TC80-CCL
TC80-D3V
TC80-EIP

DIN RAIL MOUNT TORQUE CONVERTER FOR UTMⅢ/UTMⅡ/UTMV



CC-Link EtherNet/IP RoHS2

Suitable torque meter UTMⅢ UTMⅡ UTMV

- High-speed sampling at 16000 times/sec.
- Equipped with display and comparison function for connection data*1 of UTMⅢ
- Torque, rotation speed and torque-angle curve can be monitored.
- Equipped with hold data memory function (Torque, rotation speed & angle. Store 100 latest data)
- The unit supplies electric power to UTMⅢ/UTMⅡ/UTMV. (Also to an optional rotary encoder*2)

*1 RS-485 interface (torque, rotation speed)

*2 UTMⅢ is compatible with rotary encoder option(R)(H). Rotary encoder option is not available for UTMV.

Application software for USB interface

With communication through USB interface, logging, graph display, setting parameters, and calibration can be done.

Compact size

It can be fit into a limited space!
Lightweight & compact body for 35 mm DIN rail mount.



Structure of product code

Standard unit

Sign	Interface
TC80-CCL	CC-Link, RS-485, USB
TC80-D3V	D/A converter voltage output (3 ch) RS-485, USB
TC80-EIP	EtherNet/IP, RS-485, USB

Specifications

Analog section	- Torque sensor input (voltage input)	
	Signal input range	-10 to +10 V (UTMⅢ) Input resistance 1 MΩ or more -5 to +5 V (UTMⅡ/UTMV) Input resistance 1 MΩ or more
	Accuracy	Non-linearity: Within 0.02% FS±1 digit Zero drift: Within 0.2 mV/℃ RTI Gain drift: Within 0.01%/℃
	A/D converter	Speed: 16000 times/sec. Resolution: 24 bit (binary) 1/30000 with respect to 10 V
	Digital low pass filter	PASS, 3 Hz to 1 kHz (TC80-CCL) PASS, 1 Hz to 1 kHz (TC80-D3V, TC80-EIP)
	Digital high pass filter	PASS, 1 Hz to 1 kHz (TC80-D3V, TC80-EIP)
	- Rotation speed input (Pulse input, open collector) (UTMⅢ/UTMⅡ/UTMV)	
	Maximum input rotation speed	Conforming to the maximum rotation speed of UTMⅢ/UTMⅡ/UTMV
	Minimum input rotation speed	Selectable from 15, 10, 5, 3, or 2 rpm (when pulse rate is 4 ppr)
	Minimum detection pulse width	50 μs
	Circuit configuration	No-voltage contact input (minus common) Open collector connectable (Ic = Approx. 10 mA)
	- Rotation speed input (Pulse input, open collector) (For using rotary encoder option)	
	Maximum input rotation speed	Conforming to the maximum rotation speed of UTMⅢ/UTMⅡ
	Minimum input rotation speed	0.1 rpm * The resolution depends on the settings of the rotation speed and the number of the output pulse.
	Minimum detection pulse width	5 μs
	Circuit configuration	No-voltage contact input (minus common) Open collector connectable (Ic = Approx. 10 mA)
	- Encoder input (Pulse input) Compatible with encoder option of UTMⅢ/UTMⅡ	
Display section	Display unit	Character height: 8 mm Numerical display by 7-segment green LED
	Display content	Switchable numeric display: torque, rotation speed, angle (TC80-CCL) torque, rotation speed, power/ angle (TC80-D3V, TC80-EIP)
	Display frequency	Selectable from 1, 3 , 6, 13, and 25 times/sec.
	Status display	RUN / SD / RD / ERR (TC80-CCL), MS / NS (TC80-EIP)
External I/O section	Output signal (2 points)	Selectable/ configurable Transistor's open collector output Vceo = 30 V, Ic = 50 mA
	Input signal (1 points)	Selectable/ configurable Contact (relay, switch, etc.) or non contact (transistor, photo coupler, etc.) Input is ON when shorted to COM terminal
Interface	CCL: CC-Link interface (TC80-CCL) D3V: D/A converter voltage output (3 ch) (TC80-D3V) EIP: EtherNet/IP interface (TC80-EIP)	485: RS-485 interface USB: USB interface
Genera performance	Power supply voltage	DC 24 V±15%
	Power consumption	6 W typ. (TC80-CCL, TC80-D3V), 7 W typ. (TC80-EIP)
	Operating conditions	Operation temperature: -10 to +50℃ Storage temperature: -20 to +85℃ Humidity: 85% RH or less (non-condensing)
	Dimension	34(W) × 88(H) × 91(D) mm (Not including projections)
	Weight	Approx. 230 g
Attachments	Quick manual····· 2 CC-Link connector (TC80-CCL)··· 1 Operating tool (TC80-D3V)····· 1	Mini screwdriver····· 1 Ferrite core (TC80-CCL)··· 1 Various I/O connector····· 2 (TC80-CCL, TC80-EIP), 3(TC80-D3V)
Optional accessories	CATM321: Cable for UTMⅢ connection 2 m CATM351: Cable for UTMⅢ connection 5 m CATM312: Cable for UTMⅢ connection 10 m CATM21: Cable for UTMⅡ connection 2 m CATM51: Cable for UTMⅡ connection 5 m CATM12: Cable for UTMⅡ connection 10 m CATM(R)321: Cable for connection UTM Ⅲ rotary encoder 2 m CATM(R)351: Cable for connection UTM Ⅲ rotary encoder 5 m CATM(R)21: Cable for connection UTM Ⅱ rotary encoder 2 m CATM(R)51: Cable for connection UTM Ⅱ rotary encoder 5 m CATM(RC)321: Cable for UTMⅢ(RC) connection 2 m CATM(RC)351: Cable for UTMⅢ(RC) connection 5 m	CA81-USB: USB cable (TypeA-Bmini) 1.8 m CN7A: Connector for D/A converter (3 ch) (Same as the attachment) CN74: CC-Link connector (Same as the attachment) CN75: CC-Link connector (Y type branch connector) CN76: CC-Link connector (Terminator connector) CN85: 13p connector for power source/sensor/RS-485 (Same as the attachment) CN87: 10p connector for external I/O (Same as the attachment) E04SR211132: Ferrite core

* 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.

External dimension

Unit: mm

