

Low Voltage (DC)  
 Brush motor    Brushless motor  
 Miniature screw    Precision screw    Machine screw  
 1.2 - 4.0 mm



# Delvo Brushless Type

## C Series (Current control Type) Model DLV04C/10C



### Features

- Easy fastening setting by controller
- Current Controlled Torque System suitable for screw fastening work
- Low-voltage brushless motor
- ESD (electrostatic discharge) protection structure
- For both hand-held / automatic machines
- Controller has built in counting function. Prevents human errors

## Four screwdrivers can be consolidated into one

- Controller can be set to any torque and speed within range.  
\* The range varies depending on SOFT fastening or HARD fastening.

0.25 Nm 450 min <sup>-1</sup>		1st unit
0.15 Nm 600 min <sup>-1</sup>		2nd unit
0.35 Nm 1000 min <sup>-1</sup>		3rd unit
0.30 Nm 450 min <sup>-1</sup>		4th unit



Torque: 0.05 - 0.4 Nm (DLV04C)  
[0.44 - 3.54 lbf-in]  
 0.2 - 1.0 Nm (DLV10C)  
[1.77 - 8.85 lbf-in]  
 Speed: 100 - 1000 min<sup>-1</sup>

Torque range **0.05 - 1.0 Nm**

**All in one!**

- Easily adapts for use in automatic machines  
 The sequencing of the screwdrivers can be controlled by a PLC.



For installation on automatic assembly machines, attach optional flange coupling (DLW9015) or vacuum pickup (DLP6650).



- Built-in Screw Fastening Counter Function  
 Controller has built in counting function. Prevents human errors.



### Specifications

Model	Bit	CE/UL	DLV04C10L-AY : K	DLV10C10L-AY : K
<b>Power Source</b> DCC0101X-AZP or DCC0101X-AZN				
<b>Torque Adjustment</b> Adjustment from 1 to 100% in 1% increments				
<b>Torque</b> (Nm [lbf-in])	SOFT fastening setting (1000 min <sup>-1</sup> setting)		0.05 - 0.4 [0.4 - 3.5]	0.2 - 1.0 [1.8 - 8.9]
	SOFT fastening setting (600 min <sup>-1</sup> setting)		0.05 - 0.35 [0.4 - 3.1]	0.2 - 0.45 [1.8 - 4.0]
	HARD fastening setting		0.05 - 0.4 [0.4 - 3.5]	0.2 - 1.0 [1.8 - 8.9]
<b>Free Speed</b> (min <sup>-1</sup> )	SOFT fastening setting		600 - 1000	
	HARD fastening setting		100 - 1000	
<b>Screw Size</b> (mm)	Machine screw		1.2 - 3.0	1.8 - 4.0
	Tapping screw		1.1 - 2.5	1.6 - 3.5
<b>Bit Type</b>	NK35 (OD6.35 mm [1/4"] Hex. Shank)			
<b>Input Voltage</b>	24 V DC			
<b>Mass</b>	370 g [0.82 lbs]			
<b>Rated Operation</b>	ON: 0.5 seconds / OFF: 3.5 seconds			
<b>Standard Accessories</b>	• Bit NK35(No.0 x 4 x 75): 1 pc. • Bit NK35(No.1 x 4 x 75): 1 pc. • Bit NK35(No.1 x 4 x 75): 1 pc. • Bit NK35(No.2 x 4 x 75): 1 pc. • Bit NK35(No.2 x 4 x 75): 1 pc. • Connection Cord(DLW9075): 1 pc. • Connection Cord(DLW9075): 1 pc. • Suspension Bail: 1 pc. • Suspension Bail: 1 pc.			

Please contact us for 4 mm bit type ("M" Bit) of CE/UL models.

