

High Function Type (with Output)

FGP- □ Series

Rich Measurement Function



Wide Variation with Motor Testing Stand and Set.
From "Torimon USB*" Test Results could be collected in P.C.

* From our web Page, Free Download is possible.

- **USB Communication:**
Through Interface, the USB employed Data collection could be easily passed with PC Link.
- **Memory Function:**
Three types of Memory Modes viz. Continuous Memory, Independent Memory, Standard Memory could be prepared.
- **Wide Variation through Motor Testing Stand and Set.**
- **Comparator Function In-built.**
With the Upper Limit & Lower Limit Value Settings, Yes/No Judgment could be made.

| | | | |
|-------------------|-------------|---------------|--------------------|
| USB | memory 1000 | 1000 Rev./Sec | RS-232C Output |
| D/A Analog Output | Comparator | Over Load | Reverse Indication |
| Push & Pull Peak | Hanger | Unit | TORIEMON USB |

Free Download

| Type | Max. Load | |
|---------|-----------|-------|
| FGP-0.2 | ± 2.000N | 0.2kg |
| FGP-0.5 | ± 5.000N | 0.5kg |
| FGP-1 | ± 10.00N | 1kg |
| FGP-2 | ± 20.00N | 2kg |
| FGP-5 | ± 50.00N | 5kg |
| FGP-10 | ± 100.0N | 10kg |
| FGP-20 | ± 200.0N | 20kg |
| FGP-50 | ± 500.0N | 50kg |
| FGP-100 | ± 1000N | 100kg |

Power Supply : AC Adapter or In-built Nickel Hydro. Battery (Rechargeable)

Accessories : Measuring Adapters 6 Types (Ref. Page 5). Exclusive USB Cable,

For Details Refer Page11 ~ 12

Economy Type (without Output)

FGN- □ BSeries

Corresponds to Simple Testing



- With One Touch the Numeric Value Display & Unit Display could be in versed by Reverse System employment.
- With One Touch, N, kg. All Units could be switched.

| | | | | |
|---------------|--------------------|------------------|--------|------|
| 1000 Rev./Sec | Reverse Indication | Push & Pull Peak | Hanger | Unit |
|---------------|--------------------|------------------|--------|------|

| Type | Max. Load | |
|---------|-----------|------|
| FGN-2B | 20.00N | 2kg |
| FGN-5B | 50.00N | 5kg |
| FGN-20B | 200.0N | 20kg |
| FGN-50B | 500.0N | 50kg |

Power Supply: AC Adapter or In-built Nickel Hydro. Battery (Rechargeable)

Accessories: Measuring Adapters 6 Types (Ref. Page 5).

For Details Refer Page11 ~ 12

| | | | | | | | |
|---------------------------|---|--------------------------------------|---|---------------------------|---|---------------------------|---|
| USB | USB Communication Function Furnished. | 1000 Rev./Sec | High Speed Peak Measurement of 1000 Rev./Sec. is possible. | Motor | Automatic Measurement is possible through the Motor. | Digimatic | Could be connected to Mitsutoyo Digimatic Printer. |
| RS-232C Output | Could be connected to P.C. or Printer. | D/A Analog Output | Connecting to Pen Recorder, Data Registration is possible. | Manualr | Manually Speedy Measurement is possible. | LED Comparator | Upper/Lower Limit Setting, Judgment Output is possible. (LED Display) |
| Hanger | For Storage or Suspension Hanger is attached. | Unit | N.kg(g) Unit Switching is possible. | Digital Indication | Forwarding Speed and Shifting Distance Digital Display. | Outer Parts Tare | Tare Pulling is possible through Outer Parts Signal. |
| Comparator | Upper/Lower Limit Setting, Judgment, Output is possible. | Over Load | At the time of Over Load, Signal is displayed and could be used for Machine Protection. | Analog Output | Connecting Pen Recorder, Shifting Distance Recording is possible. | Outer Parts Signal | Display Value Preservation Hold Function, Tare Adjustment, PEAK Mode Switching is possible. |
| Reverse Indication | LED Display Numeric Values and Unit could be Top-Bottom inversible is possible. | Push & Pull Peak | Recording of Press, Pull respective Values is possible. | Program Setting | Movement Program Setting is possible. | | |
| memory 1000 | Up to 1000 Items, Continuous Memory Measuring Data is possible. Max., Min. etc. Corresponds to Statistics Processing. | Corresponding Measuring Meter | Mitsutoyo made Measuring Meter (Optional) could be installed. | *1 TORIEMON USB | *2 TORIEMON | *3 RHEOEMON | FGT-TV |

