

For "delvo" Brushless Type
C Series

Screw Fastening Monitor Model DTM10/DTM45

For traceability management!

Outputs torque value from a screwdriver (converted value)

Features

- Converts motor current to numerical data at torque-up
- Sends data to external devices such as computers and PLCs

Dedicated software

- The free dedicated software is available on Nitto Kohki website
- Converts the numerical data from Screw Fastening Monitor to torque value
- OK(Pass)/NG(Fail) can be judged by the output torque (converted value) and screw fastening time
- Display language switchable (English/Japanese)



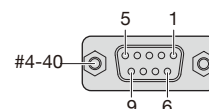
Fastening Data Log



Specifications

Model		DTM10	DTM45
Connectable models	Electric screwdriver	DLV04C10L-A□ DLV10C10L-A□ □ : X, Y, Z, U	DLV45C12L-A□ / DLV45C12P-A□ DLV70C06L-A□ / DLV70C06P-A□ □ : X, Y, Z, U
	Controller	DCC0101X-AZ	DCC0241X-AZ
Transmission data		Operation channel/Converted current value*	
		Screw fastening time	Screw fastening time/Rotation signal
Communication method		RS-232C (When connecting to a PC, please use a conversion adapter available on the market.)	
Standard Accessories		<ul style="list-style-type: none"> • Connection cord DLW9075 (2 m) • Rubber feet 	<ul style="list-style-type: none"> • Connection cord DLW9078 (2 m) • Rubber feet

RS-232C

Specifications: D-SUB 9-pin (female)
Screw: Inch female screw (#4-40)


DLW9092

(RS-232C Communication Cable 3 m)

Optional
Accessory



*Converted current value: Motor current value at torque-up converted to a value between 0 to 4095

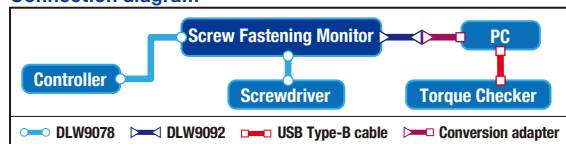
Preparation

Connect peripheral devices and download the dedicated software.

Website www.nitto-kohki.co.jp/e/prd/delvo/software/

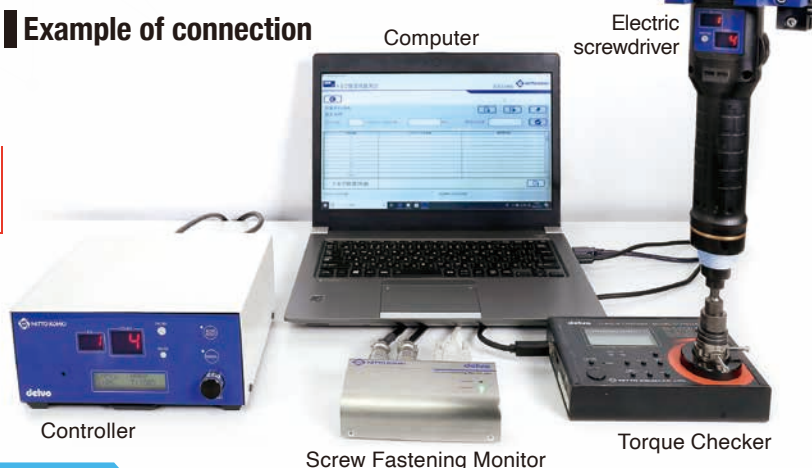


Connection diagram



*Use a conversion adapter and cable (USB Type-B) available on the market to connect to a PC.

