

# Brushless Delvo S Series (Variable speed type) Model **DLV30S/45S/70S**



- Built-in brushless motor
- Automatic speed control function
- Built-in screw counting function
- Setting with the Remote Controller

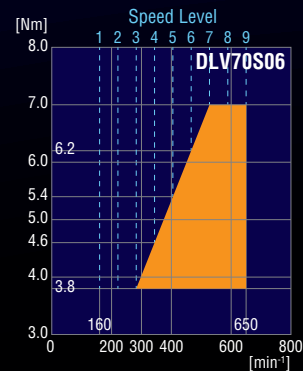
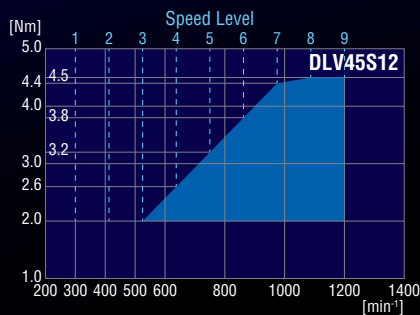
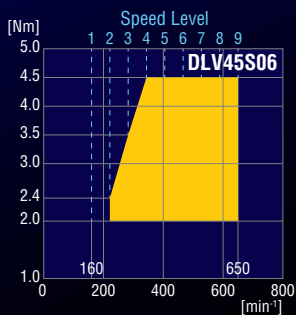
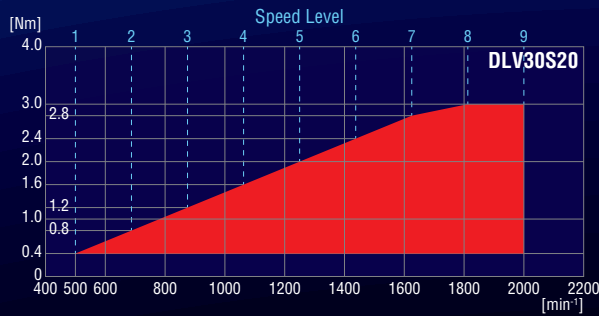
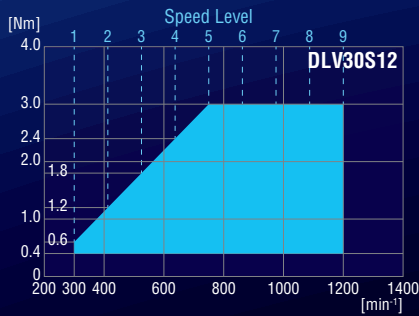
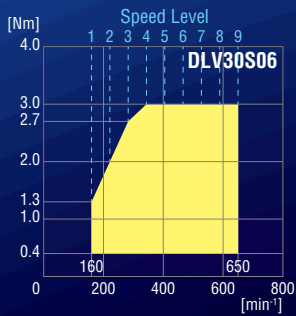
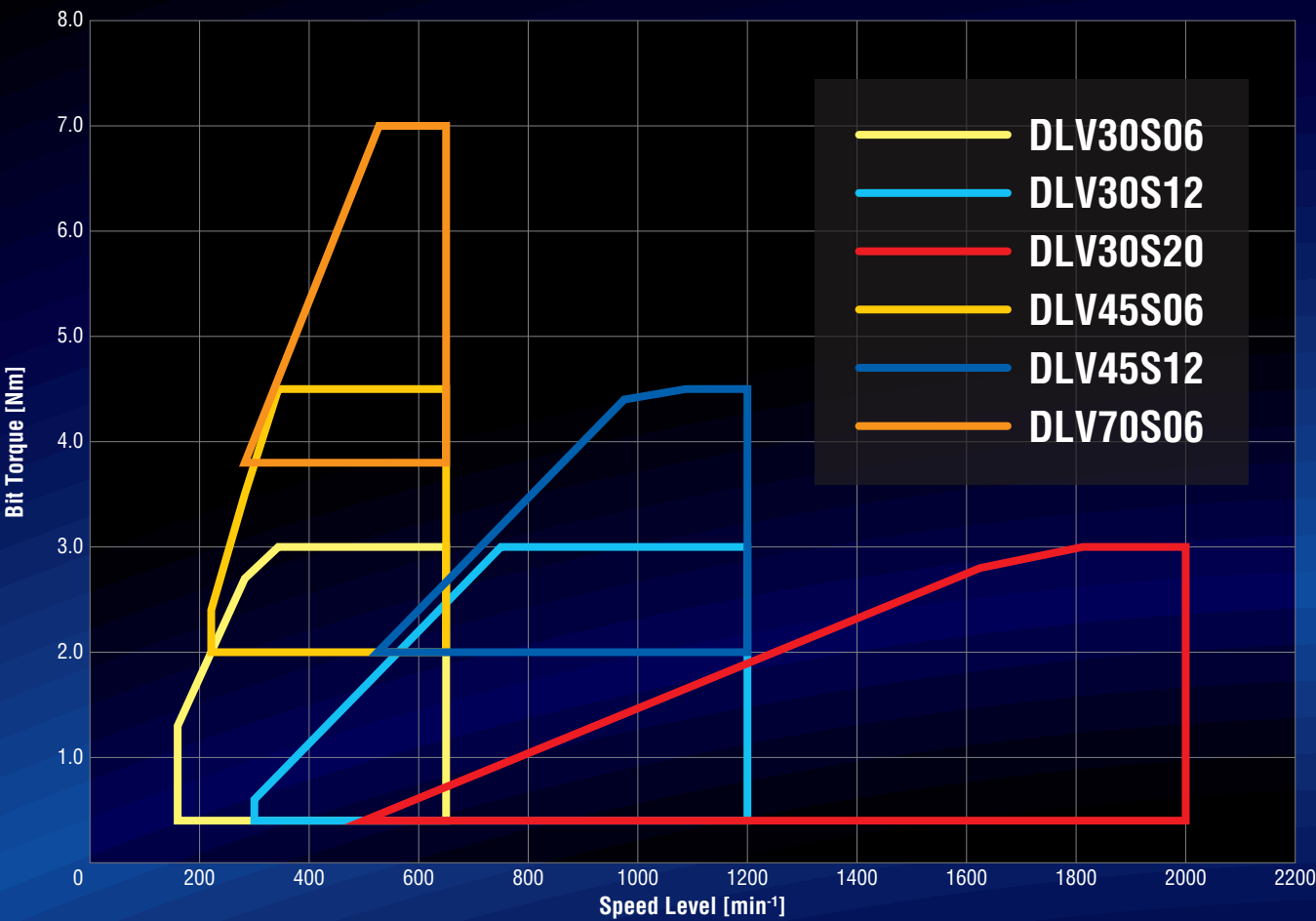