Through the Exclusive Free Software. Data Collection is possible.

*1. Toriemon USB is exclusively for FGP/FGPX Series.

USB Communication Function could be furnished with easy connection to P.C. Working Environment: DOS/V Substitution Windows XP, Excel 2003/2007

*2. Toriemon is exclusively for FGC-250HB Series. Working Environment: DOS/V Substitution Windows XP, Excel 2003.

*3. Rheoemon is exclusively for FGT- □ Series. Working Environment: DOS/V Substitution Windows XP, Excel 2003.

■ FGFX Series/FGPX- □ Series

| Model | FGPX-0.2 | FGPX-0.5 | FGPX-1 | FGPX-2 | FGPX-5 | FGPX-10 | FGPX-20 | FGPX-50 | FGPX-100 | FGPX-250H | FGPX-500H | | |
|--------------------------------------|---|--------------------------|-------------------------|--|---------------------------|---------------------------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|--|-------------|
| Rated Capacity (RC) ^{Note1} | ± 2.000N (± 200.0g) | ± 5.000N (± 500.0g) | ± 10.00N (± 1000g) | ± 20.00N (± 2.000kg) | ± 50.00N (± 5.000kg) | ± 100.0N (± 10.00kg) | ± 200.0N (± 20.00kg) | ± 500.0N (± 50.00kg) | ± 1000N (± 100.0kg) | ± 2500N (± 250.0kg) | ± 5000N (± 500.0kg) | | |
| Display Possible Scope | ± 2.000N (± 200.0g) | ± 5.000N (± 500.0g) | ± 10.00N (± 1000g) | ± 20.00N (± 2.000kg) | ± 50.00N (± 5.000kg) | ± 100.0N (± 10.00kg) | ± 200.0N (± 20.00kg) | ± 500.0N (± 50.00kg) | ± 1000N (± 100.0kg) | ± 2500N (± 250.0kg) | ± 5000N (± 500.0kg) | | |
| Display Resolution Power | 0.001N/0.1g | | 0.01N/1g | 0.01N/0.001kg | | 0.1N/0.01kg | | 1N/0.1kg | | | | | |
| Unit | N, kg Unit Switchover (Reverse Indication possible) | | | | | | | | | | | | |
| Measuring Method | Normal Measurement, Plus Peak, Minus Peak | | | | | | | | | | | | |
| Display Interval | 1 Rotation/Second, 2 Rotations/Second, 3 Rotations/Second, 5 Rotations/Second, 10 Rotations/Second, 20 Rotations/Second | | | | | | | | | | | | |
| Sampling Interval | 1000 Rotations/Second | | | | | | | | | | | | |
| Accuracy | ± 0.2% R.C. or ± 1/2 Digit (at 23°C) ^{Note 2} | | | | | | | | | | | | |
| Display Equipment | ● With LCD Tag 4 digit indication (Letter Height 12mm) ● Output dependent on Decided LED and Output Signal | | | | | | | | | | | | |
| Overload Weight Resistant | 200% R.C. | | | | | | | | 150% R.C. | | | | |
| Comparator Function | Hi,NG, OK, Lo,NG Decision, Output according to decided LED and Output Signal | | | | | | | | | | | | |
