

FORCE

Measurement





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Features

- Accuracy: $\pm 0.2\%$ FS
- Ergonomic, durable, heavy-duty metal construction
- Touchpad to minimized disturbance
- Automatic reversible display
- Selectable Units: N, kgf, lbf, ozf and/or gf
- Automatic display direction converting
- Variety of alarm output function
- USB port for upload to PC

Models	Capacity/Resolution						Order No.
	N	kgf	lbf	Ozf	gf	mN	
EFG5	5/0.0005	-	1.1/0.0001	18/0.005	500/0.05	5000/0.5	EON411a0000
EFG10	10/0.001	1/0.0001	2.2/0.0005	35/0.01	1000/0.1	10000/1	EON411b0000
EFG20	20/0.005	2/0.0005	4.4/0.001	70/0.01	2000/0.5	20000/5	EON411c0000
EFG50	50/0.005	5/0.0005	11/0.005	180/0.05	5000/0.5	50000/5	EON411d0000
EFG100	100/0.01	10/0.001	22/0.005	350/0.1	10000/1	-	EON411e0000
EFG200	200/0.05	20/0.005	44/0.01	700/0.1	20000/5	-	EON411f0000
EFG500	500/0.05	50/0.005	110/0.01	1800/0.5	-	-	EON411g0000
EFG1000	1000/0.1	100/0.001	220/0.05	3500/1	-	-	EON411h0000



Specifications

Accuracy:	$\pm 0.2\%$ F.S.
Units:	N, gf, kgf, ozf, and lbf.
Display:	160*128 matrix LCD with LED Backlight
Overload Capacity:	120% F.S.
Measurement Mode:	Track, Peak, AutoPeak
Sampling Rate:	2000 Hz
Memory:	1000 data
Temperature Effects:	$<0.03\%$ FS/ $^{\circ}\text{C}$
Power:	3.6VDC Ni-MH batteries
Charger / Adaptor:	USB/BM charger, 110~240VAC
Outputs:	USB, Set point output, RS232C
Operating Environment:	-10 to 40°C , 20 to 80%RH
Dimensions:	160*73*34mm
Weight:	0.7 kg (1.5 lb)

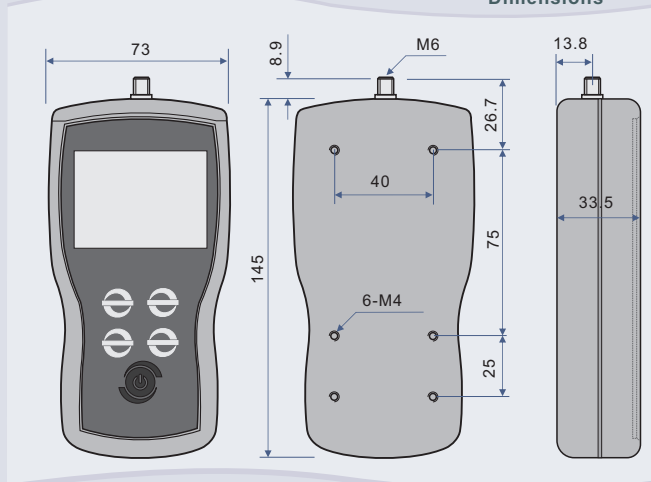
Optional

MiniPrinter EPX58P-F	Rs232 Cable ECB-MD8-DB9	Ergonomics measuring kit EAK-F-ERG1
		
EON311f0000	EON912d0000	EON419-0900
Motorised Test Stand EST-FG2	Manual Test Stand EST-FG1	
		
EON410b(c)0000	EON410a0000	

Package



Dimensions





Features

- Accuracy: $\pm 0.3\%$ FS
- Ergonomic, durable, heavy-duty metal construction
- Lighter weight, more suitable for handheld operation
- Reversible display
- Selectable Units: N, gf, kgf, ozf, and lbf
- Charger with US/EUR/UK Plugs selectable

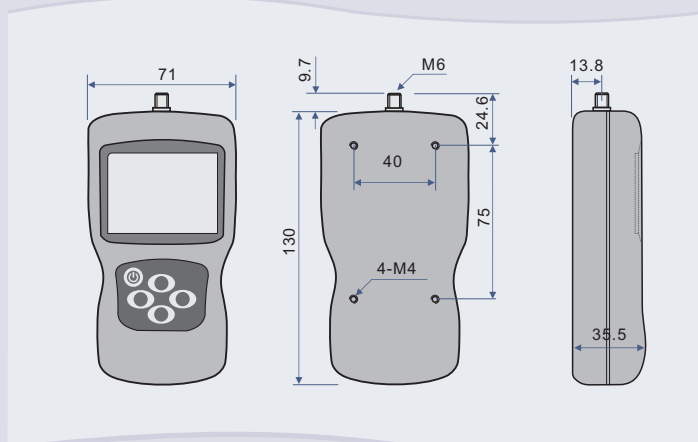
Models	Capacity/Resolution					Order No.
	N	kgf	lbf	Ozf	gf	
EFG10E	10/0.01	1/0.001	2.2/0.001	35/0.01	1000/1	EON412a0000
EFG50E	50/0.01	5/0.001	11/0.01	180/0.1	5000/1	EON412b0000
EFG100E	100/0.1	10/0.01	22/0.01	350/0.1	-	EON412c0000
EFG500E	500/0.1	50/0.01	110/0.1	1800/1	-	EON412d0000
EFG1000E	1000/1	100/0.01	220/0.1	3500/1	-	EON412e0000