**0.4 - 7.0 Nm**  
Lever Start / Push to Start

***This screwdriver can deal with various fastening conditions.***

Setting Range for Standard Models


The low speed level is effective in hard-to-fasten applications such as tapped holes in sheet metal, stainless steel, and plastic.  
The high speed level is effective in shortening the cycle time in an assembly line.



\*Graphs are for reference only. The actual values depend on usage conditions.

## Specifications

### Electric Screwdrivers

Model	Lever Start	DLV30S06L-AY	DLV30S12L-AY	DLV30S20L-AY	DLV45S06L-AY	DLV45S12L-AY	DLV70S06L-AY
	Push to Start	DLV30S06P-AY	DLV30S12P-AY	DLV30S20P-AY	DLV45S06P-AY	DLV45S12P-AY	DLV70S06P-AY
Torque	(Nm)	0.4 - 1.6 Low Torque Spring (Standard Accessory)			2.0 - 4.5		3.8 - 7.0
		1.2 - 3.0 High Torque Spring (installed)					
Free Speed	(min <sup>-1</sup> )	For the details, see the setting range of speed and torque on page 3.					
Speed Level		Lv1 - Lv9 (Lv1: Min. Speed Lv9: Max. Speed decreases in a step-by-step manner)					
Screw Size	Machine Screw	2.6 - 5.0			4.5 - 6.0		5.0 - 8.0
	Tapping Screw	2.5 - 4.0			4.0 - 5.0		4.5 - 6.0
Bit Type	(mm)						
Mass	(kg)	0.71 (without power cord)			0.86 (equipped with pistol grip without power cord)		
Power Consumption	(W)	44					
Power Supply		DEA0151N-AZ or DEA0241N-AZ		DEA0241N-AZ	DEA0151N-AZ or DEA0241N-AZ	DEA0241N-AZ	

### Standard Accessories

Model	DLV30S Series	DLV45S/70S Series
Bit No. 2 x 7 x 75		1
Low Torque Spring	1	-
Connection Cord DLW9073		1
Suspension Bail		1

### Power Supply

Model	DEA0151N-AZ	DEA0241N-AZ
Input	100 - 240 V AC, 50/60 Hz, 60 W	
Output	40 V DC	
Maximum Rated Power (W)	150	240
Mass (kg)	0.56	0.9

\*The power cord is sold separately.  
Ask us for the required power cord when ordering.

### Remote Controller

Model	RC1000
Mass (kg)	0.11 (including 3 batteries)
Battery	3 AAA batteries
Battery life	250 hours
Continuous Standby Time (for reference only)	
Battery life	10,000 times
Number of Data Transmission (for reference only)	



DEA0151N-AZ



DEA0241N-AZ

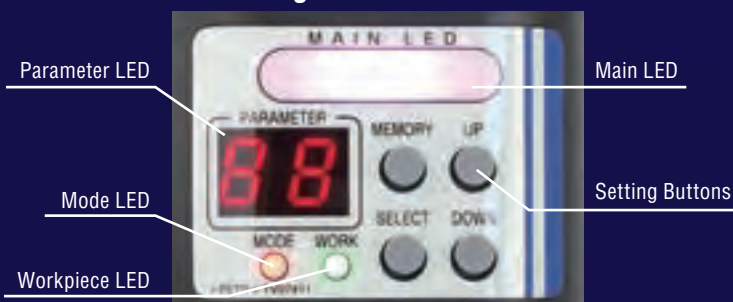


## LEDs Mounted on the Screwdriver

OK or NG operation and various setting statuses displayed/indicated on/by LCD and LED.

\*The Remote Controller is available as an option.