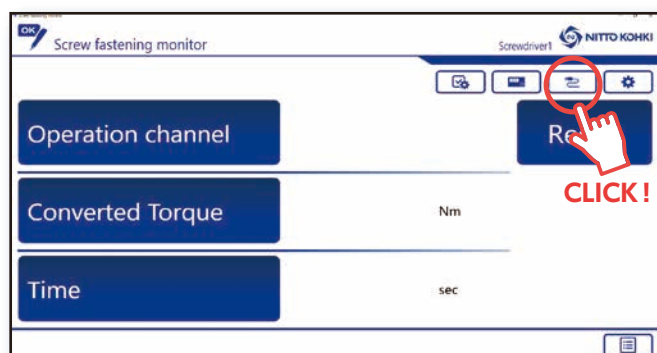
Example of connection



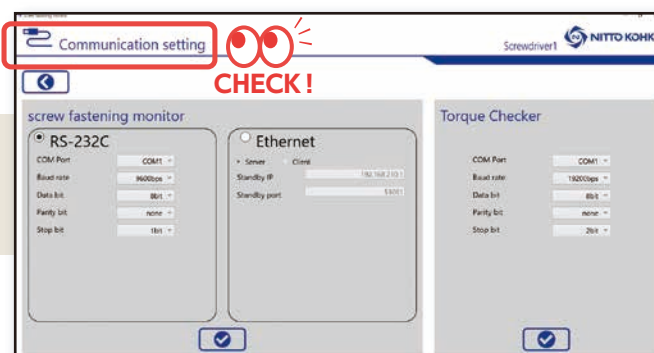
How to measure output torque (converted value)

(Measurement method: TIME)

1. Perform the communication setting for Screw Fastening Monitor and Torque Checker. Set COM Port and Baud rate.



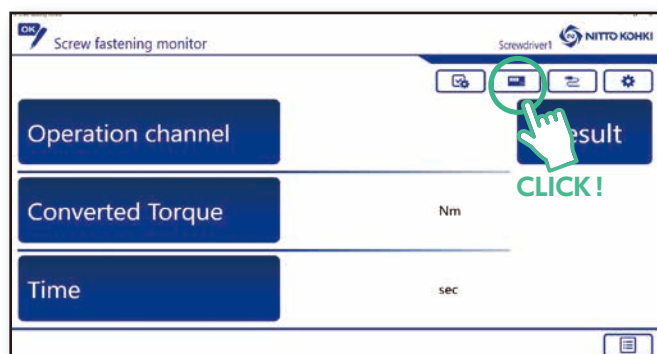
Main screen



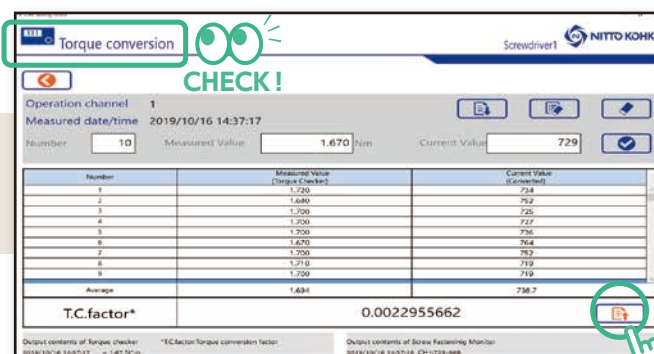
Communication setting

*Please download a driver for RS-232C from a website of each company.

