

For "delvo" Brushless Type C Series

Screw Fastening Monitor Model DTM10/DTM45

NITTO KOHK

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)



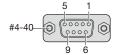
Fastening Data Log

Specifications

Мс	del	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
models	Controller	DCC0101X-AZ	DCC0241X-AZ
Transmiss	sion data	Operation chann	el/Converted current value*
	SION Uala	Screw fastening time	Screw fastening time/Rotation signal
Communica	tion method	(When connecting to a PC, please	RS-232C use a conversion adapter available on the market.)
Standard A	ccessories	 Connection cord DLW9075 (2 m) Rubber feet 	 Connection cord DLW9078 (2 m) Rubber feet

RS-232C

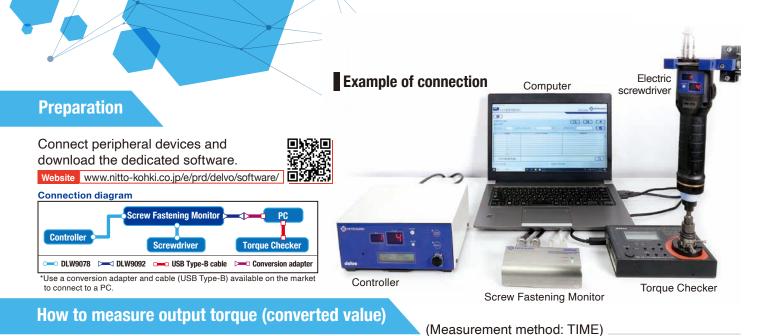
Specifications: D-SUB 9-pin (female) Screw: Inch female screw (#4-40)



DLW9092 (RS-232C Communication Cable 3 m) Optional Accessory

delvo

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



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

Screw fastening monitor	Ser	rewdriver1	Communication settin		Screwdri	ver1 SNITTO KOHKI
Operation channel	G.	Rah	Screw fastening monitor • RS-232C COM For COM T	CHECK !	Torque Checker	COM1 -
Converted Torque	Nm		Black note MODEss * Outs Bit. Bit. * Party bit. * * Stop bit. * *	Sandy # 10, 101 Sandy port 1011	Bast rate Data bit Party bit Stop bit	1920Cops = Bit = none = Zhit =
Time	sec					
Main screen			Communication	setting		<u>o</u>

2. Measure the torque conversion factor for each channel.

Screw fastening monitor	Strewdrivert Strewdrivert	Torque conversion		Screwdriver1	
Operation channel	sult	Operation channel 1 Measured date/time 2019/10/		Current Value 729	
Converted Torque	CLICK !	Nonline 1 2 3 4 5	Messured Velue (Darget 2004) 1.400 1.400 1.700 1.700 1.700 1.670	Current Value (Converted) 724 752 725 727 726 726 736	
ſime	sec	7 8 9 Average T.C.factor*	1,730 1,710 1,700 1,604	719 719 719 734.7 955662	
lain screen			orgue committen factor Output contants of administratives/vacines/re-	Screw Fattening Monitor	The

*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.

Screw fastening monitor	Screwdriver1 Strewdriver1	Judgement value set	ting	Screwdriver1
		0	CHECK !	
Operation channel	Jfm Result	Operation channel CC Torque conversion 0.00056483 factor	541 Upper limit Lower limit 0.800 0.600	m) Time judgement value(sec)(9.99–0.00) Upper limit Lover limit 1.00 0.00
Converted Torque	CLICK !	Operation shareet Mingue (solumition factor) Opdated is CH1 3.005/0000000000000000000000000000000000	At and time Output timple judgement value upgement a 900 Lower her 922 47 800 - 8000 - 8000 - 8000 - 8000 - 8000	Time (odgeneret Velorise) C000 199 0.00 0.000 1999 0.00 0.000 1999 0.00 0.000 1999 0.00 0.000 1999 0.00 0.000 1999 0.00
Гime	sec	CVI5 3 99000000 CVI7 5 990000000 CVI7 5 990000000 CVI8 3 990000000 CVI8 3 990000000 CVI10 3 990000000 CVI10 3 990000000 CVI11 3 990000000	8 000 6 000 6 000 8 000 8 000 8 000 8 000 8 000 8 000	0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00 0.000 9.99 0.00
		CH12 3 190000000 CH13 3 990000000 CH14 3 990000000	8.000 8.000 8.000	0000 999 000 0000 999 000 0000 999 010

Judgement value setting

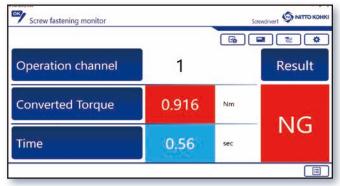
*The operation channel can be set as follows. DLV04C, DLV10C: up to CH4 DLV45C: up to CH30

Main screen



OK

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).

6. The fastening data log can be checked.

Screw fastening monitor	Screwdriveri Strewdriveri
Operation channel	Result
Converted Torque	Nm
Time	sec
Main screen	

Operation channel	1		Result
Converted Torque	0.691	Nm	
Time *	1.34	sec	NG

10-

The result of the screw fastening time is NG(Fail). *Only DTM45 can switch time (sec) and rotation signal (signal).

