

## 4.102 Precision Linear Stage PLS-85



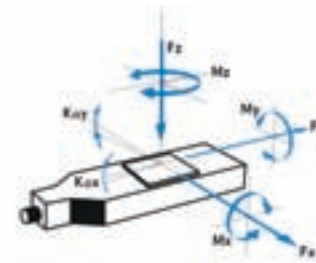
### FACTS

Load characteristics	$F_x(N)$	$F_y(N)$	$F_z(N)$	$M_x(Nm)$	$M_y(Nm)$	$M_z(Nm)$	$k^{+x}(\mu rad/Nm)$	$k^{+y}(\mu rad/Nm)$
DC-B-032	60	50	100	25	30	20	70	40
2Phase-045	60	50	100	25	30	20	70	40
DC-B-033	60	50	100	25	30	20	70	40



### KEY FEATURES

- Travel range up to 155 mm (6")
- Uni-directional repeatability down to 0.05  $\mu m$
- Maximum speed 100 mm/sec
- Load capacity up to 10 kg
- Integrated mechanical / hall limit switches
- Limit switch adjustable
- Option: linear scale



The PLS-85 linear stages are especially suited for high precision applications with limited space conditions while allowing loads of up to 10 kg. Cross-roller bearings guarantee very high guiding stiffness. Driven by a re-circulating ball screw with 1 or 2 mm pitch options, the PLS-85 can be mounted in any orientation. For demanding positioning tasks, the PLS-85 linear stages can be supplied with a side-mounted linear scale. The PLS-85 can be equipped with a DC or a 2-phase stepper motor and has two mechanical or hall sensors limit switches.

### TECHNICAL DATA

Travel range (mm)	26	52	102	155
Straightness / Flatness ( $\mu m$ )	$\pm 1$	$\pm 2$	$\pm 4$	$\pm 6$
Pitch ( $\mu rad$ )	$\pm 60$	$\pm 90$	$\pm 120$	$\pm 150$
Yaw ( $\mu m$ )	$\pm 60$	$\pm 80$	$\pm 100$	$\pm 130$
Weight (kg)	0.9	1.2	1.5	1.8

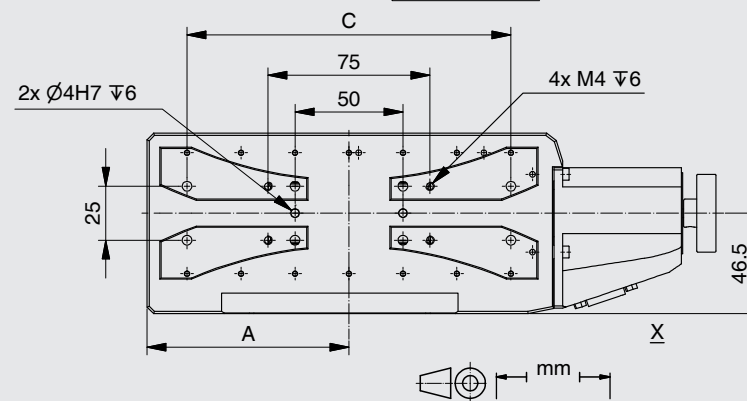
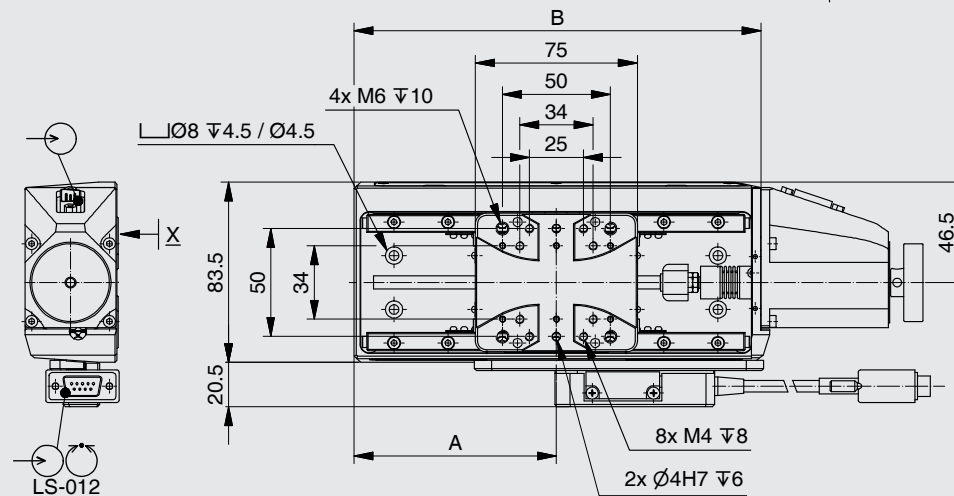
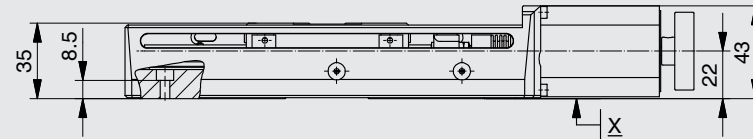
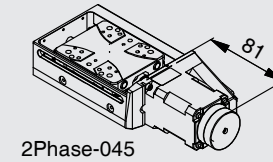
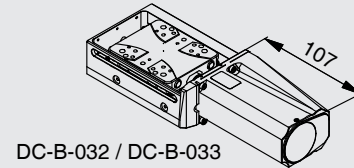
Motor (Pitch 1   2 mm)	DC-B-032	2Phase-045	DC-B-033	
Linear scale				LS-012
Speed max. (mm/sec)	50   90	20   45	50   90	
Resolution calculated ( $\mu m$ )	0.5   1 (RE)	5   10 (FS)	0.05   0.1 (RE)	0.05
Resolution typical ( $\mu m$ )	0.5   1	0.05   0.1	0.1   0.2	0.05
Bi-directional Repeatability ( $\mu m$ )	$\pm 1$	$\pm 1$	$\pm 1$	$\pm 0.1$
Uni-directional Repeatability ( $\mu m$ )	0.5   1	0.1   0.2	0.1   0.2	0.05
Nominal Current (A)	2.3	1.2	2.3	
Voltage Range (V)	24		24	

Accuracy	on request
Velocity range (mm/sec)	0.001 ... 100
Material	Aluminum, black anodized

Note: FS = full step, RE = rotary encoder  
 More info: Detailed information concerning motors and encoders, see appendix.

Error and technical modifications are subject to change

Travel (mm)	26	52	102	155
A	59	68.5	93.5	128
B	119.5	138.5	188.5	257.5
C	-	100	150	200



Order No.	6234-9-		
DC-B-032		1	
2Phase-045		3	
DC-B-033		4	
26 mm (1")		0	
52 mm (2")		1	
102 mm (4")		2	
155 mm (6")		3	
without LS-012		0	
LS-012, Linear steel scale		1	
Pitch 1 mm / mechanical limit switches		0	
Pitch 2 mm / mechanical limit switches		1	
Pitch 1 mm / hall limit switches		2	
Pitch 2 mm / hall limit switches		3	

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