2. Measure the torque conversion factor for each channel.



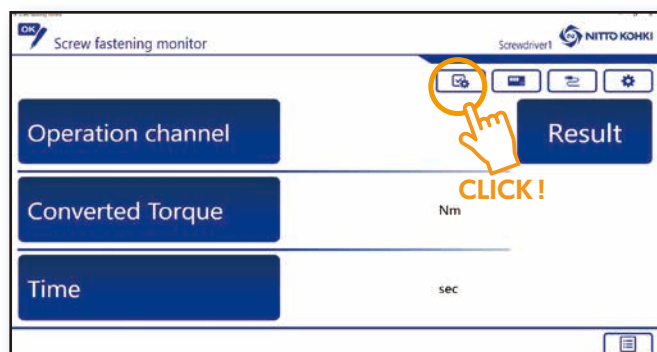
Main screen



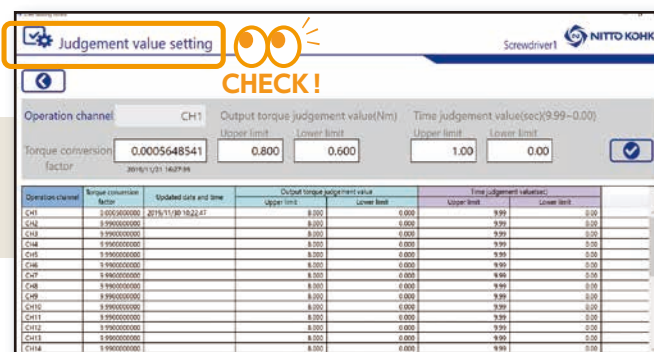
Torque conversion

*Use Torque Checker or screw joint for the subject models. (Refer to the compatibility chart on the right page.)

3. Set the output torque judgement value and time judgement value for each channel as required.



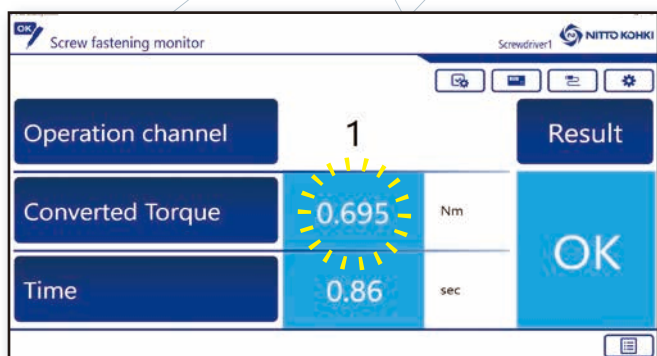
Main screen



Judgement value setting

*The operation channel can be set as follows.
DLV04C, DLV10C: up to CH4 DLV45C: up to CH30

4. Measure the torque with Torque Checker.
Check the difference of the value between the software and Torque Checker.

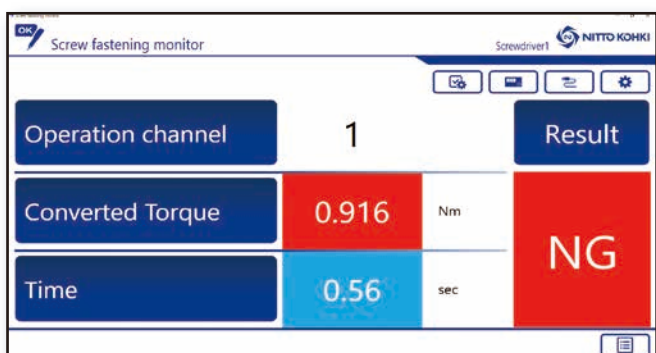


The result is OK(Pass).

