

For High-stiffness torque detector TQ-2000 series

High-response Torque Converter

TQ-5200



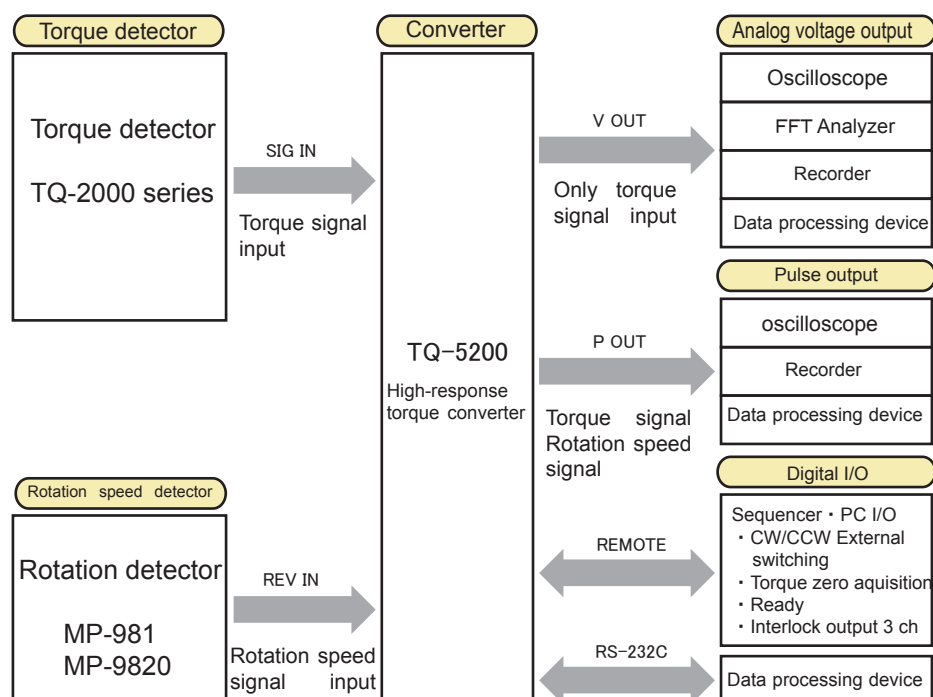
Overview

TQ-5200 can convert the detected pulse output to digital torque value or analog voltage output in used with the TQ-2000 series. Conversion to analog outut is done at every pulse cycle in periodic calculation method. The remote I/O, communication and torque interlocking function are provided as standard which are useful for building a measurement system.

Feature

- ① Compact size (210 mm in width x 44 mm in height x 200 mm in depth)
- ② Use of fluorescent display tube allows easy reading of measurement values and setup menus.
- ③ Isolated analog output enables easy connection with a control system, a recorder, data processing equipment, and so on.
- ④ External device interface RS-232C provided as standard allows easy system building.
- ⑤ Fast value judgment every one period by the Interlocking function. Three torque interlocking channels are provided. Two channels can be arbitrarily set from 0 to \pm capacity, one channel is fixed at 110 % of capacity.

System Configuration



High-response Torque Converter **TQ-5200**

● Specification

【Input section】

Torque
 Input frequency range 1 kHz to 25 kHz
 Input signal Line driver differential input
 Signal detected by TQ series
 (made by Ono Sokki)

Rotation speed

Input frequency range 1 Hz to 100 kHz
 Input signal Signal detected by MP-981,
 MP-9820 (made by Ono Sokki)

【Display section】

Display Fluorescent display tube
 Display item Torque
 or torque & rotation speed
 polarity +5-digit
 Display digit 1 s (average value)
 Display update time Torque : Nm,kNm
 Display unit Rotation speed : r/min

【Calculation section】

Conversion method Frequency conversion method
 Conversion time 1 cycle + 5 μ s
 Moving average OFF, 2 to 32
 Rotation detection signal P/R 60, 120, 180, 240, 360, 720
 Rotation speed compensation(N-0) 10 points each for CW, CCW

【Analog output section】

Output item Torque
 Output signal 0 to ± 10 V(Isolation)
 Applicable connector C02(BNC)
 Output response time Same as conversion time in
 calculation section
 Lowpass filter 4th order Butterworth type
 OFF, 1 kHz, 500 Hz, 100 Hz,
 10 Hz, 1 Hz
 Appropriate load 100 k Ω or more
 Measurement accuracy When used with a detector,
 ± 0.1 % / F.S.
 Temperature drift ± 0.01 % / F.S. / $^{\circ}$ C (alone)
 Output for calibration Zero, full

【Comparator function】

Setup item Torque
 Number of channels 3ch
 Setting contents Arbitrary setting 2ch,
 110 % fixed 1ch
 Output format Non-voltage contact output
 Applicable connector R03-PB8M
 (TAJIMI ELECTRICS CO., LTD)

【Pulse output section】

Output item Torque, rotation speed
 Output format TTL
 Applicable connector C02(BNC)

【Remote function】

Input signal CW/CCW selectable,
 auto zero
 Output signal Measurement ready signal
 Interlock 3ch
 Applicable connector Shared with the comparator
 function

【RS-232C】

Baud rate 9600 bps
 Communication Read out of setting,
 operation condition and display value
 /change of setting
 Applicable cable AX-5022(2 m: made by no Sokki)

【General specification】

Power supply voltage DC18 to 30 V
 Power consumption approx. 20 VA
 Operating temperature range 0 to 50 $^{\circ}$ C
 Outer dimensions 210(W) \times 44(H) \times 200(D) mm
 Weight approx. 1 kg
 Accessory Connector for power supply
 Connector for remote
 Instruction manual

* Analog voltage output of rotation speed can be obtained by connecting a rotation speed pulse output to FV-1400 (made by Ono Sokki).

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* Outer appearance and specifications are subject to change without prior notice.
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