

Digital gauge DF805S / DF812S series

| Main specification | | | | | | | | |
|----------------------|---------|-------------------------------------|----------|-----------|---------|-------------------------------------|----------|-----------|
| Model name | DF805SR | DF805SFR | DF805SLR | DF805SFLR | DF812SR | DF812SFR | DF812SLR | DF812SFLR |
| Measuring range | 5mm | | | | 12mm | | | |
| Resolution | 0.1μm | | | | | | | |
| Accuracy (at 20°C) | 1μm | | | | | | | |
| Protective structure | IP66 | When a φ4mm tube is connected: IP67 | | | IP66 | When a φ4mm tube is connected: IP67 | | |

Connection cable CE34 series (CE34 cable is necessary when connecting DF805S/812S series to MF10 series)

| Main specification | | | | | | |
|--------------------|----------|---------|---------|---------|---------|---------|
| Model name | CE34-005 | CE34-02 | CE34-05 | CE34-10 | CE34-15 | CE34-20 |
| Cable length | 0.5m | 2.0m | 5.0m | 10m | 15m | 20m |

Digital Gauge DT series

| Main specification | | | | | | | | |
|----------------------|----------------|----------------------|----------------|----------------------|----------------|----------------------|----------------|----------------------|
| Model name | Standard model | Protected type model | Standard model | Protected type model | Standard model | Protected type model | Standard model | Protected type model |
| | DT512N | DT512P | DT12N | DT12P | DT32N | DT32NV | DT32P | DT32PV |
| Measuring range | 12mm | | | | 32 mm | | | |
| Resolution | 1μm | | | | 5μm | | | |
| Accuracy (at 20°C) | 6μm | | | | 10μm | | | |
| Protective structure | - | IP64 or equivalent | - | IP64 or equivalent | - | - | - | IP64 or equivalent |

Interpolator for DT series MT20 series (MT20 interpolator is necessary when connecting DT series to MF10 series)

| Main specification | |
|--------------------|--|
| Model name | MT20-01 (For DT512 series) MT20-05 (For DT12/32 series) |
| Resolution | Resolution 1μm Resolution 5 μm |

Digital tolerance indicator / Counter module MF10 series

| Main specification | | | |
|---|--|-----------------------------|-------------------------|
| Model name | Digital tolerance indicator | | Counter module |
| | MF10-P1 | MF10-P2 | MF10-CM |
| Function | NPN output (current sink) | PNP output (current source) | Counter module for MG50 |
| I/O | Number of Go/No Go judgement output 2, Number of external inputs 1 | | - |
| Minimum display unit | 0.1μm | | - |
| Cable length | input/output, power cable 2m | | - |
| Mounting method | 35mm DIN rail mounting | | - |
| Power supply voltage | +10-30V DC including ripple (p-p) 10% | | - |
| Power consumption / Consumption current | 2.1W or less / 85A or less | | - |
| Mass | 75g | | - |

Interface unit MG50 series

| Main specification | | | |
|---|---|-----------------------------------|---|
| Model name | Main module | | Distribution module |
| | MG50-EC | MG50-CL | MG51 |
| Communication protocol | EtherCAT | CC-Link | Data transferred to main module by dedicated protocol |
| Baud rate | 100Mbps | Maximum downlink speed of 10 Mbps | - |
| Node address setting method | Set with decimal rotary switches or software | Set with decimal rotary switches | - |
| Node address range | 000-192 | Max. 64 | - |
| Maximum connectable counter modules | 30 | 16 | 10 |
| Maximum connectable distribution modules | 8 | | - |
| Maximum cable length | Maximum cable length between main module and distribution module: 30m | | |
| Mounting method | 35mm DIN rail mounting | | |
| Power supply voltage | DC24V (20.4-26.4V) | | |
| Power consumption / Consumption current / Current consumption | 2.4 W or less | 100 mA or less | 2W or less 80 mA or less |

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The contents of this literature are as of Dec 2015
 This catalog is printed with soy ink.
 MGS-TS-1512-EN-C

NEW gauging system

Magnescale

SPEED X PRECISION



Tough Sensor
 Speed X High Rigidity



Magnescale Co., Ltd.

「Speed」 × 「High Rigidity」

NEW

Fieldbus interface unit

EtherCAT  **CC-Link V2**

A new network interface compatible with our Tough Sensor lineup. Data output and Go/No Go judgement functions are available. Output data can be calculated and controlled by PLC via open network.



