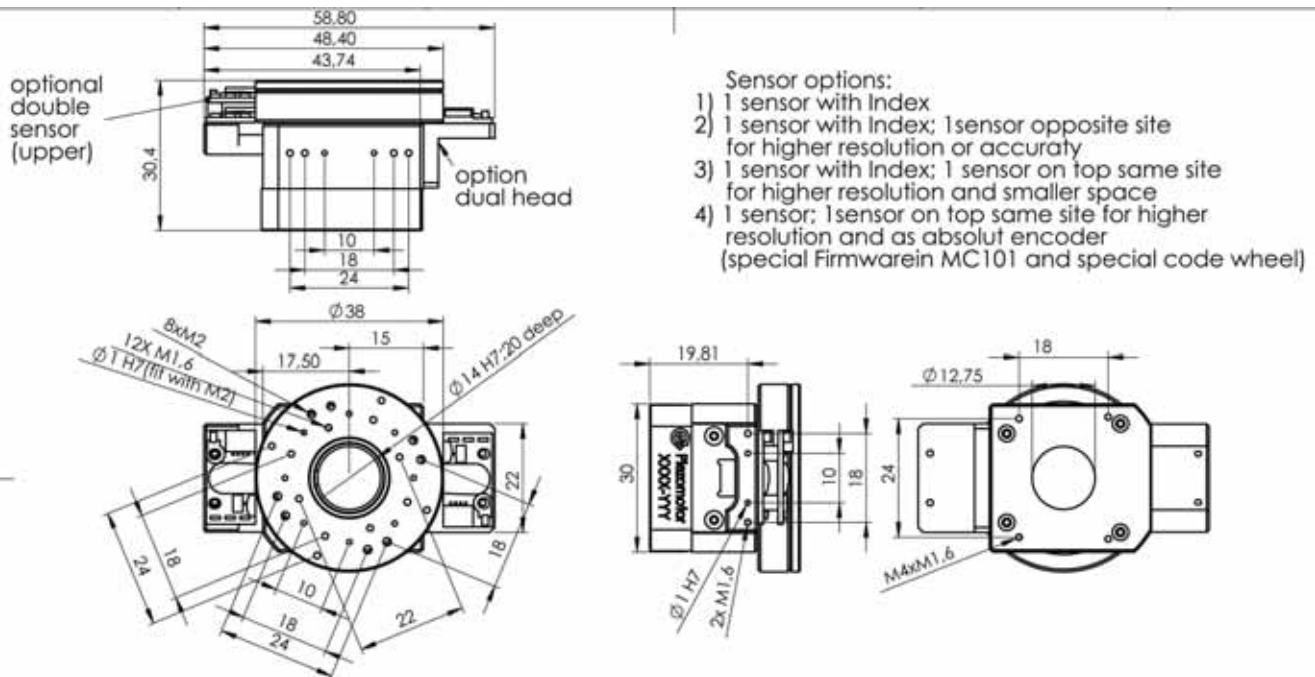
R = Resolution	0	1.966.080 (1V2_61 sensor)
	1	12.000.000 (1V2_O/ 2V2_O sensor) (MC101)
	2	24.000.000 (2V2_O sensor) (MC101)
	3	15.728.640 (1V4 sensor) max for external controller
	4	12.960.000 (1V4 sensor) (1/10 “)
	5	14.400.000 (1V4 sensor) (1°/0,000025)
	6	24.576.000 (1V4 sensor) MC101)
	7	49.152.000 (2V4 D sensor) MC101)
	8	36.000.000 (2V4 D sensor) absolut encoder (MC101)* *under development
	9	120.000.000 (1V4 sensor with tango system) (MC101)

A= Ambiente N- normal
 HV vacuum down to 10⁻⁶mbar

The order code could be for example: RPS_LW20-1V4-3-N

Rotation Piezo Stage → preliminary data sheet

Dimensions:



Applications:

