

Low Voltage (DC)
 Brush motor **Brushless motor**
 Miniature screw Precision screw Machine screw
 2.6 to 8.0 mm

See page 54 for External Dimensions

Delvo Brushless Type



S Series (Variable speed type)

Model **DLV30S/DLV45S/DLV70S**

Features

- Built-in brushless motor
- Automatic speed control function
- Built-in screw counting function
- ESD (electrostatic discharge) protection structure
- Setting with the optional Remote Controller

This screwdriver can deal with various fastening conditions.

Built-in screw counting function saves space!
 9 speed setting available.
 Wide range of specifications meet various screw fastening conditions.

Torque range **0.4 to 7.0 Nm**
 [3.5 to 62.0 lbf-in]

Lever Start / Push to Start



Built-in Automatic Speed Control Function

Low speed starting reduces the problems at start.

<Step 1>

High speed feeding at middle improves efficiency and quality of screw fastening work.

<Step 2>

Low speed fastening at finish reduces the problems at finish.

<Step 3>

Built-in the Functions of Screw Fastening Counter

- Screw count setting
- Fastening time setting, and fastening time measurement



Main LED mounted on the screwdriver

LEDs and Setting Buttons on the Screwdriver



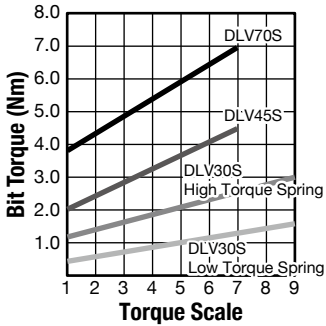
Specifications

		Low Speed	Standard	High Speed	Low Speed	Standard	Low Speed
Model	Bit	DLV30S06L-AY K	DLV30S12L-AY K	DLV30S20L-AY K	DLV45S06L-AY K	DLV45S12L-AY K	DLV70S06L-AY K
	Lever Start	DLV30S06P-AY K	DLV30S12P-AY K	DLV30S20P-AY K	DLV45S06P-AY K	DLV45S12P-AY K	DLV70S06P-AY K
Power Source		DEA0151N-AZ or DEA0241N-AZ		DEA0241N-AZ	DEA0151N-AZ or DEA0241N-AZ		DEA0241N-AZ
Torque Adjustment		Stepless					
Torque (Nm [lbf-in])	Low Torque Spring*1	0.4 to 1.6 [3.5 to 14.2]		2.0 to 4.5 [17.7 to 39.8]		3.8 to 7.0 [33.6 to 62.0]	
	High Torque Spring*2	1.2 to 3.0 [10.6 to 26.6]					
Free Speed (min ⁻¹)	For the details, see separate setting range of speed and torque.						
Speed Level	Lv1(Min. Speed) to Lv9(Max. Speed)						
Power Consumption (W)	44						
Screw Size (mm)	Machine Screw	2.6 to 5.0		4.5 to 6.0		5.0 to 8.0	
	Tapping Screw	2.5 to 4.0		4.0 to 5.0		4.5 to 6.0	
Mass (g [lbs])	710 [1.57]		860 [1.90] (with pistol grip)				
Rated Operation	ON: 0.5 seconds / OFF: 3.5 seconds						
Bit Grounding	Equipped as standard						
Standard Accessories ³	<ul style="list-style-type: none"> • Bit NK35(No.2 × 7 × 75): 1 pc. • Suspension Bail: 1 pc. • Low Torque Spring: 1 pc. • Connection Cord 1.5 m (DLW9073): 1 pc. • Torque Adjustment Ring Cover (DLW5203) 			<ul style="list-style-type: none"> • Bit NK35(No.2 × 7 × 75): 1 pc. • Suspension Bail: 1 pc. • Connection Cord 1.5 m (DLW9073): 1 pc. • Pistol Grip (DLW2300ESD): 1 pc. • Torque Adjustment Ring Cover (DLW5202) 			
Input/Output Signal Type	PNP						
Power Supply	Model	DEA0151N-AZ	DEA0241N-AZ				
	Power Source	100 - 240 V AC, 50/60 Hz, 60 W					
	Output Voltage	40 V DC					
	Maximum Rated Power (W)	150	240				
	Mass (kg)	0.56	0.9				
Power Cord 2m (Optional) ³	DLW9220 / DLW9240 / DLW9250						
Bit Type							
unit: mm							

*1: Standard Accessory
 *2: Installed
 *3: The power cord is sold separately. Ask us for the required power cord when ordering.

Please contact us for 5 mm bit type

Torque Diagrams
(for reference)



Setting with the Remote Controller

Infrared data transmission and the LCD display shorten the setting time. Simultaneous setting of multiple screwdrivers with the Remote Controller. *The Remote Controller is available as an option.

Key Lock Command

The Remote Controller can transmit the key lock command to a screwdriver. The key lock command prevents accidental button operation on the screwdriver.



Setting Range of Speed and Torque (for reference only)

		DLV30S06	DLV45S06	DLV70S06			DLV30S12	DLV45S12			DLV30S20
Speed Level	Speed (min ⁻¹)	Torque (Nm [lbf-in])			Speed Level	Speed (min ⁻¹)	Torque (Nm [lbf-in])		Speed Level	Speed (min ⁻¹)	Torque (Nm [lbf-in])
Lv1	160	0.4 to 1.3 [3.5 to 11.5]	-	-	Lv1	300	0.4 to 0.6 [3.5 to 5.3]	-	Lv1	500	0.4 [3.5]
Lv2	220	0.4 to 2.0 [3.5 to 17.7]	2.0 to 2.4 [17.7 to 21.2]	-	Lv2	420	0.4 to 1.2 [3.5 to 10.6]	-	Lv2	690	0.4 to 0.8 [3.5 to 7.0]
Lv3	280	0.4 to 2.7 [3.5 to 23.9]	2.0 to 3.5 [17.7 to 30.9]	3.8 [33.6]	Lv3	530	0.4 to 1.8 [3.5 to 15.9]	2.0 [17.7]	Lv3	880	0.4 to 1.2 [3.5 to 10.6]
Lv4	340	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	3.8 to 4.6 [33.6 to 40.7]	Lv4	640	0.4 to 2.4 [3.5 to 21.2]	2.0 to 2.6 [17.7 to 23.0]	Lv4	1,060	0.4 to 1.6 [3.5 to 14.1]
Lv5	410	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	3.8 to 5.4 [33.6 to 47.8]	Lv5	750	0.4 to 3.0 [3.5 to 26.6]	2.0 to 3.2 [17.7 to 28.3]	Lv5	1,250	0.4 to 2.0 [3.5 to 17.7]
Lv6	470	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	3.8 to 6.2 [33.6 to 54.9]	Lv6	860	0.4 to 3.0 [3.5 to 26.6]	2.0 to 3.8 [17.7 to 33.6]	Lv6	1,440	0.4 to 2.4 [3.5 to 21.2]
Lv7	530	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	3.8 to 7.0 [33.6 to 62.0]	Lv7	980	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.4 [17.7 to 38.9]	Lv7	1,630	0.4 to 2.8 [3.5 to 24.7]
Lv8	590	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	3.8 to 7.0 [33.6 to 62.0]	Lv8	1,090	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	Lv8	1,810	0.4 to 3.0 [3.5 to 26.6]
Lv9	650	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	3.8 to 7.0 [33.6 to 62.0]	Lv9	1,200	0.4 to 3.0 [3.5 to 26.6]	2.0 to 4.5 [17.7 to 39.8]	Lv9	2,000	0.4 to 3.0 [3.5 to 26.6]

*Speed and torque are for reference only. The actual values depend on the materials to be fastened and size of screws. The values are not guaranteed.

Up to eight types of motion setting or up to 8 channels can be saved in the screwdriver

Eleven functions in motion setting can be saved in each channel.

