UNIPULSE

UTMⅡ(W)/UTMⅡ(WR)

SQUARE DRIVE ROTARY TORQUE METER

Ideal torque meter for torque monitoring of screwdriving machines and power tools such as nutrunners.

CE RoHS

Ensures high speed and accurate torque measurement during tightening with UTMⅡ.
Can be used with portable torque monitor TM400 for on-site calibration.

Torque monitoring：UTMⅡ（W）, Torque+Angle monitoring：UTMⅡ（WR） **NEW**

- Capacity：100/500Nm
- High accuracy：0.03%
- High speed sampling：1kHz
- Safe overload：500%
- Avoid data loss

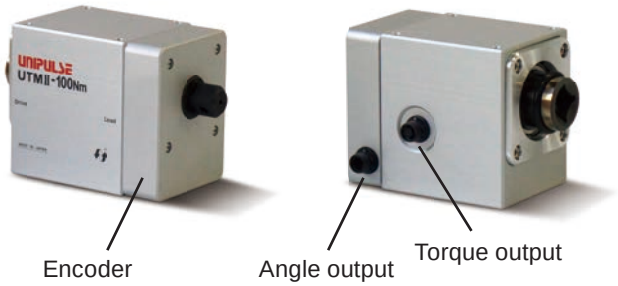
Torque can be monitored easily just by setting the sensor between socket and shaft of a nut runner.

Drive (nut runner)

Load (socket)

UTMⅡ(WR) + TM400
Best fit for angular tightening (rotation angle method)!
3600 torque pulses per rotation with 0.1 degree resolution can be done!

By monitoring rotation angle and torque at the same time, accuracy and consistency of torque tightening can be checked.



3600 torque pulses per rotation with 0.1 degree resolution
Can be used for on-site calibration with 0.1 degree resolution!

Portable torque monitor TM400（Optional accessories）
Portable type with built-in battery.
Changes in torque can be displayed with respect to angle.
Peak value of torque and angle can be measured and saved in internal memory.

Best fit for torque control & rotation angle tightening method
By directly attaching the torque meter to the end of nutrunner, torque can be measured accurately.
It has a function to reset angle to 0° when any specific torque value is exceeded.
Rotation angle and torque can be measured automatically after exceeding snug torque.

Specifications

UTMⅡ(W)

Model	UTMⅡ-100Nm(W)	UTMⅡ-500Nm(W)
Measurement range	±100Nm	±500Nm
Power supply	DC24V ±15%	
Power consumption	150mA or less	
Output range	±5V DC Load resistance must be more than 2kΩ	
Responsivity	1kHz	
Rotation signal	4 pulses per 1 rotation Open collector Max. ratings 30V, 10mA	
Safe overload	500%FS	
Non-linearity	0.03%FS(Typ)	
Hysteresis	0.03%FS(Typ)	
Repeatability	0.03%FS(Typ)	
Operation temp . range	−10 ～+50℃	
Temp. effect on ZERO	0.01%FS/℃(Typ)	
Temp. effect on span	0.01%FS/℃(Typ)	
Max. rotation speed	15000rpm	10000rpm
Torsional spring constant	38.5×10^3 Nm/rad	265×10^3 Nm/rad
Max. torsional angle	2.60×10^{-3}rad(0.149°)	1.88×10^{-3}rad(0.108°)
Inertia moment	3.8×10^{-5}kgm^2	2.15×10^{-4}kgm^2
Case size	67(W)×74(H)×57(D)mm	67(W)×79(H)×72(D)mm
Total length	100.5mm	115mm
Shaft diameter	□12.7mm	□19.05mm
Weight	Approx. 0.8kg	Approx. 1.4kg
CE marking certification	EMC directives EN61326-2-3	

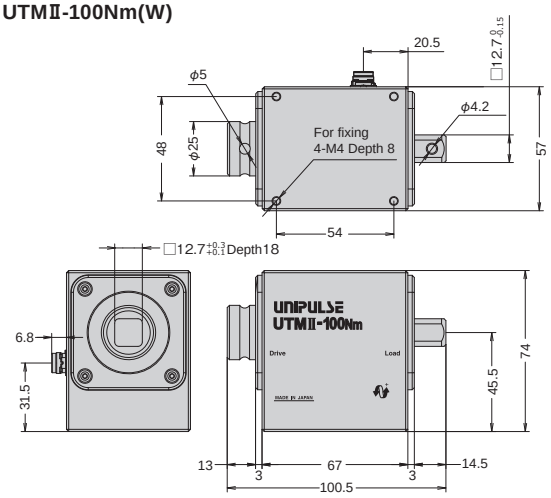
UTMⅡ(WR)