### LEDs and Setting Buttons on the Screwdriver



### Part Names of the Remote Controller



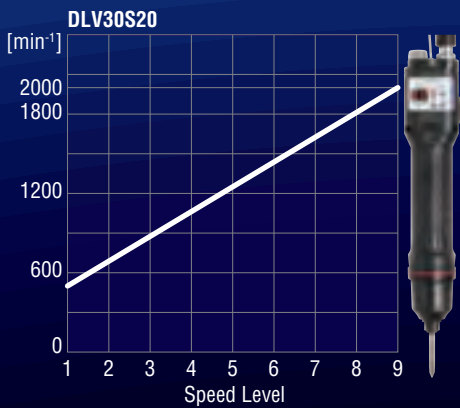
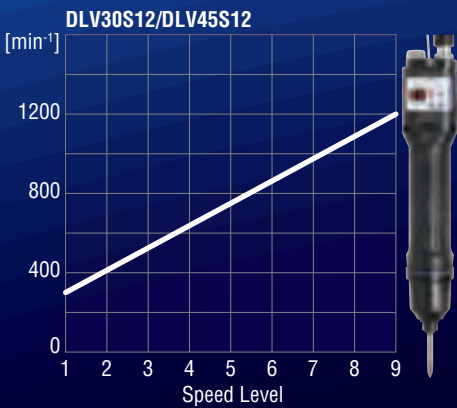
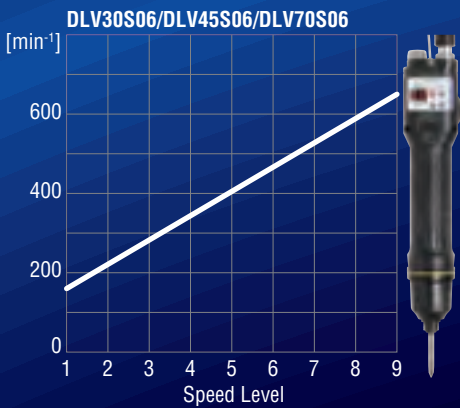
ESD Protection

Compliant with IEC61340-5-1.  
ESD is the abbreviation of Electro-Static-Discharge. It means the discharge of static electricity.



1 - 9 speed setting available

Wide range of specifications meet various screw fastening conditions.



● Setting Range of Speed and Torque (for reference only)

Setting Range of MAX 650 min <sup>-1</sup> Series					Setting Range of MAX 1,200 min <sup>-1</sup> Series				Setting Range of MAX 2,000 min <sup>-1</sup> Series		
		DLV30S06	DLV45S06	DLV70S06			DLV30S12	DLV45S12			DLV30S20
Speed Level	Speed (min <sup>-1</sup> )	Torque (Nm)			Speed Level	Speed (min <sup>-1</sup> )	Torque (Nm)		Speed Level	Speed (min <sup>-1</sup> )	Torque (Nm)
Lv1	160	0.4 - 1.3	—	—	Lv1	300	0.4 - 0.6	—	Lv1	500	0.4
Lv2	220	0.4 - 2.0	2.0 - 2.4	—	Lv2	420	0.4 - 1.2	—	Lv2	690	0.4 - 0.8
Lv3	280	0.4 - 2.7	2.0 - 3.5	3.8	Lv3	530	0.4 - 1.8	2.0	Lv3	880	0.4 - 1.2
Lv4	340	0.4 - 3.0	2.0 - 4.5	3.8 - 4.6	Lv4	640	0.4 - 2.4	2.0 - 2.6	Lv4	1,060	0.4 - 1.6
Lv5	410	0.4 - 3.0	2.0 - 4.5	3.8 - 5.4	Lv5	750	0.4 - 3.0	2.0 - 3.2	Lv5	1,250	0.4 - 2.0
Lv6	470	0.4 - 3.0	2.0 - 4.5	3.8 - 6.2	Lv6	860	0.4 - 3.0	2.0 - 3.8	Lv6	1,440	0.4 - 2.4
Lv7	530	0.4 - 3.0	2.0 - 4.5	3.8 - 7.0	Lv7	980	0.4 - 3.0	2.0 - 4.4	Lv7	1,630	0.4 - 2.8
Lv8	590	0.4 - 3.0	2.0 - 4.5	3.8 - 7.0	Lv8	1,090	0.4 - 3.0	2.0 - 4.5	Lv8	1,810	0.4 - 3.0
Lv9	650	0.4 - 3.0	2.0 - 4.5	3.8 - 7.0	Lv9	1,200	0.4 - 3.0	2.0 - 4.5	Lv9	2,000	0.4 - 3.0

\*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.

