

ECR5050hs

Technical Specifications

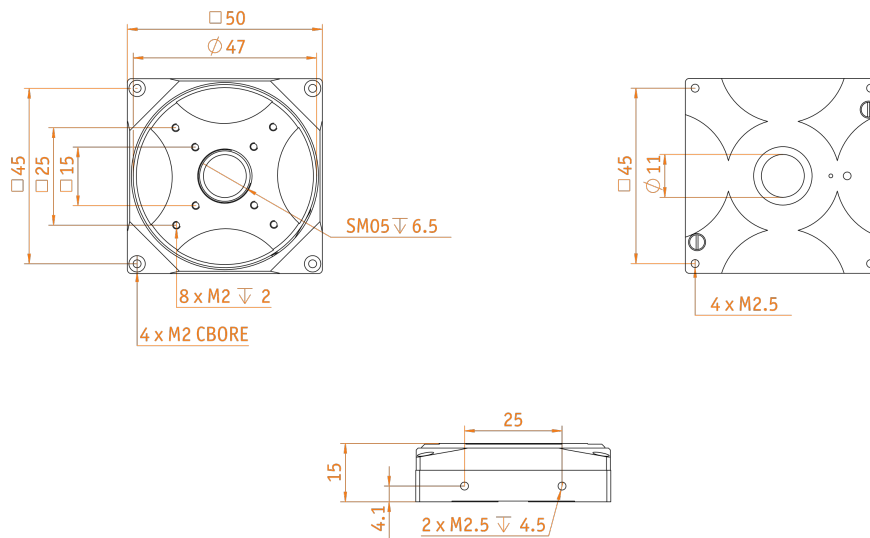
Technology	
travel mechanism	inertial piezo drive
positioner type	rotator
Size and Dimensions	
footprint; height	50 x 50 ; 15 mm
max installation space	50 x 50 ; 15 mm
weight (aluminium version)	102 g
weight (stainless steel version)	214 g
Materials	
positioner body	Aluminum
actuator	PZT ceramics
connecting wires	copper, jacket: RT: silicon, HV/UHV: fiberglass
bearings	stainless steel
Load (@ ambient conditions)	
maximum load	20 N
maximum dynamic torque around axis	5 Ncm
Coarse Positioning Mode	
input voltage range	0 - 45 V
travel range (step mode)	360 °
maximum drive velocity @ 300 K	15 °/s
typical minimum step size @ 300 K	0.2 m°

Fine Positioning Mode	
fine positioning resolution	μ°
fine angular positioning range @ 300 K	15 m°
input DC voltage range @ 300 K	0 - 120 V
Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
typ. forward / backward step asymmetry	10 %
wobble	6 mrad
typical bearing clearance	0.15 mrad
Working Conditions	
mounting orientation	arbitrary
Connectors and Feedthroughs	
cable	50 cm cable with connector
connector type	14-pole connector
connector type (/HV, /UHV)	15-pin D-Sub connector
Options	
material options	/StSt, /Al
environmental options	/RT, /HV, /UHV
Versions	
/StSt/UHV Version	1012484
/StSt/HV Version	1012482
/Al/RT Version	1012481

AMC100
Piezo Positioning
Controller



Technical Drawings



ECR5050hs/NUM(+)