Model	UTMⅡ-100Nm(WR)-12.7	UTMⅡ-100Nm(WR)-19.05	UTMⅡ-500Nm(WR)-19.05
Measurement range	±100Nm	±100Nm	±500Nm
Power supply	DC24V ±15%		
Power consumption	150mA or less		
Output range	±5V DC Load resistance must be more than 2kΩ		
Responsivity	1kHz		
Rotation signal	4 pulses per 1 rotation Open collector Max. ratings 30V, 10mA		
Angle of rotation (encoder) output	3600 torque pulses per rotation		
Safe overload	500%FS		
Non-linearity	0.03%FS(Typ)		
Hysteresis	0.03%FS(Typ)		
Repeatability	0.03%FS(Typ)		
Operation temp . range	−10 ～+50℃		
Temp. effect on ZERO	0.01%FS/℃(Typ)		
Temp. effect on span	0.01%FS/℃(Typ)		
Max. rotation speed (Measurable range for angle)	10000rpm (2000rpm)		
Torsional spring constant	26.4×10^3 Nm/rad	54.6×10^3 Nm/rad	136×10^3 Nm/rad
Max. torsional angle	3.78×10^{-3}rad(0.217°)	1.83×10^{-3}rad(0.105°)	3.68×10^{-3}rad(0.211°)
Inertia moment	3.58×10^{-5}kgm^2	1.92×10^{-4}kgm^2	2.06×10^{-4}kgm^2
Case size	87(W)×74(H)×57(D)mm	87(W)×79(H)×72(D)mm	
Total length	120.5mm	133mm	
Shaft diameter	□12.7mm	□19.05mm	
Weight	Approx. 0.9kg	Approx. 1.7kg	Approx. 1.8kg
CE marking certification	EMC directives EN61326-2-3		

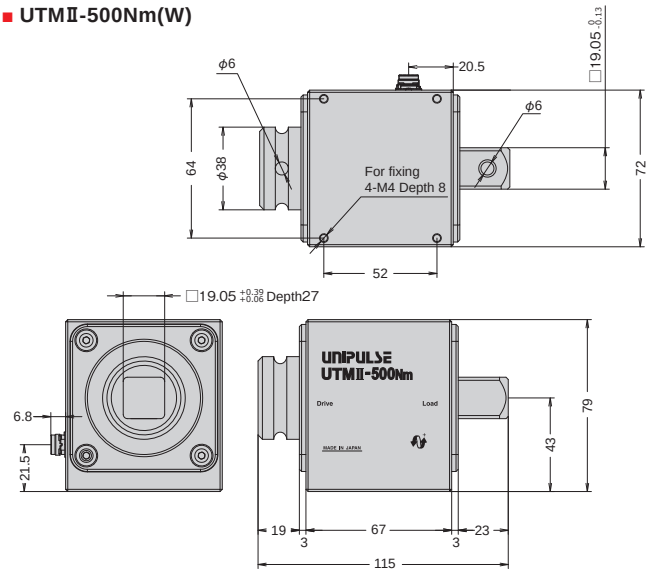
External dimension

Unit mm

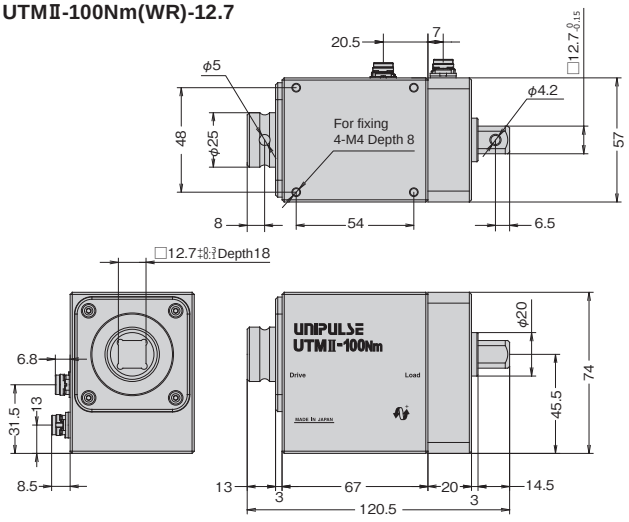
UTMⅡ-100Nm(W)



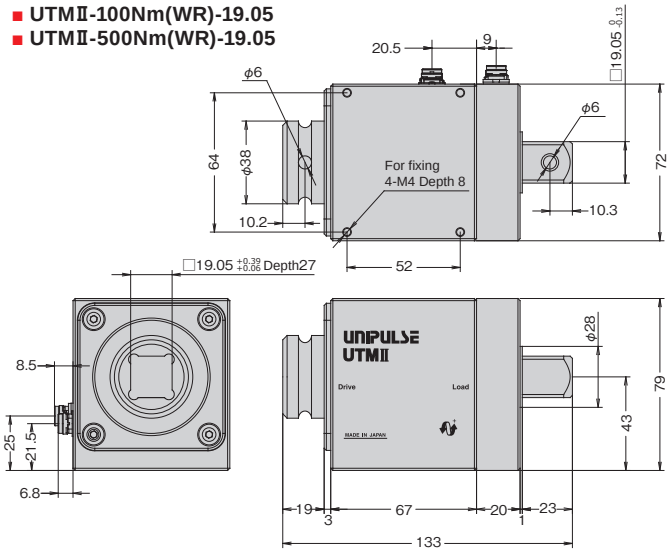
UTMⅡ-500Nm(W)



UTMⅡ-100Nm(WR)-12.7



UTMⅡ-100Nm(WR)-19.05
UTMⅡ-500Nm(WR)-19.05



*Please note that specifications or designs shown in this catalog may vary due to our continuous product improvement activities.

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