

# BD05

Belt type

CE compliance

## Ordering method

<b>BD05</b>	<b>48</b>	<b>N</b>	<b>N</b>			<b>S2</b>	
<b>Model</b>	<b>Lead</b>	<b>Brake</b>	<b>Origin position</b>	<b>Stroke</b>	<b>Cable length</b> <small>Note 1</small>	<b>Robot positioner</b>	<b>I/O</b>
	48: 48mm	N: With no brake	N: Standard	300: 300mm 500: 500mm 600: 600mm 700: 700mm 800: 800mm 900: 900mm 1000: 1000mm 1200: 1200mm 1500: 1500mm 1800: 1800mm 2000: 2000mm	1K: 1m 3K: 3m 5K: 5m 10K: 10m	S2: TS-S2 <small>Note 2</small>	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <small>Note 3</small>
						<b>SH</b>	
						<b>Robot positioner</b>	<b>I/O</b>
						SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <small>Note 3</small>
							<b>Battery</b>
							B: With battery (Absolute) N: None (Incremental)
						<b>SD</b>	<b>1</b>
						<b>Robot driver</b>	<b>I/O cable</b>
						SD: TS-SD	t: 1m

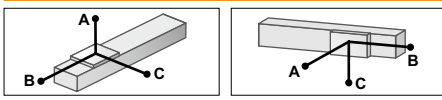
Note 1. The robot cable is flexible and resists bending.  
 Note 2. See P.498 for DIN rail mounting bracket.  
 Note 3. Select this selection when using the gateway function. For details, see P.60.

## Basic specifications

<b>Motor</b>	42 □ Step motor
<b>Resolution (Pulse/rotation)</b>	20480
<b>Repeatability</b> <small>Note 1</small> (mm)	+/-0.1
<b>Drive method</b>	Belt
<b>Equivalent lead (mm)</b>	48
<b>Maximum speed</b> <small>Note 2</small> (mm/sec)	1400
<b>Maximum payload (kg)</b>	5
<b>Stroke (mm)</b>	300/500/600/700/800/900/ 1000/1200/1500/1800/2000
<b>Overall length (mm) (Horizontal installation)</b>	Stroke + 241.8
<b>Maximum outside dimension of body cross-section (mm)</b>	W58 × H123
<b>Cable length (m)</b>	Standard: 1 / Option: 3, 5, 10

Note 1. Positioning repeatability in one direction.  
 Note 2. The maximum speed needs to be changed in accordance with the payload.  
 See the "Speed vs. payload" graph shown on the right.

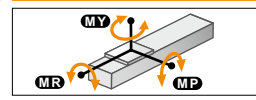
## Allowable overhang Note



Horizontal installation (Unit: mm)				Wall installation (Unit: mm)			
	A	B	C		A	B	C
1kg	9445	2274	1681	1kg	1784	2312	9545
3kg	2982	702	553	3kg	573	743	3082
5kg	1689	385	325	5kg	331	429	1789

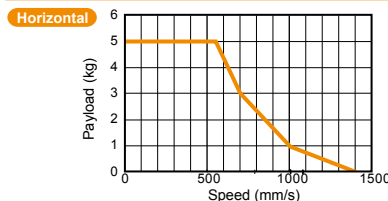
Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000km (This does not warrant the service life of the product.). (Service life is calculated for 600mm stroke models.)

## Static loading moment



(Unit: N·m)		
MY	MP	MR
27	27	52

## Speed vs. payload

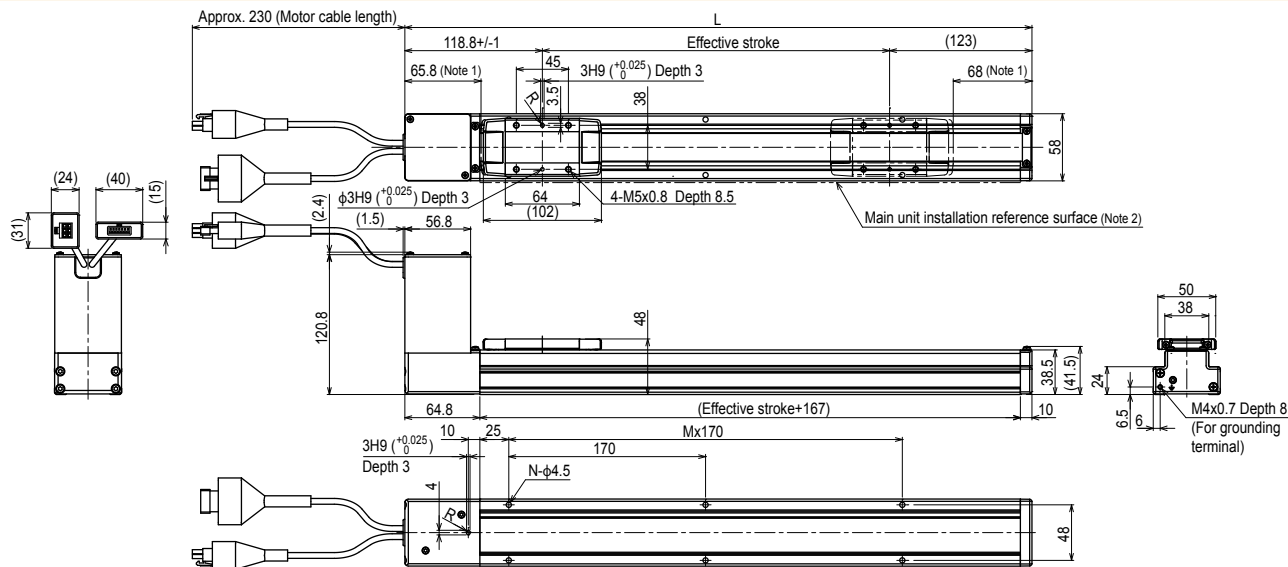


Quick reference		
Payload (kg)	Speed (mm/sec)	%
5	550	39
3	700	50
1	1000	71
0	1400	100

## Controller

Controller	Operation method
TS-S2	I/O point trace / Remote command
TS-SH	Remote command
TS-SD	Pulse train control

## BD05



Effective stroke	300	500	600	700	800	900	1000	1200	1500	1800	2000
<b>L</b>	541.8	741.8	841.8	941.8	1041.8	1141.8	1241.8	1441.8	1741.8	2041.8	2241.8
<b>M</b>	2	3	4	4	5	6	6	7	9	11	12
<b>N</b>	6	8	10	10	12	14	14	16	20	24	26
<b>Weight (kg)</b>	2.39	2.85	3.08	3.31	3.54	3.77	4	4.46	5.15	5.84	6.3

Note 1. Position from both ends to the mechanical stopper. (Movable range during return-to-origin)  
 Note 2. When installing using the main unit installation reference surface, make the mating or positioning height 2mm or more higher than the reference surface since the R-chamfering is provided on the main unit. (Recommended height, 5mm)  
 Note 3. The minimum bending radius of the motor cable is R30.