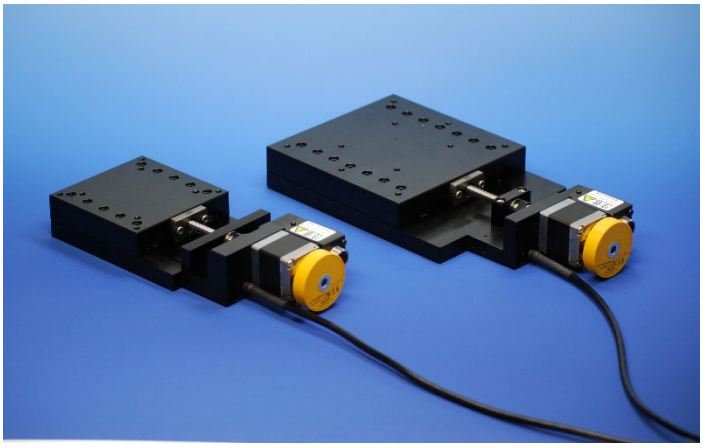
1nm feedback stage FS-UPX

RoHS

FS-UPX is feedback stage with 1nm resolution positioning.
FS-UPX series operates faster than high torque type FS-SPX series.
In-house optical linear encoder are built-in at the center of stage to detect position.
Positioning to target position, positioning repeatability and holding the position with high resolution is achieved by feedback control using position information of encoder.
There are two types of the stage which travel of 20mm and 50mm.



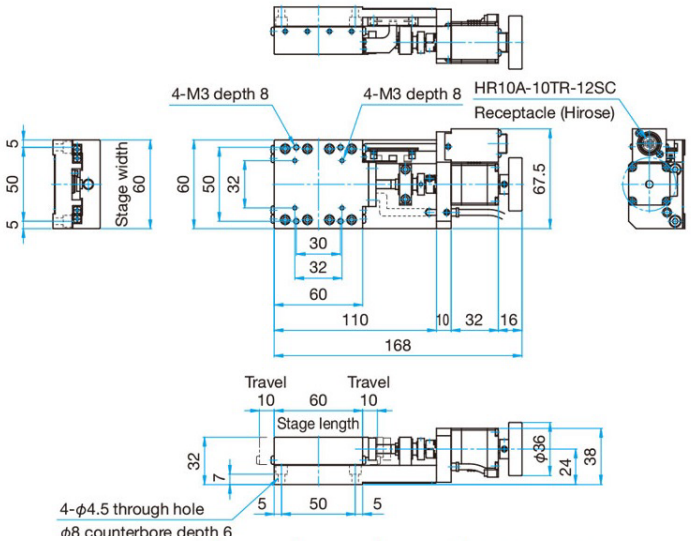
Applicable controller and cable	
Controller	FC-911
Cable	PM-CA-＊

Specifications			
Part Number		**FS-1020UPX**	**FS-1050UPX**
Mechanical spec	Travel [mm]	20	50
	Size of the stage [mm]	60×60	120×120
	Feed screw [mm]	Ball screw dia. 6, 1mm lead	
	Positioning slide	Crossed roller	
	Primary material	Aluminum	
	Finish	Black anodized	
	Motor type	□28mm 5 phase stepping motor	
	Weight [kg]	0.7	1.6
Accuracy spec	Minimum Resolution [nm] ※1	1	1
	Positional repeatability [nm] ※1	+/- 2	+/- 2
	Load capacity [N]	49(5kgf)	98(10kgf)
	Running parallelism [μm]	10	10
	Max speed [mm/sec]	5	5
Sensor	Limit sensor	Equipped	
	Origin sensor	None	
	Proximity origin sensor	None	
Equipped scale	Signal cycle	2μm	
	Scale cable (※2)	2m	