Model	DCC0101X-AZ : P*
<b>Input Voltage</b>	100 - 240 V AC, 50/60Hz
<b>Operation Channel Function</b>	Torque and speed setting in 4-channel memory Can switch to any operation channel
<b>Count Function</b>	Tracks screws fastened Workpiece detector can be incorporated
<b>External Start up Control Function</b>	Start up control can be enabled by external input signal
<b>Input Signal Method</b>	Photocoupler input (24 V DC drive (5 mA/1 input), respond to PNP output)
<b>Output Signal Method</b>	Photocoupler output (30 V DC or less, 30 mA/1 output or less, PNP output method)
<b>Service Power Source</b>	24 V DC (Maximum capacity 200 mA)
<b>Power consumption</b>	When on standby: 20 W During electric screwdriver rotation (rated): 30 W
<b>Mass</b>	1100 g [2.4 lbs]
<b>Power cord (Optional)*</b>	DLW9220 / DLW9240 / DLW9250





\*DCC0101X-AZN with NPN output also available

\*The power cord is sold separately. Ask us for the required power cord when ordering. (see page 9 "Optional Accessories")

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**Delvo Brushless Type**

**Comparison of Adjustment Method with Conventional Model**

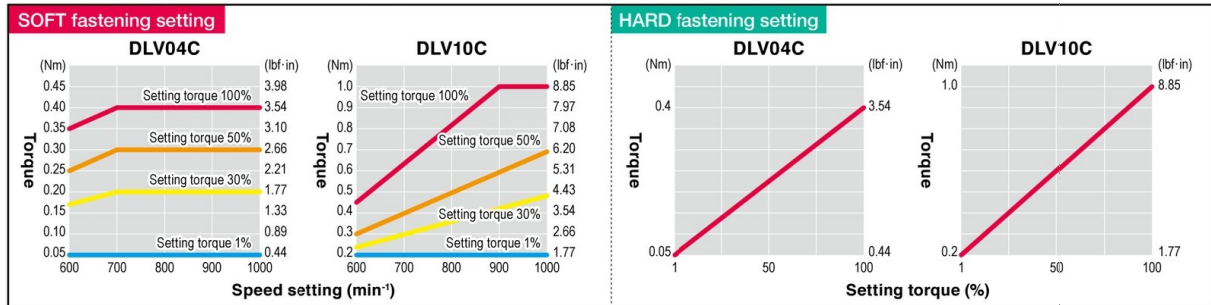
Torque adjustment	 <p>Torque is adjusted by turning the adjusting ring at the end of the screwdriver.</p>	Conventional	 <p>Can be set with the external controller. No need to adjust the screwdriver body.</p>	C Series
Speed setting	 <p>The speed of transformerless type screwdrivers is fixed for each series.</p>	Conventional	 <p>Can be set with the external controller. Adjustable between 100 to 1000 min<sup>-1</sup>.</p>	C Series

**SOFT / HARD Fastening Settings**

Two types of fastening mode available subject to the workpiece. Coordinate the actual workpieces, screws and operating conditions and determine the fastening mode.

- SOFT fastening setting** Suitable for workpieces with high fastening load such as tapping screws or fastening soft objects such as rubber.
- HARD fastening setting** Suitable for workpieces with small fastening load such as threaded holes or rigid bodies such as metal.

**Output Torque and Rotation Speed**



\*The graph is for guidance only. The output torque range is not guaranteed.

**External Signals**

You can input or output external signals via a signal terminal block.

Terminal No.	Function	Details	I/O
1 (+)	+24 V DC	Built-in service power source (Capacity: Maximum 200 mA) • Use in power source for input/output signal common wire, or for the workpiece detection sensor, etc.	Service power source
2 (-)	0 V DC		
3	Channel A		
4	Channel B	In the 2-bit input signal, specify the operation channel (CH1 to CH4) • Valid only when "operation channel switching method" (No.1 CH-CHG) is set to "INPUT"	
5	Forward rotation startup		
6	Reverse rotation startup	Startup with external input signal	
7	WORK	Input the workpiece signal (workpiece detection sensor output) • With "count function" (No.11 COUNT-FNC) and "workpiece signal" (No.12 WORK-SNSR) set to ON, the workpiece signal input is valid	Input
8	WORK RESET	Reset operation (same as controller [WORK RESET] button)	
9	Keylock	Lock the controller button operation • Disable the controller button operation, and prevent setting changes by the operator	
10	Input signal negative common wire	Connect 0 V DC* • Service power source (terminal No.2) or external 0 V DC power source can be connected	
11	Forward rotation signal	Set output signal during forward rotation to ON	Output
12	Reverse rotation signal	Set output signal during reverse rotation to ON	
13	Count-up (C-UP)	Performance of normal screw tightening (torque-up) sets output signal to 0.3 seconds ON	
14	Screw fastening NG (F-NG)	If screw fastening NG, sets output signal to 0.3 seconds ON	
15	Operation channel 1 (CH1)	Set the channel output signal to ON during operation or settings	
16	Operation channel 2 (CH2)		
17	Operation channel 3 (CH3)		
18	Operation channel 4 (CH4)		
19	Operation OK	If the set count screw tightening is judged to be completed and operation OK, the output signal is set to ON	
20	Operation NG	When the WORK input signal is OFF during an operation, and the operation is judged to be NG, the output signal is ON	
21	Space	Connection impossible	
22	Output signal positive common wire	Connect +24 V DC* • Service power source (terminal No.1) or external +24 V DC can be connected	