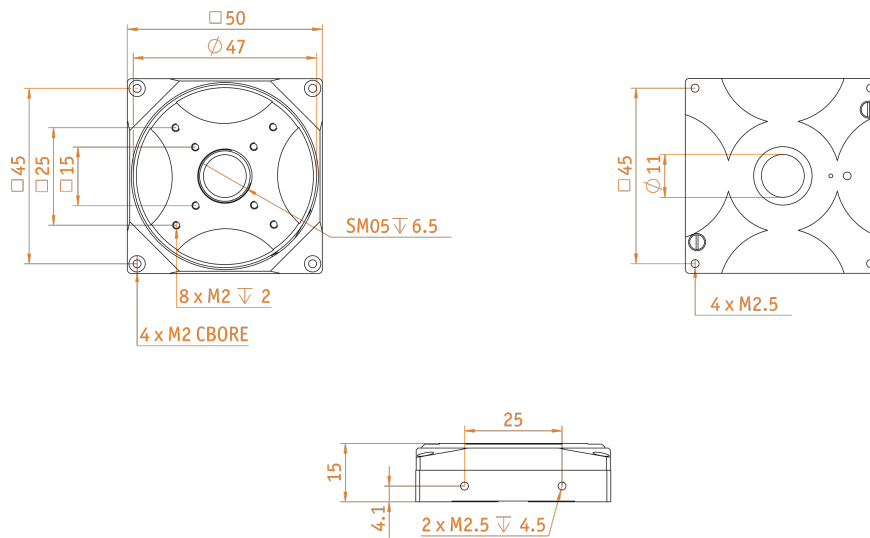
Technical Specifications

Technology	
positioner type	rotator
Size and Dimensions	
footprint; height	50 x 50 ; 15 mm
max installation space	50 x 50 ; 15 mm
weight (aluminium version)	102 g
weight (stainless steel version)	214 g
Materials	
positioner body	Stainless Steel
actuator	PZT ceramics
connecting wires	copper, jacket: RT: silicon, HV/UHV: fiberglass
bearings	stainless steel
Load (@ ambient conditions)	
maximum load	20 N
maximum dynamic torque around axis	5 Ncm
Coarse Positioning Mode	
input voltage range	0 - 45 V
travel range (step mode)	360 °
maximum drive velocity @ 300 K	15 °/s
typical minimum step size @ 300 K	0.2 m°

Fine Positioning Mode	
fine positioning resolution	μ°
fine angular positioning range @ 300 K	m°
input DC voltage range @ 300 K	0 - 120 V
Accuracy of Movement	
typ. forward / backward step asymmetry	10 %
wobble	6 mrad
typical bearing clearance	0.15 mrad
Position Encoder	
readout mechanism	optoelectronic sensor
sensor power (when measuring)	50 mW
wavelength of illumination	870 nm
sensor resolution	0.01 m°
repeatability	1 m° (bidirectional)
absolute accuracy	< 0.01% of travel range
Working Conditions	
mounting orientation	arbitrary
Connectors and Feedthroughs	
cable	50 cm cable with connector
connector type	14-pole connector
electrical feedthrough solution	EVFT/HV, EVFT/UHV
Options	
material options	/StSt
encoder options	/NUM, /NUM+
environmental options	/HV, /UHV
Versions	
/StSt+/UHV Version	1012483
/StSt+/HV Version	1012478
/StSt/UHV Version	1012681
/StSt/HV Version	1012680



Technical Drawings



AMC100

Art.Nr.: 1013507

Technical Specifications

Application System

Machine Vision

Manual Positions

Motion Control Products

Optical & Mirror Holder

Optomechanics

Holders

Factory Automation Parts

Measurement & Control

FA Electrical Parts

Laser

Tools & Clean Parts

Nanometer Stages

Precision Linear Motorized Stages

High Speed Motorized Stages

Motorized Goniometer

Multiaxis Motorized Stages

Motorized Rotation Stages

Industrial Robot

Controller & Driver & Cable

Custom-Built Motorized Stages

General Specifications	
type of instrument	3 axes motion controller
number of slots	3
connector to product(pos/mic)	3 x D-Sub H/D 26pin
temperature range	0 - 40°C, non condensing
Modes of Operation	
open loop positioning	stepping signals for slip-stick positioners
closed loop positioning	closed loop control for ECS/NUM positioners
remote operation	Ethernet, WLAN (optional, planned), USB for hand-held controller (optional, planned)
positioning mode	stepping, fine positioning, closed loop positioning
no. device per operation	control of multiple device via one PC
Size and Dimensions	
chassis	22 x 22 x 4.5 cm ³
weight	2 kg
Controller Hardware	
power supply	12 VDC
power consumption	max. 30 W
connector	DC
connection cable (ELE - POS)	1 per axis, length: 2m
Software Drivers	
Windows, Linux	Stand-alone application for Windows XP™, 7™, 8™, 10™, DLL,
communication speed	AquadB : up to 25 MHz, LabVIEW™ : up to 300 Hz

Output Signals	
output connectors	26-Pin SubD connector
output voltage range	stepping : 0 .. 45 V
frequency range	stepping : 0 .. 5 kHz (1 axis), stepping : 0 .. 2 kHz (3 axes simultaneously)
output current	stepping : max > 16 A peak
maximum capacitance load	2 µF
setpoint bandwidth	fine positioning : 1 kHz
output noise	stepping : < 5 mVpp (500 kHz bandwidth)
Trigger Signals	
trigger level definition	LVDS, LVTTL
input trigger	1 per axis
trigger interface	GPIO - port
Options and Upgrades	
optional upgrades	PRO : activation code (art. no. 1013511), SYNC : activation code (art. no. 1013511)
Options	
software upgrades	I/O, PRO
Versions	
PRO Upgrade	1013511
I/O Upgrade	1013885