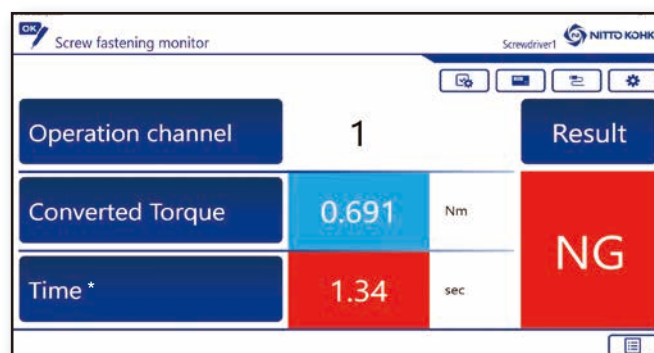


Torque Checker

5. OK(Pass)/NG(Fail) can be judged by the output torque (converted value) and screw fastening time.



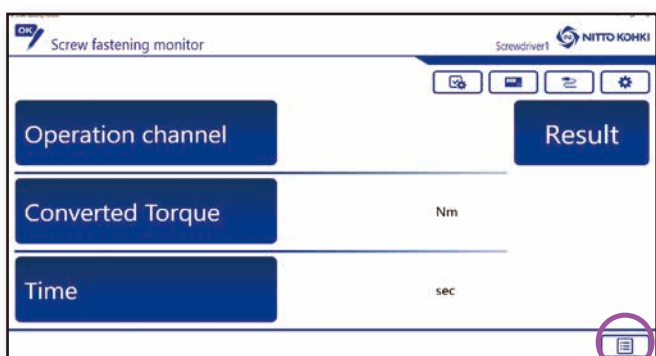
The result of the output torque is NG(Fail).



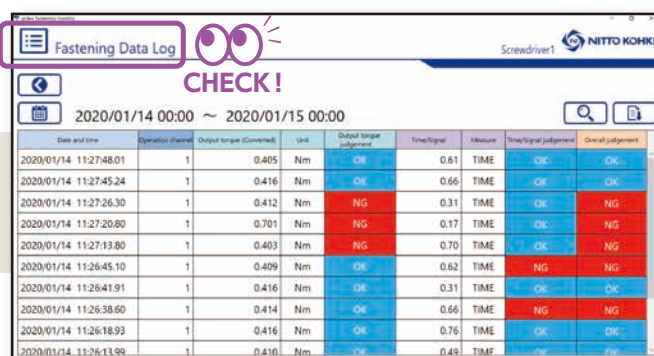
The result of the screw fastening time is NG(Fail).

*Only DTM45 can switch time (sec) and rotation signal (signal).

6. The fastening data log can be checked.



Main screen



Fastening Data Log

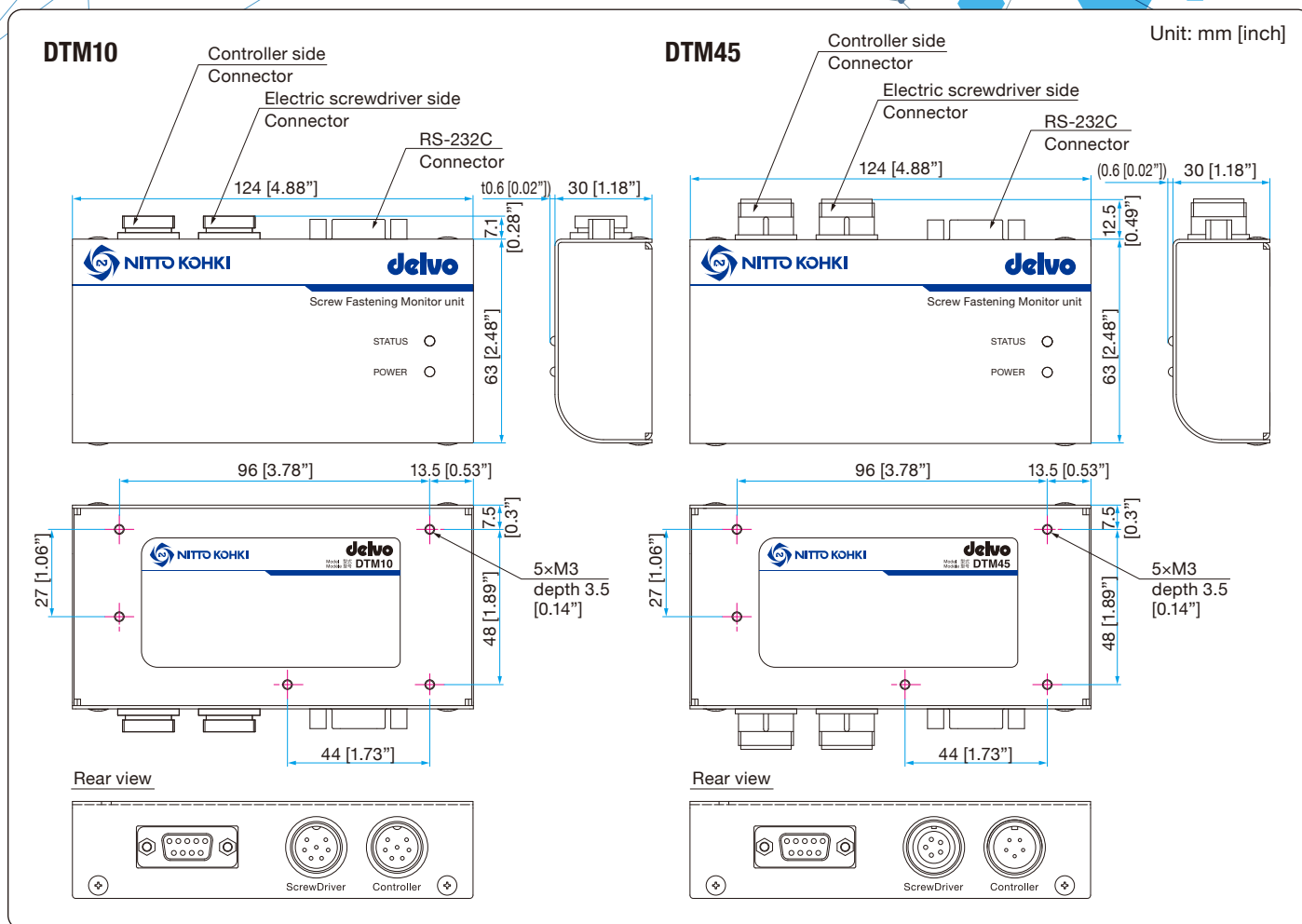
*The measured data is a reference value obtained by converting the load current of the electric screwdriver to torque, which is not a guaranteed value.

