

TM380 HIGH-SPEED TORQUE MONITOR FOR UTMⅢ/UTMⅡ

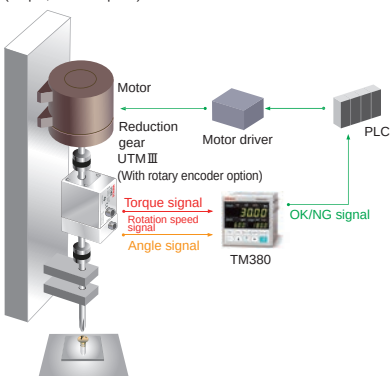


Suitable torque meter UTMⅢ UTMⅡ UTMV UTF

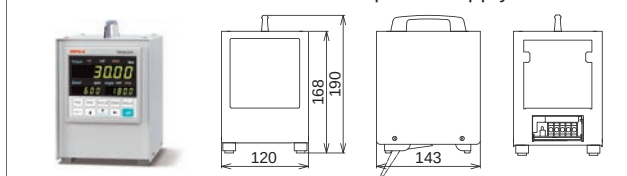
- High-speed sampling at 16kS/s!!
- Compatible with encoder option of UTM series
- Equipped with display connection data* of UTMⅢ/UTF and comparison function.
- Torque, rotation speed and angle are displayed simultaneously.
- Hold function
- Upper/lower comparators function
- Equipped with data memory function (Torque, rotation speed, angle, the latest 30 items are recorded)
- The unit supplies electric power to UTMⅢ/UTMⅡ/UTMV.

* RS-485 interface (torque, rotation speed)

■ Usage example



DTC2 : Case for TM380 (with AC power supply)