Example of motion setting

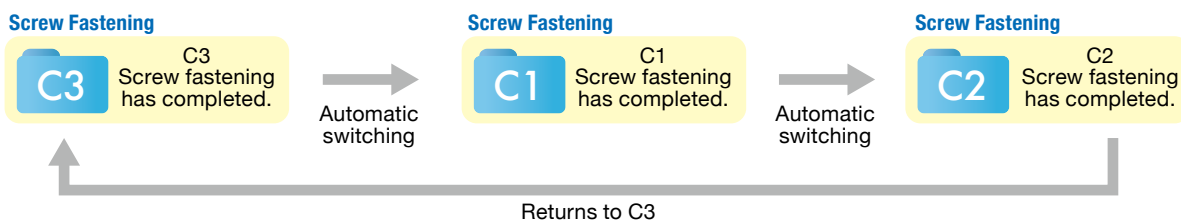
		Channel				
		C1	C2	C3	...	C8
Motion setting	1 : Number of screw fastening	2 pieces	3 pieces	1 piece		4 pieces
	2 : Speed level at start	Level 2	Level 1	Level 1		Level 2
	3 : Rotation time at start	0.20 sec.	0.30 sec.	0.30 sec.		0.20 sec.
	4 : Speed level at middle	Level 7	Level 9	Level 9		Level 9
	5 : Rotation time at middle	0.30 sec.	0.50 sec.	3.0 sec.		7.5 sec.
	6 : Speed level at finish	Level 2	Level 1	Level 1		Level 2
	7 : Min. screw fastening time	0.60 sec.	0.80 sec.	3.5 sec.		8.0 sec.
	8 : Max. screw fastening time	1.0 sec.	1.2 sec.	4.0 sec.		9.0 sec.
	9 : Auto reverse mode setting	OFF	OFF	Reverse after torque-up		Reverse after reaching the min. screw fastening time
	10 : Reverse rotation speed level	-	-	Level 2		Level 1
	11 : Reverse rotation time	-	-	0.20 sec.		0.30 sec.

Automatic Channel Switching

Channel can be switched automatically if channel switching order is preset.

*Setting with the Remote Controller is required.

Example : Channel switching is set to C3 » C1 » C2





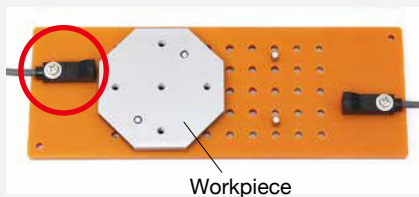
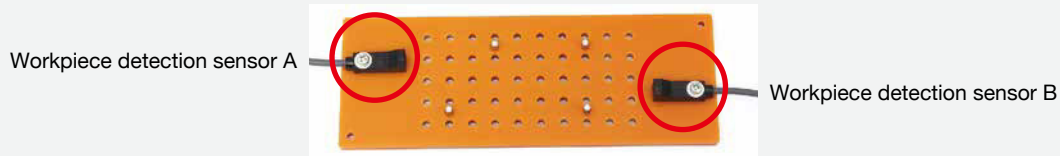
Setting of automatic channel switching pattern

Up to four automatic channel switching patterns can be set with an external signal.

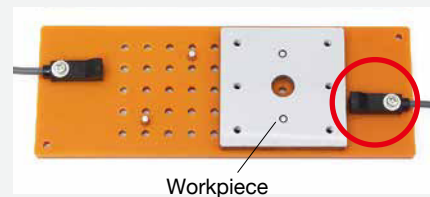
*Setting with the Remote Controller is required.

Example of setting : Installation of the workpiece detection sensors A and B connected to the external signal connector.

Automatic channel switching is set to C2 » C1 on the side of the workpiece detection sensor A.
Automatic channel switching is set to C3 » C1 » C2 on the side of the workpiece detection sensor B.



When the workpiece detection sensor A detects a workpiece, the preset automatic channel will be invoked.

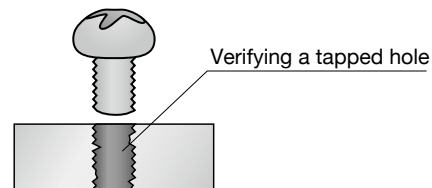
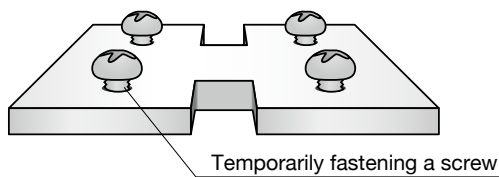


When the workpiece detection sensor B detects a workpiece, the preset automatic channel will be invoked.



Built-in Auto Reverse Mode

The screwdriver automatically reverses after torque-up or reaching the preset time.
Auto reverse mode can be used for temporarily fastening screws or verifying tapped holes.



Equipped with the External Signal Connector

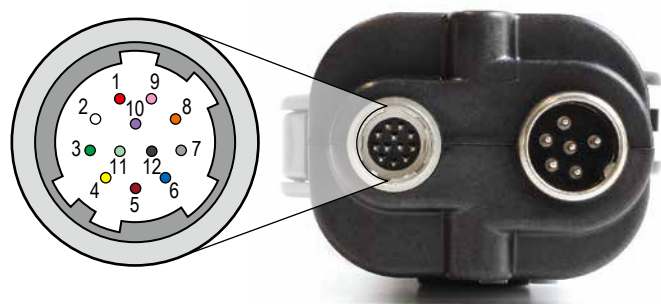
The screwdriver can input/output external signals through the external signal connector.

