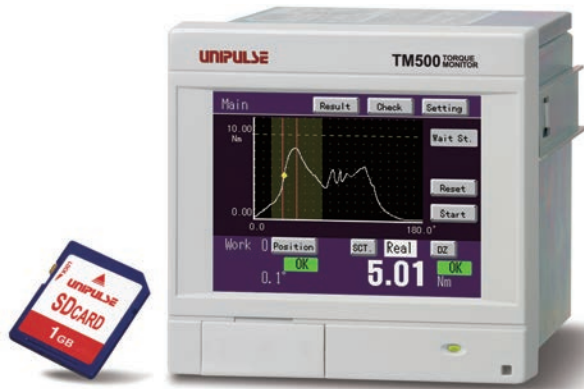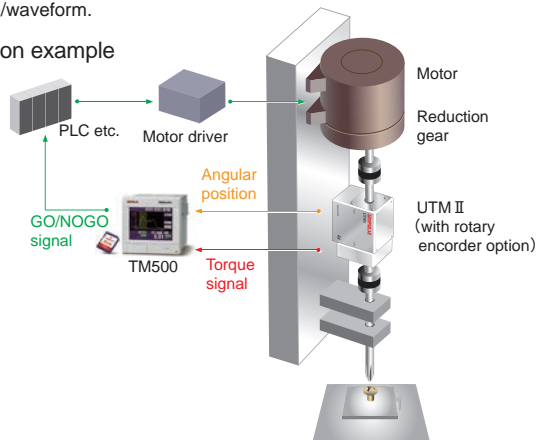# TM500

TORQUE WAVEFORM MONITOR FOR UTMⅡ/UTMV

DIN 96 RoHS

- Waveform display of torque variation against angles.※
- Suitable for low-speed rotation and linear motion applications.
- Save measurement data and setting values in a SD card.
  Data can be converted to CSV format and edited in Excel format easily.
- Easy connection to UTMⅡ/UTMV with the supplied cable.
- The unit supplies electric power to UTMⅡ/UTMV.
  (also to an optional rotary encoder※)

※：Rotary encoder option is not available for UTMV.
   Torque fluctuation over a period of time will be displayed
   in a curve/waveform.