Specifications

Analog section	Torque sensor input (voltage input)	
	Signal input range	-10 to +10V (UTMⅢ/UTF (Option)) Input resistance 1MΩ or more -5 to +5V (UTMⅡ/UTMV) Input resistance 1MΩ or more Non-linearity : Within 0.02%/FS±1digit Zero drift : Within 0.2mV/°C RTI Gain drift : Within 0.01%/°C
	Accuracy	
	A/D converter	Speed...16000 times/sec. Resolution...24bit (binary) 1/30000 with respect to 10V PASS,3Hz to 1kHz PASS,3Hz to 1kHz
Digital section	Voltage output input voltage cuff (For test point)	
	Rotation speed input for high speed (Pulse input, open collector) (UTMⅢ/UTMⅡ/UTMV/UTF(Option))	
	Maximum input frequency	Based on UTMⅢ/UTMⅡ/UTMV/UTF
	Minimum input frequency	Select from 15, 10, 5, 3, or 2 rpm (when pulse rate is 4 ppr) Select from 60, 40, 20, 12, 8 rpm (when pulse rate is 1 ppr)
Digital section	Minimum detection pulse width	50μs
	Circuit configuration	No-voltage contact input (minus common) Open collector connectable (Ic = Approx. 10mA)
	Rotation speed input for low speed(Pulse input, open collector) *Example of using UTMⅡ rotary encoder option	
	Maximum input frequency	Approx. 1000rpm
Digital section	Minimum input frequency	0.1rpm
	Minimum detection pulse width	5μs
	Circuit configuration	No-voltage contact input (minus common) Open collector connectable (Ic = Approx. 10mA)
	Encoder input(Pulse input)	Compatible with encoder option of UTMⅢ/UTMⅡ
Display section	Display Main display : Character height 15mm Numerical display by 7-segment green LED (5-digit+sign) Sub display : Character height 8mm Numerical display by 7-segment green LED (5-digit)	
	Indicated value	Main display : 5-digit -99999 to +99999 Signs : Minus sign on most significant digit Sub-display (Rotation speed) : 5 digit 0 to +99999 Sub-display (Angle) : -19999 to +19999 Signs : Minus sign on most significant digit
	Decimal point	0, 0.0, 0.00, 0.000 (Torque) 0 (Rotation speed Low-speed rotation mode 0.0) 0, 0.0, 0.00 (Angle Depending on unit and min. scale division setting)
	Display frequency	Select from 3, 6, 13, and 25 times/sec.
Hold	Status display	HI / LO / HOLD
	Unit	rad/deg (Depending on angle unit setting)
	Sample, Peak, Valley, P-P, Average	
	Hold section setting (All section) External signal External signal+Time Level+Time)	
External I/O section	External input (5)	Hold control / Hold reset / Digital Zero / Angle zero clear/ Record data clear Dry contact input circuit (minus common type), Ic = 10mA or less
	External output (13)	Torque HI/LO limit comparison (alarm HI · HI · OK · LO · alarm LO) / Rotation speed HI/LO limit comparison (alarm HI · HI · OK · LO · alarm LO) / Hold complete / RUN Timing output/ Absolute value display Open collector output circuit (sink type), Vceo = 30V (max) Ic = 30mA (max)
	Interface	SIF:2-wire serial interface 485 : RS-485 interface(UTMⅢ/UTF designated) BCO:BCD parallel data output interface (Option) 232:RS-232C communication interface (Option) D3V:D/A converter voltage output(3ch) (Option) DAV:D/A converter voltage output (Option) DAI:D/A converter current output (Option) USB:USB interface (Option)
	Option	UTF:UTF-dedicated specification
General performance	Power supply voltage	DC24V±15%
	Power consumption	8W typ.
	Operating conditions	Operation : -10 to +50°C Storage -40 to +80°C Humidity : 85%RH or less(non-condensing)
	Dimensions	96(W)×96(H)×138(D) mm(Projections excluded)
Attachments	Weight	Approx. 1.2kg
	Operation manual	1 Unit seal
	External input/output connector	1 Operating tool
	Connector for BCD output (with BCO option)	1 (with D/A converter(3ch) option)
Optional accessories	Mini screwdriver (with D/A converter option)	1
	CA372-I/O: Cable with FCN connector at one-end 3m	CA81-USB:miniUSB-computer USB cable 1.8m
	CATM321-M: Cable for UTMⅢ/UTF connection 2m	CATM351-M: Cable for UTMⅡ/UTMV connection 5m
	CATF-COM-2M-M: Communication cable for UTF 2m	CATF-COM-5M-M: Communication cable for UTF 5m
CE marking certification	CATM221-MC: Cable for UTMⅡ/UTMV connection 2m	CATM251-MC: Cable for UTMⅡ/UTMV connection 5m
	CATM(R)321-M: Cable for connecting UTMⅢ rotary encoder 2m	CN34-D-Sub9p connector for RS-232C
	CATM(R)321-MR: Cable for connecting UTMⅢ rotary encoder 5m	CN50:FCN series I/O connector (with cover)
	CATM(R)321-MR: Cable for connecting UTMⅡ rotary encoder 2m	CN51:BCD output connector
	CATM(R)321-MR: Cable for connecting UTMⅡ rotary encoder 5m	CN55:FCN series I/O connector (with diagonal cover)
	CN73-D/A converter(3ch) connector	DT2C: Case for TM320 (with AC power supply)
	CN90: Waterproof plastic connector for UTMⅡ/UTMV connection	CN92: UTMⅢ connector
	CN93: UTMⅢ rotary encoder connector	TSU03: Lightning surge protector (DC)
	GMP96x96 : Rubber packing	

Structure of product code

TM380	□	□
①	②	③

① Standard unit

② Suitable torque meter

Sign	Specification
Standard	UTMⅢ/UTMⅡ/UTMV
UTF	UTF specification

Note) If UTF is selected, UTMⅢ/UTMⅡ/UTMV cannot be connected.

③ Interface

Sign	Interface
Standard	Standard unit : SI/F, RS-485 UTF specification : SI/F, RS-485

One optional interface can be added in addition the standard interface.

232	RS-232C
BCO	BCD output (Sink type)
D3V	D/A converter voltage output(3ch)
DAV	D/A converter voltage output
DAI	DAI : D/A converter current output
USB	USB

External dimension