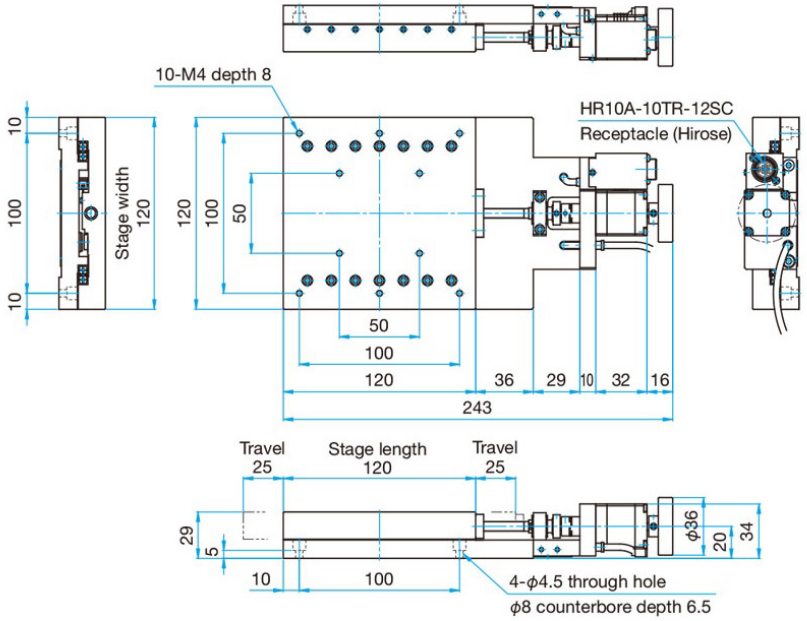
※1 : Minimum resolution and position repeatability accuracy for built-in scale read.
※2 : Scale cable comes directly out of the stage. Please prepare "extension cable for scale" separately if 2m or longer cable are needed.

Outline drawing

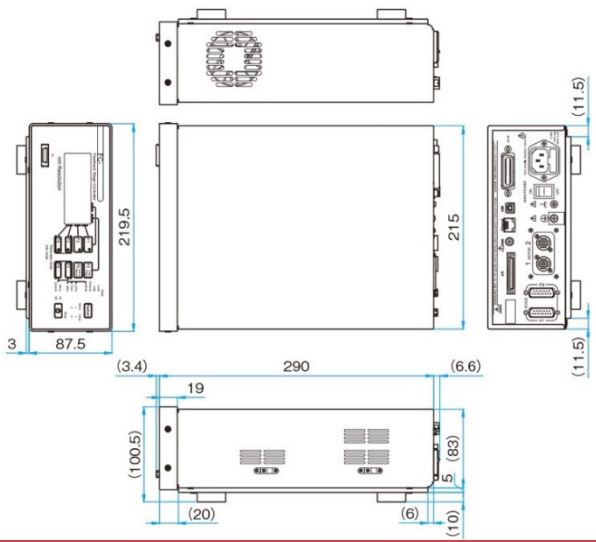
FS-1020UPX



FS-1050UPX



FC-911



FS-UPX dedicated controller for 1nm feedback stage FC-911

RoHS

Dedicated controller for 1nm feedback stage (FS-UPX series) to control with 1nm resolution.

Specifications				
Part number				**FC-911**
Primary spec	Number of control axes			2
	Minimum command unit			1nm
	In position range			+/- 1nm (+/-3, +/-7nm selectable)
	Max operating speed set value			6mm/sec
	Max travel range set value			-134.217728～+134.217727mm
	Number of control interface port	Jog controller		1
		Emergency stop		1
		GP-IB		1
		USB		1
		Ethernet		1
		General I/O		1
	Teaching	Number of register channel		5
		Number of registered lines per channel		200
		Operational interface		Controller key operation
				Jog controller key operation
				Communication command
				General I/O
General spec	Power voltage			AC100～240V 50/60Hz
	Power supply voltage fluctuation allowable range			AC90V～264V
	Power consumption			110VA max
	Fuse			250V, 2.5A, time lag, 2
	Outer dimensions（W×H×Dmm)			W220×H88×D290mm
	Weight［kg］			5.2
	Operating temperature/humidity			0 deg.C to 40 deg.C / 20% to 80%RH(without condensation)
	Storage temperature/humidity			-10deg.C to 55 deg.C / 20%～80%RH (without condensation)
	Connectable option			JC-01
	Communication port	GP-IB	Address	1～30
			Delimiter	CR+LF, EOI, CR, LF
			Service request	Valid or invalid
			Flow control	None (fixed)
		USB	Function	Virtual COM port
			Transfer speed	Full speed transfer(12Mbps max)
			Delimiter	CR+LF, CR, LF
		Ethernet	Standard	IEEE802.3x standard flow control compliant
			Transfer speed	10Mbps and 100Mbps
			Delimiter	CR+LF, CR, LF
	General I/O port	Input	General input	3 port
			Teaching	1 set
			Busy error cancel	1 set
		Output	General output	3 port
			Scale division pulse signal	1 set for each axis
			Alarm signal	1 set for each axis
			In position signal	1 set for each axis
			Teaching status	1 set
	Emergency stop input			B contact (fixed)