Compatibility chart

Screw Fastening Monitor	Electric screwdriver	Controller	Torque Checker	Screw joint	
				SOFT	HARD
DTM10	DLV04C	DCC0101X-AZ	DLT1173A	DLW4540	DLW4560
	DLV10C			DLW4550	
DTM45	DLV45C	DCC0241X-AZ	DLT1673A	DLW4050	DLW4040
	DLV70C			DLW4080	



External Dimensions



Connectable electric screwdrivers and controller

For DTM10

□ : X, Y, Z, U

Model	DLV04C10L-A □	DLV10C10L-A □
Starting Method	Lever Start	
Power Source	From dedicated controller	
Torque Adjustment	1 to 100% (From 1 to 100% in 1% increments)	
Torque (Nm [lbf·in])	SOFT fastening setting (1000 min ⁻¹ setting)	0.05 to 0.4 [0.4 to 3.5]
	SOFT fastening setting (600 min ⁻¹ setting)	0.05 to 0.35 [0.4 to 3.1]
	HARD fastening setting	0.05 to 0.4 [0.4 to 3.5]
Free Speed (min ⁻¹)	SOFT fastening setting	600 to 1000
	HARD fastening setting	100 to 1000
Controller	DCC0101X-AZ	



For DTM45

□ : X, Y, Z, U

Model	Lever Start	DLV45C12L-A □	DLV70C06L-A □
	Push to Start	DLV45C12P-A □	DLV70C06P-A □
Power Source	From dedicated controller		
Torque Adjustment	1 to 100% (From 1 to 100% in 1% increments)		
Torque (Nm [lbf·in])	0.6 to 4.5 [5.3 to 39.8]		2.0 to 7.0 [17.7 to 62.0]
Free Speed	SOFT fastening setting	(min ⁻¹)	400 to 1200
	HARD fastening setting	(min ⁻¹)	100 to 700
		Speed Level	Level 1 to 9
		Speed Level	Automatically set by torque setting
Controller	DCC0241X-AZ		



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