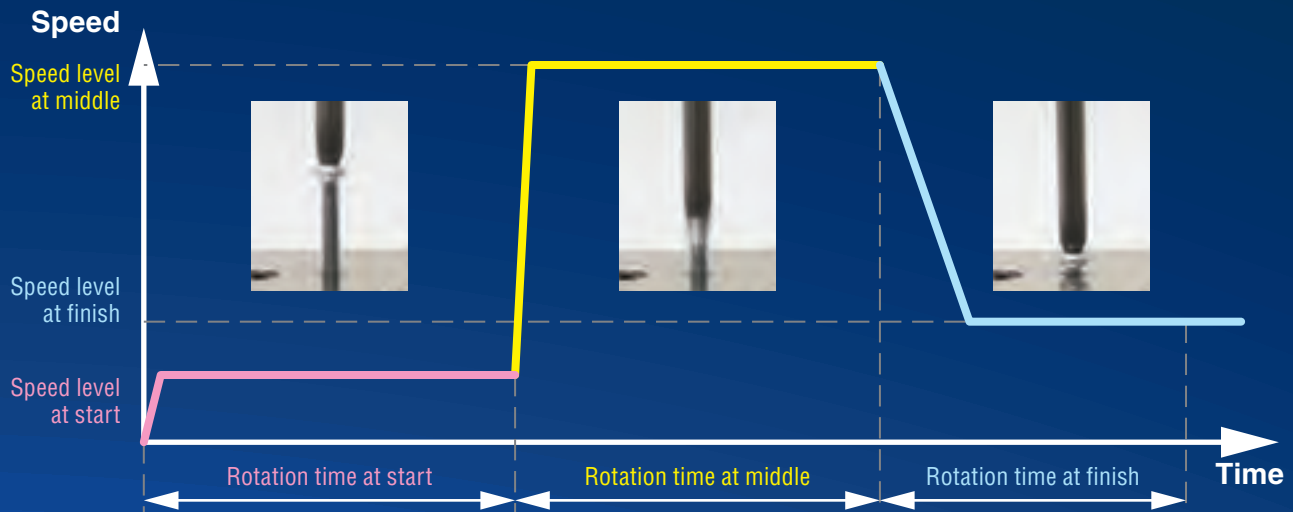
## Built-in Automatic Speed Control Function

Contributing to improvement of efficiency and quality of screw fastening work.

Built-in the industry's first automatic three step speed control.

(Combination of low speed at start, high speed during feeding, and low speed at the final stage of fastening)

Operation Timing Chart (an example of speed and time)



### Low speed starting reduces the following problems.

- If a bit is not well down in the cross-section of a screw, the cross-section may be damaged.
- If a screw does not fit in a thread, the screw may be cross-threaded and seated partially.

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

- High speed feeding at middle improves efficiency compared with conventional low speed models.
- Low speed starting and low speed fastening at finish improve quality of screw fastening work compared with conventional high speed models.

### Low speed fastening at finish reduces the following problems.

- If a bit is not well down in the cross-section of a screw, the cross-section may be damaged.
- High speed fastening from start to finish generates overshoot torque (overtightening by an inertial force) and may cause breakage of a screw neck part.

## Built-in the Functions of Screw Fastening Counter

The screwdriver comes equipped with the functions of our screw fastening counter such as screw count setting, mini/max fastening time setting, and fastening time measurement, resulting in a compact space-saving design.