| Communication | With USB (with exclusive communication software, communication with P.C. is possible. Connecting Cable is Standard Accessory). With RS-232C, (with exclusive communication command, communication with P.C. is possible. Connecting Cable is Optional) Digimatic : could be connected with Mitsutoyo Digimatic Printer DP-1VR . | | | | | | | | | | | | |
| Analogue | ● ± 1V. (As against the Output ± Indication Possible Scope), Accuracy ±50mV, 12 bit/D/A Converter Method ● Output Update 1000Revolutions/Second, Zero Setting is possible, Load Resistance More than 10k Ω | | | | | | | | | | | | |
| Output | Overload PUSH, PULL Open Corrector Output (Max. DC30V/5mA) Comparator Hi,OK,LO Open Corrector Output (Max. DC30V/5mA) | | | | | | | | | | | | |
| Input Signal | ZERO (Outer Parts Zero Setting), HOLD (Outer Parts Hold) | | | | | | | | | | | | |
| Current | ● AC Adapter (DC9V/200mA) or Inner Stored Nickle Hydrogen Battery (Rechargeable) ● During Recharging Measurements possible ● Battery Working possible time : After Full charged battery about 8 hrs. ● Charging period : max. 16 hrs. (Automatically gets off when fully charged) | | | | | | | | | | | | |
| Auto Power Off Function | 10 Minutes (when AC Adapter is connected, continuous usage is possible), Invalidate/Cancel function is also possible. | | | | | | | | | | | | |
| Memory Function | ● Continuous Memory 1000 items/Independent Memory 100 items/ Standard Memory 50 items (3 types of Memory Mode switching over possible) ● Statistics function exists (Maximum, Minimum, Peak, Average, Standard deviation) | | | | | | | | | | | | |
| Working Temperature (Temp.) Scope | Temperature : 0 ~ 40°C (However, no condensation allowed) Humidity : 35 ~ 85% RH (However, condensation not allowed) | | | | | | | | | | | | |
| Outer Dimensions | W 75 × Thick 38 × L141mm | | | Width 75 x Thickness 38 x Length 147mm | | | | | L Only 149mm | | W82 x T 57 x L 214mm | | |
| Weight | About 450g | | | | | | | | About 500g | | About 900g | | About 1000g |
| Accessories | Measuring Adapter (6types), Hanger, AC Adapter, Carrying Case, USB Cable, Handle (FGPX- □ H Only) | | | | | | | | | | | | |
| Communication Software | Exclusive Communication Software (Corresponding to USB) could be download free of cost from our Co.'s Home Page. | | | | | | | | | | | | |

