

Transmitter for optical transmission method torque meter OPT-564

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Features



- Special transmitter for optical transformer method torque meter.
- The calibration data for four torque meters can be recorded and changed.
- Digital compensation of asymmetry, linearize and twist direction reversing can be executed.
- Up to 2 points as analog output for torque is selectable from a voltage output (standard), current output or frequency output.
- The analog output for the rotational speed is selected from either of voltage output or current output, and are selected whether or not to exist of the frequency output.
- Digital output is selectable one from RS-232C interface, RS-422/485 interface, Profibus interface or CANopen interface.

Specification

Specification name	Specification contents
Bridge power supply	24 VDC \pm 2 VDC, 2 A
Applicable transducer	Optical transformer method torque transducer
Input signal / Torque	Frequency input 5 kHz \sim 15 kHz (at F-54=0) Frequency input 120 kHz \sim 360 kHz (at F-54=1)
Input signal / Rotational speed	Frequency input 0 kHz \sim 50 kHz (at 120 teeth) Frequency input 0 kHz \sim 100 kHz (at 240 teeth)

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/ rotation speed	Frequency input 0 kHz ~ 150 kHz (at 360 teeth)
Output signal/Analog output (Standard)	±10 VDC (at [negative rated torque] ~ [positive rated torque]) Load resistance : 2 kΩ or more Output capacitance load : 0.1 μF or less
Output signal/Analog output (Select at the time of order)	Current output and frequency output for torque Voltage output, Current output, and Frequency output for rotation speed
A/Z effective range	±10 %R.O.
Digital compensation	Asymmetry compensation ±10%R.O. Linearize compensation Up to 10 points (5 points for 0 to positive rated output. 5 points for 0 to negative rated output) Torsion direction reversal Reverses torsion direction and output signal. (Standard is positive output for counterclockwise direction.)
Non-linearity (Display and voltage output)	0.01 %F.S.
Non-linearity (Current output)	0.05 %F.S.
CHECK	Approx. 80 % of rated output (Set by function)
Frequency response range	DC ~ 6 kHz (when F54 = 1) Changeable to 1 Hz, 10 Hz, 30 Hz, 50 Hz, 100 Hz, 300 Hz, 500 Hz, 1 kHz, and 6 kHz DC ~ 1 kHz (when F54 = 0) Changeable to 1 Hz, 10 Hz, 30 Hz, 50 Hz, 100 Hz, 300 Hz, 500 Hz, and 1 kHz Above is 10 Hz ~ 6 kHz : -3 dB±1 dB, 1 Hz : -3 dB±3 dB
Torque analog output delay time	270 μs (Typ.), when 6 kHz of low pass filter and 1 time of moving average samples.
Rotation speed analog output delay time	24 ms (Typ.) when 10 Hz of low pass filter and 1 time of moving average samples.
Sampling rate	Torque : 60 000 times/s (when F-54 = 1) Torque : 10 000 times/s (when F-54 = 0) Rotation speed : 10 000 times/s
Torque display section	Output display : 0 ~ ±99 999 digital display (Green LED) Display format : Analog voltage / Torque Decimal point display : Changeable to No display, 101, 102, 103 and 104 Condition display : A/Z, LOCK, CHECK, H, M, ERROR Unit display : Changeable to V, Nm and kNm Display frequency : Approx. 20 cycles/s (Changeable to 4 cycles/s) Calibration number : 1 to 4 (display the selected calibration number.)
Rotation speed display section	Output display : 0 ~ ±27 500 digital display (green LED) Out-of-range display : [-OS] appears for minus overflow, [OS] appears for plus overflow. Display format : Rotation speed Unit display : r/min Display frequency : Approx. 20 cycles/s (Changeable to 4 cycles/s)
Various function	Digital filter, Sheet key lock, Changeover of calibration data, Indication of luminous energy decrease, Error code display

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Operating temp. / humidity range	0 °C ~ 50 °C, 85 %RH orless (Non condensing)
Power supply	100 VAC ~ 240 VAC, 50/60 Hz (Permissible variable range : 85 VAC ~ 264 VAC),
Power consumption	Approx. 60 VA (at 100 VAC)
Outline dimensions (WxHxD)	68 mm x 209 mm x 252 mm (Excludes protruding parts)
Weight	Approx. 2 kg
Accessory	Manual、Time Lag Fuse(5 A)、External control I/O connector(Plug: MC1.5/9-ST-3.81)、Torque transducer/Rotation detector connector(Plug:MC1.5/16-ST-3.81)、Analog output connectors(Plug : MC1.5/8-ST-3.81)

Options

Current output

Frequency output

RS-232C interface

RS-422/485 interface

PROFIBUS interface

CANopen interface

Rotation detector MP-982