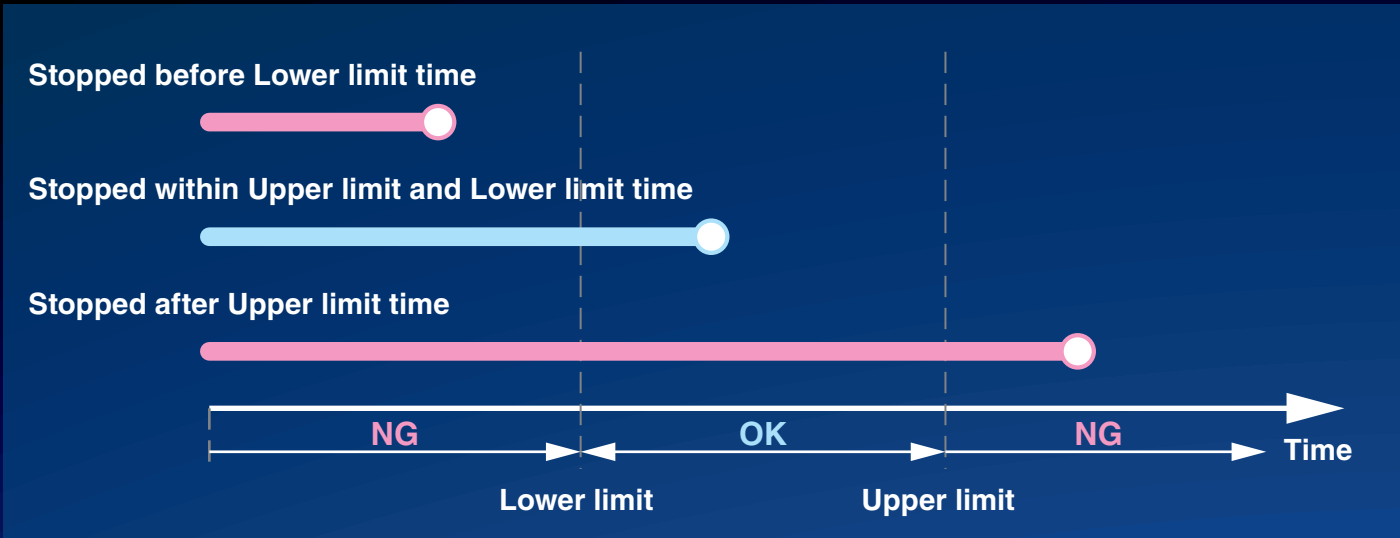


DLR5040A-WE



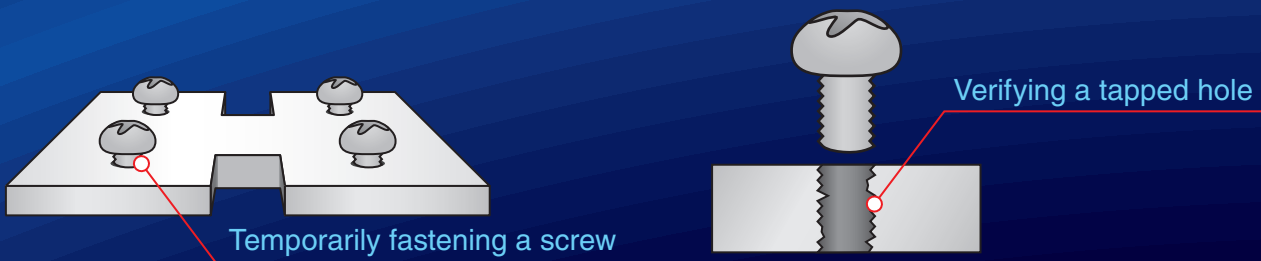
## Screw Fastening Time measuring (see page 26 in the instruction manual.)

The upper/lower limit of screw fastening time can be set.  
(Prevents contamination of wrong screws or partially seated screws, detects damaged screws)



## Built-in Auto Reverse Mode (see page 28 in the instruction manual.)

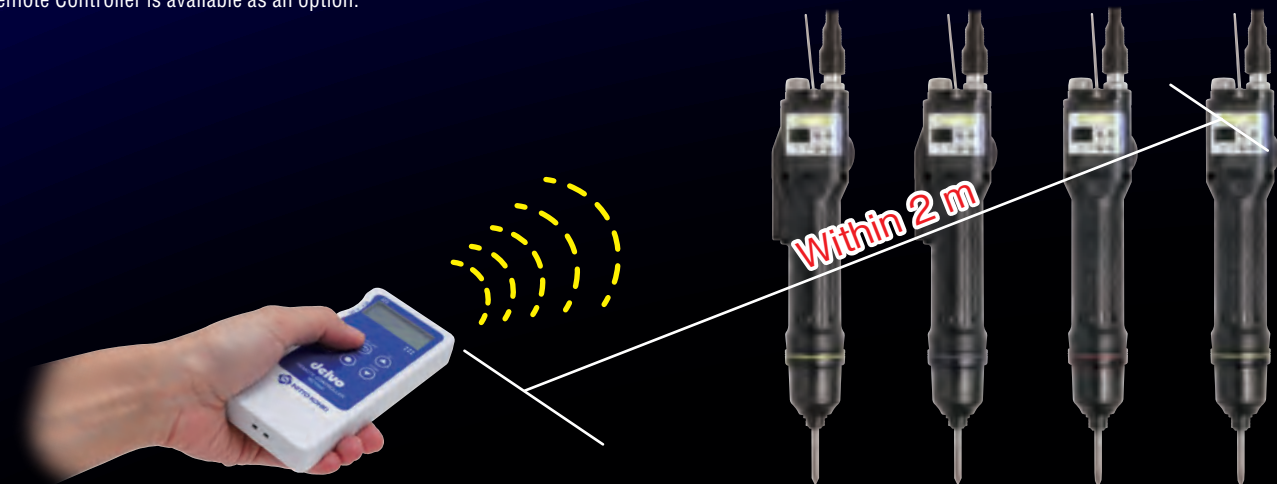
The screwdriver automatically reverses after torque-up or reaching the preset time.  
Auto reverse mode can be used for temporarily fastening screws or verifying tapped holes.



## Setting with the Remote Controller (see the instruction manual for the Remote Controller.)

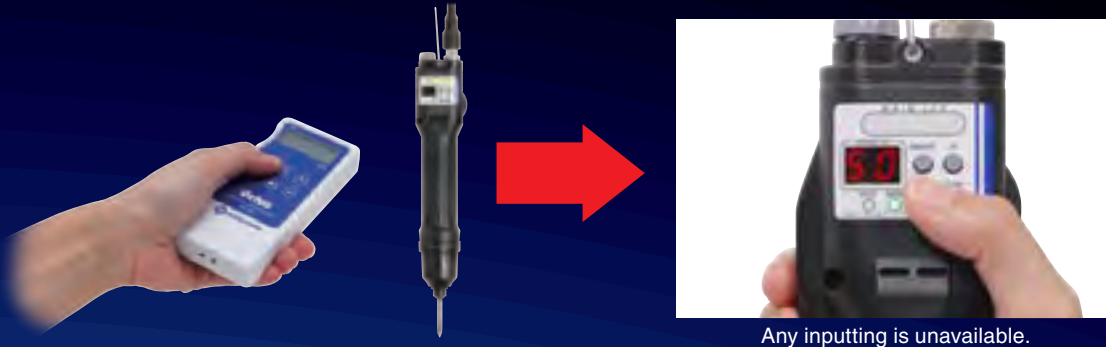
Infrared data transmission and the LCD display shorten the setting time.  
Simultaneous setting of multiple screwdrivers with the Remote Controller

\*The Remote Controller is available as an option.