■ Application example

Specifications

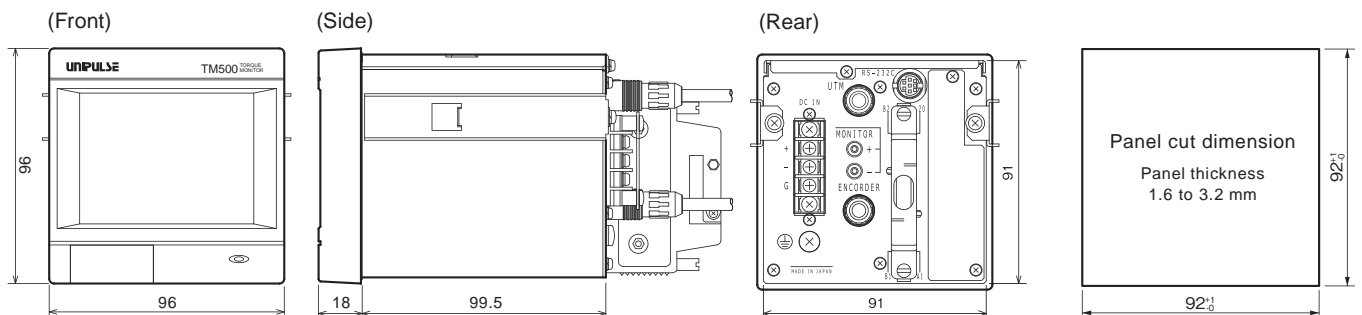|		
Analog	Torque input	−5 to ＋5 V　Input impedance：1M　or more
	Accuracy	Non-linearity：Within 0.02%FS±1digit Zero drift：Within 0.2mV/℃ RTI Gain drift：Within 0.01%/℃
	Analog filter	Low pass filter（−6dB/oct.）Select from 30, 100, 300, 1kHz
	A/D converter	Rate：4000times/sec Resolution：24bit（binary）Approx. 1/30000 with respect to 5V
	Monitor output	Input voltage return (for tester)
	Pulse input （Open collector）	Maximum input frequency 50kHz Internal counting range　Approx. 1000000
Display	Display unit	3.5 inch TFT color LCD
Setting	Setting method	Setting by analog type touch panel operation
	Preservation of set values	NOV RAM (nonvolatile RAM), Lithium-battery-backed-up C-MOS RAM
External I/O signa	External output signal（15）	Hold result（Load, DPM）／ Overload ／ Wave result ／ Complete ／ RUN ／ Load OK ／ DPM OK ／ SD OK
	External input signal（12）	Load Digital Zero ／ DPM Positioning ／ Start ／ Stop ／ Hold ／ Reset ／ Backlight On ／ Prohibit Touch Panel ／ Work change
Interface	RS-232C interface	
Option	SDC：SD card slot (Approx. 80 waveforms can be preserved by 1MB., SDHC and SDXC are not supported.) All indicated values and all comparison waveforms can be saved and restored. Measured waveforms and judgment points can be saved automatically.	
General performance	Power supply	DC24V(±15%)
	Power consumption	7W typ
	Operating conditions	Temperature：Operation −10℃ to ＋40℃　Storage −20℃ to ＋60℃ Humidity：85%RH or less (non-condensing)
	Dimension	96（W）×96（H）×117.3（D）mm（Projections excluded）
	Weight	Approx. 1.0kg
Attachment	Operation manual・・・1, External input/output connector・・・1, Cable for UTMⅡ/UTMV connection 2m・・・1, Cable for UTMⅡ rotary encoder connection 2m・・・1, SD card (1GB)(with SDC option)・・・1	
Optional accessories	DTC1：　　　　　Case for TM500 (with AC power supply) SD1G：　　　　　1GByte card SD2G：　　　　　2GByte card SD-ADP：　　　　SD card adapter（ATA TYPEⅡ） CA81-232X：　　miniDIN-D-Sub9p cross cable 1.5m CATM21-M：　　Cable for UTMⅡ/UTMV connection 2m CATM51-M：　　Cable for UTMⅡ/UTMV connection 5m CATM(R)21：　　Cable for UTMⅡ rotary encoder connection (non-connector at one end) 2m CATM(R)21-M：　Cable for UTMⅡ rotary encoder connection 2m CATM(R)51-M：　Cable for UTMⅡ rotary encoder connection 5m CN52：　　　　　FCN series I/O connector (with cover) CN57：　　　　　FCN series I/O connector (with diagonal cover) CN60：　　　　　Circular DIN 8p connector for RS-232C CN90：　　　　　Waterproof plastic connector for UTMⅡ/UTMV connection CN91：　　　　　Waterproof plastic connector for UTMⅡ rotary encoder connection GMP96x96：　　Rubber packing	

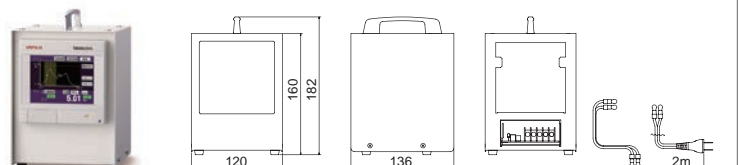### Structure of product code

TM500 ①□②

①Standard unit　②SD card slot

Sign	Card slot
Standard	W/O
SDC	SD card slot (1GB attached)

External dimension

(Front)

96 / 96

(Side)

18 / 99.5

(Rear)

91

Panel cut dimension
Panel thickness
1.6 to 3.2 mm

92^{+1}_{0}

DTC1：Case for TM500 (with AC power supply)

160 / 182 / 120 / 136 / 2m

Unit　mm