Note : 1) R.C. = RATED CAPACITY Note : 2) digit = Digital Indication means 1 count part. ± 1 digit means that to the last digit the Digital Counter tolerance is 1 counter.

■ FGP Series

| Model | | FGP-0.2 | FGP-0.5 | FGP-1 | FGP-2 | FGP-5 | FGP-10 | FGP-20 | FGP-50 | FGP-100 |
|-----------------------------------|--------------------|--|--------------------|-------------------|--|---------------------|---------------------|---------------------|---------------------|--------------------|
| Rated Capacity (RC) | | ± 2.000N(± 200.0g) | ± 5.000N(± 500.0g) | ± 10.00N(± 1000g) | ± 20.00N(± 2.000kg) | ± 50.00N(± 5.000kg) | ± 100.0N(± 10.00kg) | ± 200.0N(± 20.00kg) | ± 500.0N(± 50.00kg) | ± 1000N(± 100.0kg) |
| Display Possible Scope | | ± 2.000N(± 200.0g) | ± 5.000N(± 500.0g) | ± 10.00N(± 1000g) | ± 20.00N(± 2.000kg) | ± 50.00N(± 5.000kg) | ± 100.0N(± 10.00kg) | ± 200.0N(± 20.00kg) | ± 500.0N(± 50.00kg) | ± 1000N(± 100.0kg) |
| Display Resolution Power | | 0.001N/0.1g | | 0.01N/1g | 0.01N/0.001kg | | 0.1N/0.01kg | | 1N/0.1kg | |
| Unit | | N, kg Unit Switchover (Reverse Indication possible) | | | | | | | | |
| Measuring Method | | Normal Measurement, Plus Peak, Minus Peak | | | | | | | | |
| Display Interval | | 1 Rotation/Second, 2 Rotations/Second, 3 Rotations/Second, 5 Rotations/Second, 10 Rotations/Second, 20 Rotations/Second | | | | | | | | |
| Sampling Interval | | 1000 Rotations/Second | | | | | | | | |
| Accuracy | | ± 0.2% R.C. or ± 1/2 Digit (at 23°C) | | | | | | | | |
| Display Numeric | Unit Display | Tag Attached 4 Digit Liquid Crystallized Display (Letter Height 12mm). The Tag is as against the Load Orientation and setting option is possible. Reverse Indication possible / 3 digit Liquid Crystallized Display (Letter Ht. 7mm) | | | | | | | | |
| | All Types Displays | | | | | | | | | |
| Overload Weight Resistant | | 200% R.C. | | | | | | | | 150% R.C. |
| Tracking Function | | Exists (ON/OFF Switching Possible) | | | | | | | | |
| Output Signal USB | USB | (with exclusive communication software, communication with P.C. is possible. Connecting Cable is Standard Accessory). Continuous Transmitting Max. 100 Rev.s/Sec. | | | | | | | | |
| | Other Outputs | RS-232C, Analogue, Over Load, Comparator (FGP- □ Series Only), Analog Cable etc., Other Cables are Optional. | | | | | | | | |
| Current | | ● AC Adapter (DC9V/200mA) or Inner Stored Nickel Hydrogen Battery (Rechargeable) ● During Recharging Measurements possible ● Battery Working possible time : After Full charged battery about 8 hrs. ● Charging period : max. 16 hrs. (Automatically gets off when fully charged) | | | | | | | | |
| Auto Power Off Function | | 10 Minutes (when AC Adapter is connected, continuous usage is possible), Invalidate/Cancel function is also possible. | | | | | | | | |
| Memory Function | | ● Continuous Memory 1000 items/Independent Memory 100 items/ Standard Memory 50 items (3 types of Memory Mode switching over possible) ● Statistics function exists (Maximum, Minimum, Peak, Average, Standard deviation) | | | | | | | | |
| Comparator Function | | Exists (Upper Limit and Lower Limit) | | | | | | | | |
| Working Temperature (Temp.) Scope | | Temperature : 0 ~ 40°C (However, no condensation allowed) Humidity : 35 ~ 85% RH (However, condensation not allowed) | | | | | | | | |
| Outer Dimensions | | W 75 × Thick 38 × L141mm | | | Width 75 × Thickness 38 × Length 147mm | | | | | L Only 149mm |
| Weight | | About 450g | | | | | | | | About 500 g |
| Accessories | | Measuring Adapter (6types) ^{Note3} , Hanger, AC Adapter, Carrying Case, USB Cable, | | | | | | | | |
| Communication Software | | Torionon USB - Exclusive Communication Software (Corresponding to USB) could be download free of cost from our Co.'s Home Page. | | | | | | | | |

Note : 3) Measuring Adapter up to 0.5 - M4, Above 1 is M6 as accessories (Refer Page No.5)