## Key Lock Command (see the instruction manual for the Remote Controller.)

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



## Built-in Security Function (see the instruction manual for the Remote Controller)

A password can be provided to the screwdriver with the Remote Controller.



You can set a password to each screwdriver.  
When the power switch is turned on, without a password the electric screwdriver will not operate.

\*Security function can be changed to on/off.

## NG display

When NG operation occurs, the parameter LED display a No. from E1 to E9 and the main LED light in red. While the main LED light in red, the electric screwdriver does not operate(rotate).

No.	Details
E1	When rotation stopped before the screw fastening time lower limit elapses (when torque reached the set torque or the start switch is pressed)
E2	When the screwdriver is rotating longer than the screw fastening time upper limit
E3	When the operation time setting is as follows: <ul style="list-style-type: none"> <li>• Screw fastening time upper limit &lt; Screw fastening time lower limit</li> <li>• Screw fastening time lower limit &lt; Start rotation time or middle rotation time</li> </ul>
E4	In auto reverse mode setting, the torque reached the set torque and rotation stopped during reverse turning
E5	In auto reverse mode setting, rotation stopped when the start switch is released during reverse turning
E6	In auto reverse mode with the "Reverse after the screw fastening time lower limit" setting, when the torque reached the set torque and rotation stopped before switching to reverse rotation
E7	When work-piece signal input is set, the work-piece signal is turned OFF (the work-piece is removed) during the period between when the work-piece setup NG starts and when the OK signal is output
E8	When the motor has insufficient power (Motor-Lock) The motor stops automatically and protects the motor and circuit board
E9	When the board has failed and the setting conditions cannot be read



Up to eight types of motion setting or up to 8 channels can be saved in the screwdriver (see page 22 in the instruction manual.)

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

● Example of motion setting

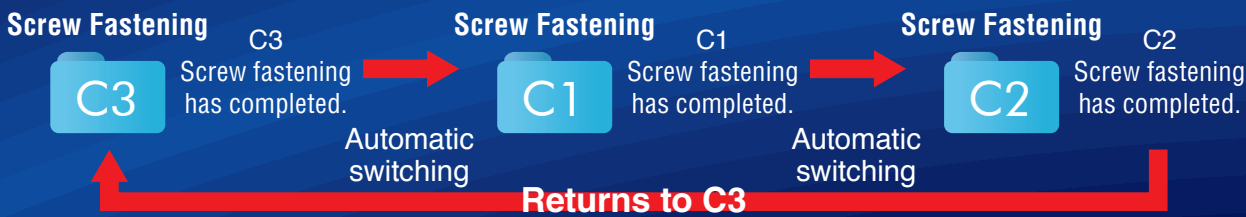
	Channel				
	C1	C2	C3		C8
1 : Number of screw fastening	2 pieces	3 pieces	1 piece		4 pieces
2 : Speed level at start	Level 2	Level 1	Level 1		Level 2
3 : Rotation time at start	0.20 sec.	0.30 sec.	0.30 sec.		0.20 sec.
4 : Speed level at middle	Level 7	Level 9	Level 9		Level 9
5 : Rotation time at middle	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 (see the instruction manual for the Remote Controller.)

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 (see the instruction manual for the Remote Controller)

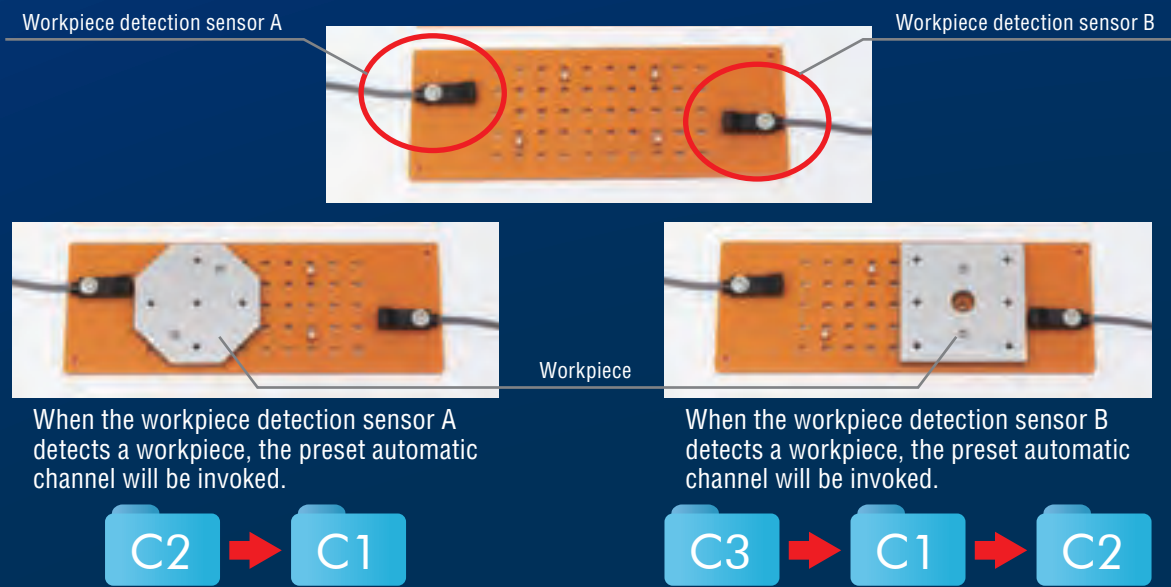
Up to four automatic channel switching patterns can be set with an external signal.