Pin No.	Lead wire color	Signal	Input / output
1	Red	+24 V DC power (supplied from outside)	
2	White	Workpiece Signal	Input
3	Green	Reset signal	Input
4	Yellow	LINK-IN	Input
		Forced stop signal	
5	Brown	OK Signal	Output
6	Blue	NG Signal	Output
7	Gray	LINK-OUT	Output
		Channel switching signal	
8	Orange	Torque-up (count) signal	Output
9	Peach	Channel A	Input
10	Purple	Channel B	Input
11	Yellow Green	Channel C	Input
12	Black	0 V DC	
















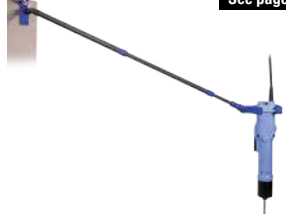





Lead wire colors are the ones used in the optional signal cable ass'y DLW9090.

*Either Pin No.4 or 7 must be selected, but not both.

*Input / Output signal type is PNP.



Optional Accessories

<p>Grounded 3-Prong Power Cord 2 m</p>	<p>Power Supply DEA0151N-AZ</p>		<p>Power Supply DEA0241N-AZ</p>		<p>Remote Controller RC1000</p>
<p>DLW9220 North America DLW9240 Europe DLW9250 UK</p> 	 <p>*Power cord is not included</p>		 <p>*Power cord is not included</p>		 <p>For simultaneous setting of multiple screwdrivers</p>
<p>Signal Cable Ass'y 3 m DLW9090</p>	<p>Connection Cord 1.5 m DLW9073</p>		<p>Relay Cord 0.1 m (To connect DLW9073 and DLW9073) DLW9074</p>		<p>Pistol Grip DLW2300ESD</p>
 <p>For signal input/output</p>	<p>Standard accessory of screwdrivers</p>  <p>Connects Power Supply and screwdriver</p>		 <p>To connect DLW9073 and DLW9073</p>		<p>See page 51</p>  <p>ESD Protection</p> <p>Standard accessory of DLV45S/DLV70S</p> <p>For operator fatigue reduction, suitable for horizontal fastening</p>
<p>Torque Adjustment Ring Cover DLW5203</p>	<p>Torque Adjustment Ring Cover DLW5202</p>		<p>Sleeve for Vacuum Pickup DLS4000 Series</p>		<p>Vacuum Pickup DLP7401-K</p>
 <p>Standard accessory of DLV30S</p>	 <p>Standard accessory of DLV45S/DLV70S</p>		<p>See page 49</p>  <p>Select according to the screw shape</p>		<p>See page 49</p>  <p>For screw vacuum pickup *DLS4220/DLS4221 included</p>
<p>Torque Reaction Arm (TD06180)</p>	<p>Torque Reaction Arm DRA-SW-650 (Swing type)</p>		<p>Torque Reaction Arm DRA-SL-650 (Slide type)</p>		<p>Torque Reaction Arm DRA-TS-1000 (Telescope type)</p>
<p>See page 52</p>  <p>For reducing reaction force to an operator</p>	<p>See page 50</p>  <p>For reducing reaction force to an operator Vertical tightening to the workpiece improves quality of the work</p>		<p>See page 50</p> 		<p>See page 50</p>  <p>For reducing reaction force to an operator</p>
<p>Angle Attachment (For use with lever start type only) DLW9021</p>	<p>Diamond Shape Flange Coupling DLW9016</p>	<p>Flange Coupling DLW9018</p>	<p>Diamond Shape Flange Coupling DLW9017</p>	<p>Flange Coupling DLW9019</p>	
<p>See page 52</p>  <p>For fastening work at right angles *Use with an output torque of 2.0 Nm or less and a torque scale of 2 or more.</p>	<p>See page 54</p> 	<p>See page 54</p> 	<p>See page 54</p> 	<p>See page 54</p> 	<p>For DLV30S For mounting on equipment or jigs</p> <p>For DLV45S/DLV70S For mounting on equipment or jigs</p>