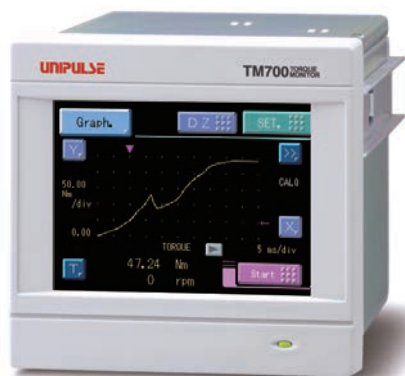


# TM700

## HIGH-SPEED TORQUE WAVEFORM MONITOR FOR UTMII/UTMV

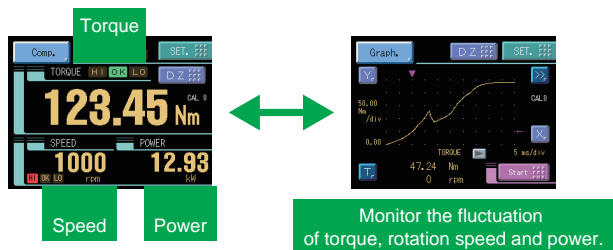


Suitable torque meter **UTMII** **UTMV**

- High-speed sampling at 20000 times/sec.!!
- A torque curve monitor supporting the high response time of UTMII/UTMV (1 kHz).
- Monitoring of torque, rotation speed and power\*1 curves.
- Upper/lower limits & hold function.
- Easy connection to UTMII/UTMV with the supplied cable.
- Operation power can be supplied to the UTMII/UTMV. (also to an optional rotary encoder\*2)
- Data recording with USB.

\*1 Power (W) =  $2\pi \times \text{Torque (Nm)} \times \text{Rotation speed (rpm)} / 60$

\*2 Rotary encoder option is not available for UTMV.  
It will be a waveform display of torque fluctuations in chronological order.



### Specifications

Torque input	- Voltage input
	Signal input range -5 to +5 V Input impedance: 1 M or more
Accuracy	Non-linearity: Within 0.02% FS±1 digit
	Zero drift: Within 0.2 mV/°C RTI
Analog filter	Gain drift: Within 0.01%/°C
	Low pass filter (-6 dB/oct.) Select from 10, 30, 100, 300, 1k, 3k, 10k, 30k Hz
A/D converter	Rate: 20000 times/sec.
	Resolution: 24 bit (binary) Effective Resolution: Approx. 1/30000 against 5 V
Monitor output	Input voltage return (for tester)
Rotation input	- Pulse input (open-collector)
	high-speed (for standard UTMII/UTMV)
Max. frequency	Accordance with UTMII/UTMV
	Min. frequency Select from 15, 10, 5, 3, 2 rpm (when pulse rate is 4 ppr)
Min. pulse width	Select from 60, 40, 20, 12, 8 rpm (when pulse rate is 1 ppr)
	50 μs
Circuit configuration	No-voltage contact input (minus common) Open collector connectable (Ic = Approx. 10 mA)
	low-speed (for UTMII with rotary encoder option)
Max. frequency	Approx. 1000 rpm
	Min. frequency 0.1 rpm
Min. pulse width	5 μs
	Circuit configuration No-voltage contact input (minus common) Open collector connectable (Ic = Approx. 10 mA)
Display	Display unit 3.5 inch TFT color LCD
External I/O signal	External output (8)
	ex) high and low limit outputs
Interface	External input (10)
	ex) hold control input, digital zero input (DZ)
SIF: 2-wire serial interface	USB: USB interface
	D3V: D/A converter voltage output (3 ch) (Option)
Power supply	DC 24 V (±15%)
Power consumption	6 W typ.
Operating conditions	Temperature Operation -10 to +40°C Storage -40 to +80°C
	Humidity 85% RH or below (non-condensing)
Dimension	96(W) x 96(H) x 138(D) mm (excluding projections)
Weight	Approx. 1.0 kg
Attachment	Operation manual: ...1, External input/output connector: ...1,
	Cable for connecting UTMII/UTMV 2 m: ...1, Operating tool (with D/A converter (3 ch) option): ...1
Accessories	DTC2: Case for TM700 (with AC power supply)
	CA372-I/O: Cable with FCN connector at one-end 3 m
CA81-USB: miniUSB-computer USB cable 1.8 m	CATM21-M: Cable for connecting UTMII/UTMV 2 m
	CATM51-M: Cable for connecting UTMII/UTMV 5 m
CATM(R)21-M: Cable for connecting UTMII rotary encoder 2 m	CATM(R)51-M: Cable for connecting UTMII rotary encoder 5 m
	FCN series I/O connector (with cover)
CN50: FCN series I/O connector (with diagonal cover)	CN73: D/A converter (3 ch) connector
	CN90: Waterproof plastic connector for UTMII/UTMV
CN91: Waterproof plastic connector for UTMII rotary encoder	GMP96x96: Rubber seal
	TSU03: DC lighting surge unit
CE marking certification	EMC directives EN61326-1

\* Please note that there are possibilities of individual differences in a color tone on display devices such as LEDs, fluorescent display tubes and LCDs due to manufacturing process or production lots.

### Structure of product code

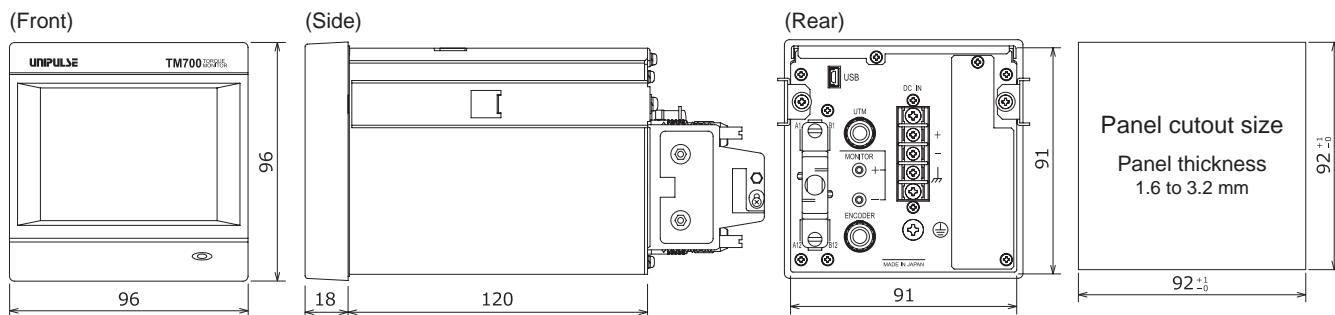
TM700 ☐  
① ②

① Standard unit

② Interface

Sign	Interfac
Standard	SI/F, USB
D3V	D/A converter (Voltage output) (3 ch)

### External dimension



Unit: mm

DTC2: Case for TM700 (with AC power supply)