\*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.

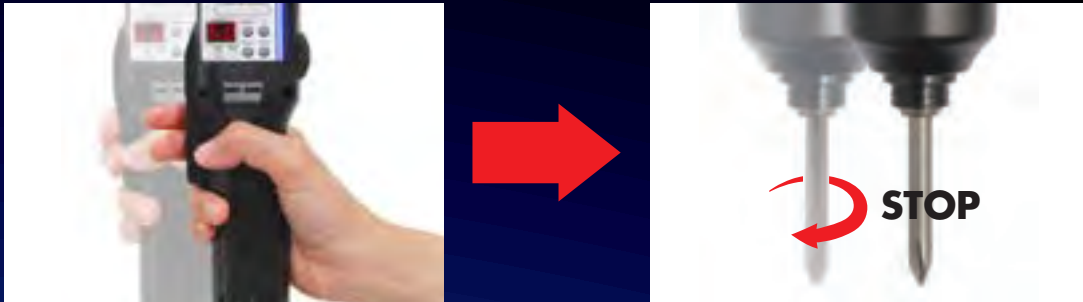




## Built-in Bit Brake Function (see page 40 in the instruction manual)

Upon releasing the start switch of the screwdriver, the bit will stop instantly.

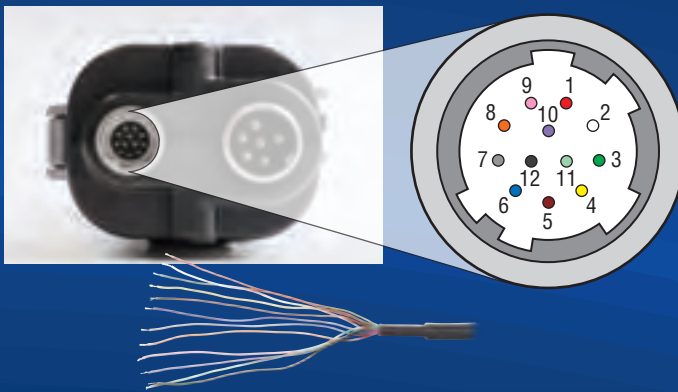
\*Bit brake function can be changed to on/off.



Upon releasing the start switch, the bit will stop instantly.

## Equipped with the External Signal Connector (see page 44 in the instruction manual.)

The screwdriver can accept an external signal or output a signal externally 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.

## Forced Stop Signal Input (see page 59 in the instruction manual.)

The electric screwdriver can be stopped forcefully with an external signal.



## Link Function (see page 55 in the instruction manual.)

The screwdrivers operate in the screw fastening sequence. Up to 10 screwdrivers can be connected to the Link. Standby screwdrivers do not operate.