E Fastening Da	ata Log						Screwdriver1	NITTO KO
3 2020/01		CHECK !	/15 00	0:00			C	Q. [[
Date and time	Operation channel	Output torgee (Converted)	1944	Output torque judgement	Trieflight	Measure	Time/Signal Judgement	Duerall Judgement
2020/01/14 11:27:48.01	1	0.405	Nm	ÓK,	0.61	TIME	OC I	
2020/01/14 11:27:45:24	1	0.416	Nm	OL	0.66	TIME	OK 1	
2020/01/14 11:27:26.30	1	0.412	Nm	NG	0.31	TIME	Or.	
2020/01/14 11:27:20.80	1	0.701	Nm	NG	0.17	TIME	OK	NG
2020/01/14 11:27:13.80	1	0.403	Nm	NG	0.70	TIME	CT OK	
2020/01/14 11:26:45.10	1	0.409	Nm	OC	0.62	TIME	NG	
2020/01/14 11:26:41.91	1	0.416	Nm	06	0.31	TIME	oc	
2020/01/14 11:26:38.60	1	0.414	Nm	06	0.66	TIME	NG	NG
2020/01/14 11:26:18.93	1	0,416	Nm	OE	0.76	TIME	OK:	
2020/01/14 11:26:13.99	-	0.410	Nm		0.49	TIME	1	

Fastening Data Log

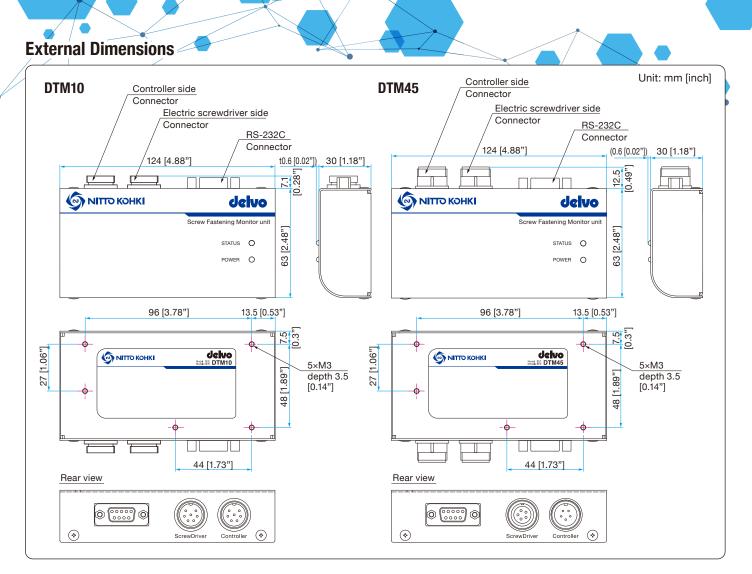
*The measured data is a reference value obtained by converting the load current of the electric screwdriver to torque, which is not a guaranteed value.

Compatibility chart

Screw Fastening	Electric	Controller	Torque	Screw	joint
Monitor	screwdriver	Controller	Checker	SOFT	HARD
DTM10	DLV04C	DCC0101X-AZ		DLW4540	DLW4560
DTIVITO	DLV10C	DCCUIUIX-AZ	DLIII/3A	DLW4550	DLW4500
DTMAE	DLV45C			DLW4050	DLW4040
DTM45	DLV70C	DCC0241X-AZ	DLI 1673A	DLW4080	DLVV4040



DLW4540 DLW4550 DLW4560



Connectable electric screwdrivers and controller

For DTM10

FORDIN	110		🗌 : X, Y, Z, U
Model		DLV04C10L-A	DLV10C10L-A
Starting Met	hod	Lever	Start
Power Source	e .	From dedica	ted controller
Torque Adju	stment	1 to 1 (From 1 to 100% i	
	SOFT fastening setting (1000 min ⁻¹ setting)	0.05 to 0.4 [0.4 to 3.5]	0.2 to 1.0 [1.8 to 8.9]
Torque (Nm [lbf·in])	SOFT fastening setting (600 min ⁻¹ setting)	0.05 to 0.35 [0.4 to 3.1]	0.2 to 0.45 [1.8 to 4.0]
	HARD fastening setting	0.05 to 0.4 [0.4 to 3.5]	0.2 to 1.0 [1.8 to 8.9]
Free Speed	SOFT fastening setting	600 to	o 1000
(min ⁻¹)	HARD fastening setting	100 to	o 1000
Controller		DCC01	01X-AZ

For DTM45

Model		Lever Start	DLV45C12L-A	DLV70C06L-A	
woder	Γ	Push to Start	DLV45C12P-A	DLV70C06P-A	
Power S	Source		From dedicat	ed controller	
Torque Adjustment			1 to 100% (From 1 to 100% in 1% increments)		
Torque (Nm [lbf.in])		0.6 to 4.5 2.0 to 7.0 [5.3 to 39.8] [17.7 to 62.0]			
	SOFT fastenin	(min-1)	400 to 1200	210 to 650	
Free	setting	Speed Level	Level 1 to 9		
Speed	HARD	(min ⁻¹)	100 to 700	100 to 430	
fastening Speed Lev		Speed Level	Automatically set by torque setting		
Controller			DCC02	41X-AZ	



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