Main module MG50
Maximum connectable counter modules
EtherCAT MG50-EC Maximum 30
CC-Link MG50-CL Maximum 16

Distribution module MG51
Maximum connectable distribution modules per main module
Maximum 8

Wire-saving
Total extension 30m
2 wire power 2 output line RS485 wiring



Maximum connectable counter modules per distribution module

Maximum 10

Counter module MF10

Slim body and space saving design

8 types of functional calculations Function block

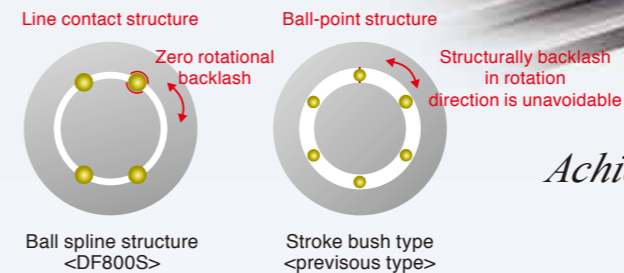
8 types of calculation functions are provided by the Function Block. Calculation functions can be executed easily by PLC programming.

| | | | |
|---|----------|-----------|---------|
|  | Maximum | Minimum | Average |
| | Flatness | Gap | Torsion |
| | Warpage | Thickness | |
| | | | |

•Our function block is compatible with NJ series (OMRON), and Q and L series (Mitsubishi) (Our function block does not support some versions. For more details, please contact our sales staff.)

High resistance to shock and vibration Ball spline structure

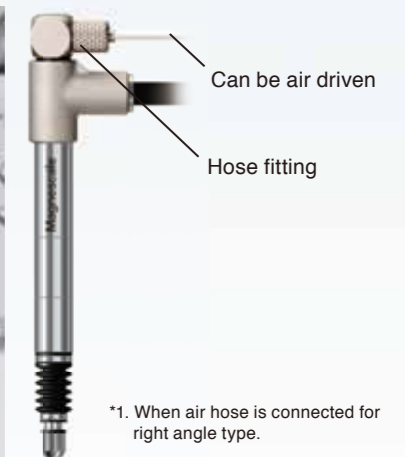
The new ball spline construction provides approximately 5 times the radial load resistance and zero rotational backlash compared to the previous model which utilized a ball-point contact structure.



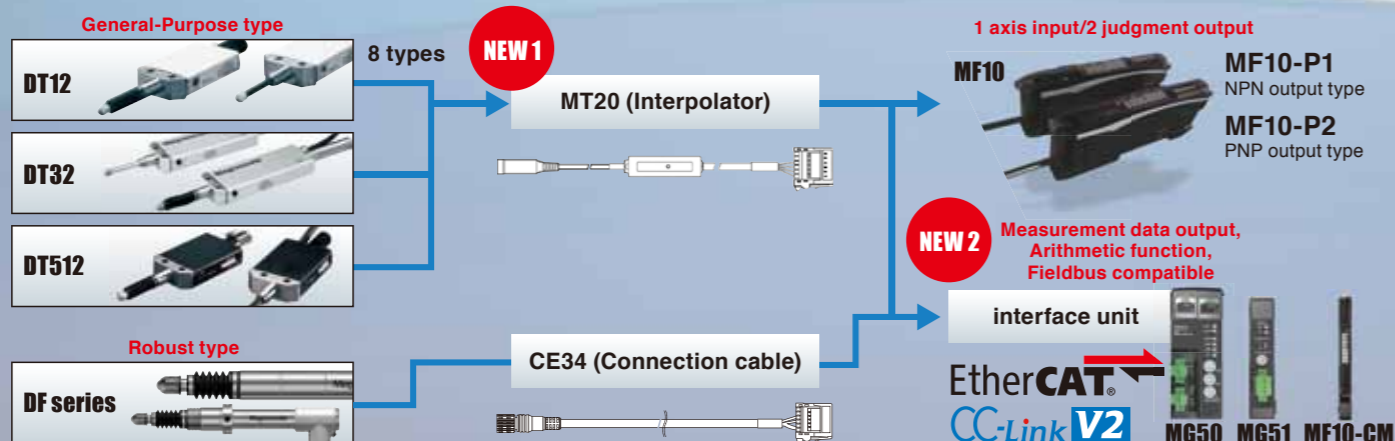
Achieved numbers of strokes: **92 million**
(full stroke sliding test 2 years passed as of March, 2014)

Resistant to the effects of water and condensation IP67 *1

Magnescale employs a magnetic detection principle that is resistant to the effects of oil, water and condensation. This principle allows for the achievement of high positioning accuracy even in severe environments. The spindle can be driven by air easily with the right angle type using the provided hose connection. This adhesion structure has successfully completed a 72 hour underwater stroke test which exceeds an IP67 rating.



*1. When air hose is connected for right angle type.



DF800S Series Slim & Compact

Compact ø8mm body is suitable for various measurement applications. Our broad lineup including angle and flange type models make it easy to integrate into machines and route the cables.