■ FGN- □ B Series

| Model | FGN-2B | FGN-5B | FGN-20B | FGN-50B |
|---------------------------------------|--|----------------------|----------------------|----------------------|
| Rated Capacity (RC) | ± 20.00N(± 2.000kg) | ± 50.00N(± 5.000kg) | ± 200.0N(± 20.00kg) | ± 500.0N(± 50.00kg) |
| Display Possible Scope | ± 20.00N(± 2.000kg) | ± 50.00N(± 5.000kg) | ± 200.0N(± 20.00kg) | ± 500.0N(± 50.00kg) |
| Display Resolution Power | 0.01N/0.001g | | 0.1N/0.01kg | |
| Unit | N, kg Unit Switchover (Reverse Indication possible) | | | |
| Measuring Method | Normal Measurement, Plus Peak, Minus Peak | | | |
| Display Interval | 1 Rotation/Second, 2 Rotations/Second, 3 Rotations/Second, 5 Rotations/Second, 10 Rotations/Second, 20 Rotations/Second | | | |
| Sampling Interval | 1000 Rotations/Second | | | |
| Accuracy | ± 0.2% R.C. or ± 1/2 Digit (at 23°C) | | | |
| Display Unit Display | Tag Attached 4 Digit Liquid Crystalized Indicator (Letter Height 12mm). Pull Load is "Minus" Indication (Reverse Indication possible) | | | |
| Numeric | (1) "LO BAT" (Battery Voltage Low) (2) "BAT" (while Recharging) (3) "OVR" (Over Load) (4) "PEAK" (Peak Hold Mode) | | | |
| Overload Weight Resistant | 200% R.C. | | | |
| Current | ● AC Adapter (DC9V/200mA) or Inner Stored Nickle Hydrogen Battery (Rechargeable) ● During Recharging Measurements possible ● Battery Working possible time : After Full charged battery about 8 hrs. ● Charging period : max. 16 hrs. (Automatically gets off when fully charged) | | | |
| Auto Power Off Function | "10 Minutes or Continuous" could be selected. (when AC Adapter is connected, continuous usage is possible) | | | |
| Working Temperature Scope | 0 ~ 40°C (However, no condensation allowed) | | | |
| Outer Dimensions, Weight, Accessories | Width 75 × Thickness 38 × Length 147mm, About 450g (Including Battery) / Measuring Adapter (6 Types) Note-4, Hanger, AC Adapter, Carrying Case. | | | |

Note : 4) For Measuring Adapter up to 50B - M6, For FGN-100HB/250HB - M10, provided as accessories

■ FGRT Series

| Model | FGRT-1/2/5/10 |
|-------------------------|---|
| Rated Load Capacity (N) | ± 10N/20/50/ ± 100N |
| Unit | kPa(KiloPascal) |
| Measurement Method | Normal Measurement, Peak Measurement |
| Display Intervals | could be selected from 1,2,3,5,10,20 Revolutions/Sec. |
| Sampling Interval | 1000 Rotations/Sec |
| Accuracy | ± 0.2% ± 1/2digit |
| Comparator Function | Upper Limit, Lower Limit NG Pass/Acceptance Decision could be possible |
| Memory Function | Max. 1000 items could be memorized |
| Communication | USB/RS-232C |
| | Digimatic |
| Output | Analog |
| | Over Load |
| | Comparator |
| Input | ● ZERO Tare Pulling, Peak Rest ● HOLD Display preservation ● PEAK Set Measurement Mode |
| Current | Inner Stored Nickel Hydrogen Battery, AC Adapter (DC9V/200mA) |

■ FGFX-RT

| Model | FGFX-RT- □ |
|------------------------|---|
| Load Cell | ● Isolation Model Load Cell Max 5 ● Max. 5 types of calibrated data storage memory |
| Measurement Unit | N Unit or kg Unit (Reverse Display possible) |
| Measurement Method | Normal Measurement . Plus Peak, Minus Peak |
| Sampling Interval | 1000 Rotations/Sec |
| Display Intervals | could be selected from 1, 2, 3, 5, 10, 20 Revolutions/Sec |
| Display Part | LCD |
| Current | ● Inner Stored Nickel Hydrogen Battery ● AC Adapter (DC9V/200mA) |
| Battery Working Period | About 8 Hrs |
| Comparator Function | Hi,NG, OK, Lo, NG ecision, Ouput asper Decided LED and Output Signal |
| Analogue | ± 1V |
| Communication | USB, RS-232C, Digimatic |
| Output | ● Over Load/ PUSH, PULL ● Comparator/ HI,OK,LO |
| Input Signal | ZERO, HOLD |
| Memory | 1000 Items |
| Outer Dimensions, Mass | Width 75 × Thickness 38 × Length 140mm, 300g |
| Accessories | USB Cable, AC Adapter, Carrying Case |

Regarding Corresponding Sensors, please enquire separately.