Optional Accessories



**Power Supply**    DEA0151N-AZ  
• Power cord is not included



**Power Supply**    DEA0241N-AZ  
• Power cord is not included

North America



DLW9220

Europe



DLW9240

UK



DLW9250

**Grounded 3-Prong Power Cord**



**Remote Controller**    RC1000



**Signal Cable Ass'y**    DLW9090



**Connection Cord**    DLW9073  
\*Standard accessory of screwdrivers



**Relay Cord**  
(To connect DLW9073 and DLW9073)    DLW9074



**Torque Checker**    DLT1973A



DLT1673A



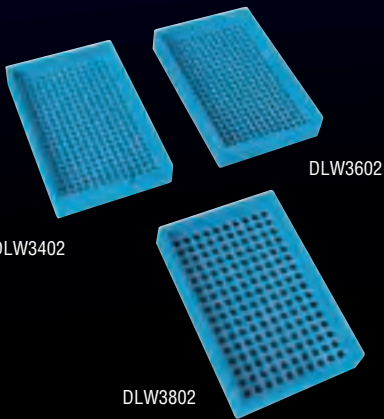
**Pistol Grip**    DLW2300ESD



**Tool Balancer**    TW-06R/1R

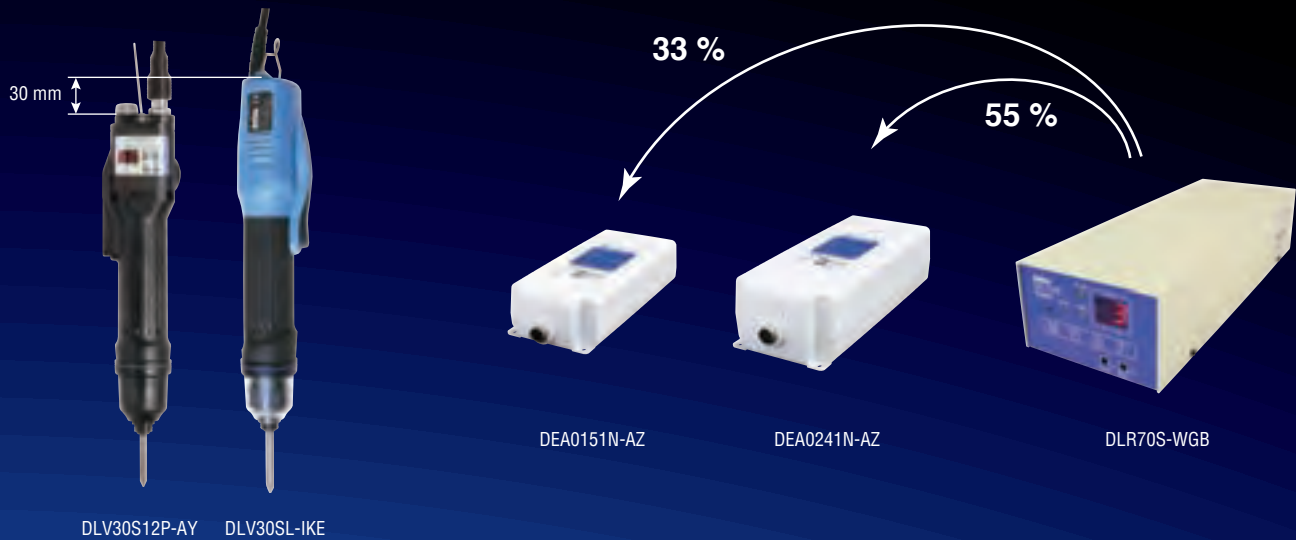


RW-3/5

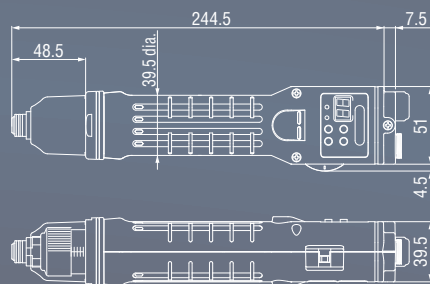


**Shaker Box**

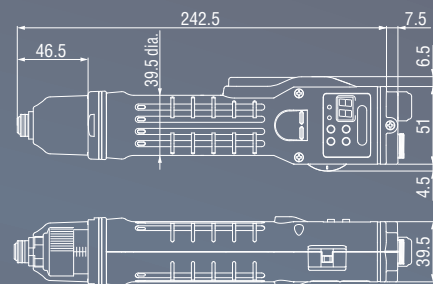
## External Dimensions



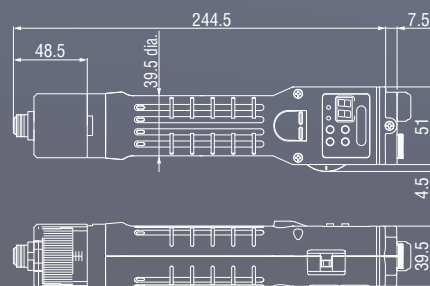
### DLV30S06P / DLV30S12P / DLV30S20P



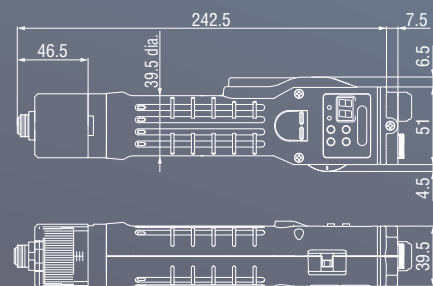
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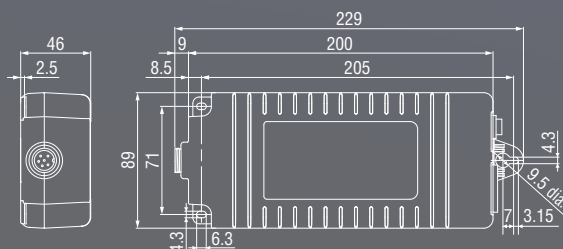
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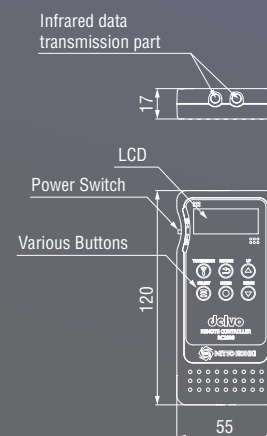
### DLV45S06L / DLV45S12L / DLV70S06L



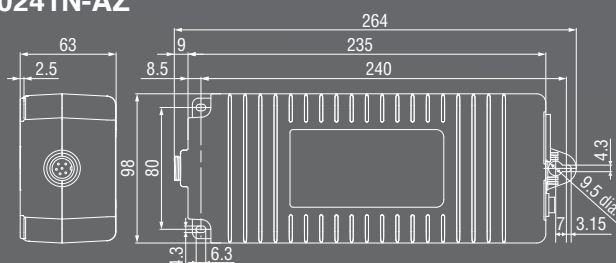
### DEA0151N-AZ



### RC1000



### DEA0241N-AZ



(Unit : mm)

# Brushless Delvo S Series

## About certifications

Nitto Kohki's Delvo electric screwdrivers are safe, secure and high quality products that are compliant with the international standards.



Focused on you  
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