\*When PNP output

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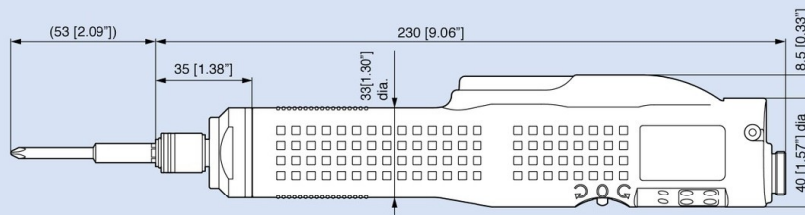
**Optional Accessories**

<p><b>Grounded 3-Prong Power Cord</b></p> <p>DLW9220      DLW9240      DLW9250</p> <p>North America      Europe      UK</p>			<p><b>Screw vacuum pump</b> DLP2530 (100 V), DLP2570 (230 V)</p> <p>Connect the tube to the vacuum pickup port. The vacuum will pick up the screw.</p>
<p><b>Torque checker</b> DLT1173A</p>	<p><b>Screw joint (with white rubber)</b> DLW4540</p> <p>*For DLV04C10L-AY SOFT fastening torque measurement</p>	<p><b>Screw joint (with black rubber)</b> DLW4550</p> <p>*For DLV10C10L-AY SOFT fastening torque measurement</p>	<p><b>Screw joint (with metal washer)</b> DLW4560</p> <p>*For HARD fastening torque measurement of both DLV04/10C10L-AY</p>
<p><b>For "K" Bit</b></p>			
<p><b>Vacuum pickup</b> DLP6640</p>	<p><b>Vacuum pickup (for automatic machine)</b> DLP6650</p>	<p><b>Connection Cord</b> DLW9075</p> <p>Standard accessory of screwdrivers</p>	<p><b>Flanged coupling (for automatic machine)</b> DLW9015</p>

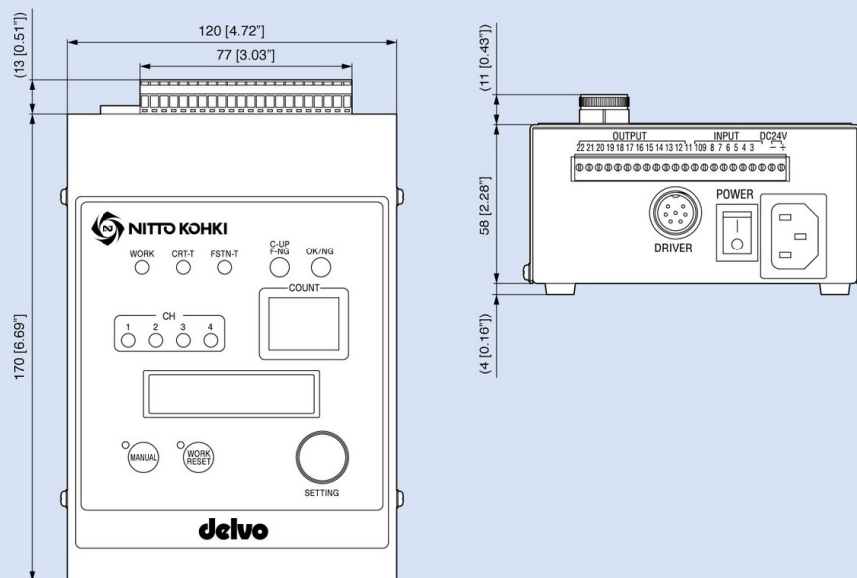
\* Please see page 39 for details.

**External Dimensions**

•DLV04C/10C ("K" Bit Type)



•DCC0101X-AZ



unit: mm [inch]