Specifications

Accuracy:	$\pm 0.3\%$ F.S.
Units:	N, gf, kgf, ozf, and lbf. (Selectable)
Display:	160*128 matrix LCD with Backlight
Overload Capacity:	120% F.S.
Measurement Mode:	Track, Peak, Preset
Sampling Rate:	1000 Hz
Memory:	500 data
Temperature Effects:	$<0.03\%$ FS/ $^{\circ}\text{C}$
Power:	Ni-MH rechargeable batteries
Charger / Adaptor:	USB charger, Input: 110~240VAC
Outputs:	USB, Set point output, RS232C
Operating Environment:	-10 to 40 $^{\circ}\text{C}$, 20 to 80%RH
Dimensions:	150*72*33mm
Weight:	0.45 kg (1 lb)

Dimensions



Optional

MiniPrinter	Rs232 Cable
EPX58P-F	ECB-MD8-DB9
EON311f0000	EON912d0000
Motorised Test Stand	Manual Test Stand
EST-FG2	EST-FG1
EON410b(c)0000	EON410a0000



Package



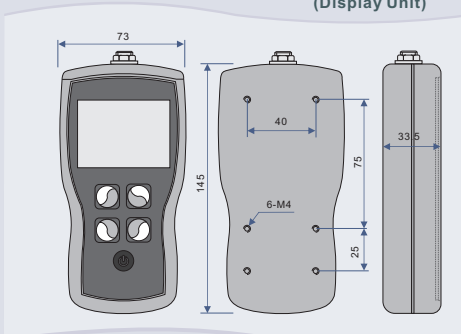
Features

- Accuracy: $\pm 0.2\%$ FS
- Ergonomic, durable, heavy-duty metal construction
- Touchpad to minimized disturbance
- Automatic reversible display
- Automatic load cell identification (ALI)
- Diagram displaying and printing
- Overload Alarm
- Automatic display direction converting
- Variety of alarm output functions
- USB port for upload to PC



Models	Load Cell	Capacity/Resolution					Order No.
		N	kgf	lbf	kN	tf	
EFG10S-1K-S	ESP-F1K-S	1000/0.1	100/0.01	220/0.05	-	-	EON413a0000
EFG10S-2K-S	ESP-F2K-S	2000/0.5	200/0.05	450/0.1			EON413b0000
EFG10S-5K-S	ESP-F5K-S	5000/1	500/0.1	1100/0.1			EON413c0000
EFG10S-10K-S	ESP-F10K-S	10000/1	1000/0.1	2250/0.5	10/0.001	-	EON413d0000
EFG10S-20K-S	ESP-F20K-S		2000/0.5	4500/1	20/0.005		EON413e0000
EFG10S-10K-R	ESP-F10K-R	10000/1	1000/0.1	2250/0.5	10/0.001		EON413f0000
EFG10S-20K-R	ESP-F20K-R	-	2000/0.5	4500/1	20/0.005	-	EON413g0000
EFG10S-50K-R	ESP-F50K-R		5000/1	1.1k/0.005k	50/0.01	5/0.001	EON413h0000
EFG10S-100K-R	ESP-F100K-R			2.2k/0.005k	100/0.01	10/0.001	EON413j0000
EFG10S-200K-R	ESP-F200K-R		-	4.4k/0.01k	200/0.05	20/0.005	EON413k0000

Dimensions (Display Unit)



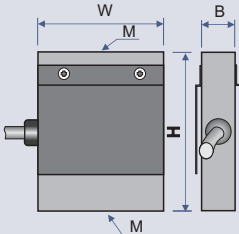
Package

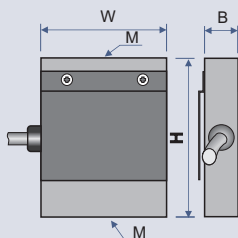


Models	Load Cell	Capacity/Resolution (Push only)				
		N	kgf	lbf	kN	tf
EFG10S-1K-M	ESP-F1K-M	1000/0.1	100/0.01	220/0.05	-	-
EFG10S-5K-M	ESP-F5K-M	5000/1	500/0.1	1100/0.1		
EFG10S-10K-M	ESP-F10K-S	10000/1	1000/0.1	2250/0.5	10/0.001	
EFG10S-50K-M	ESP-F50K-M	-	5000/1	1.1k/0.005k	50/0.01	5/0.001
EFG10S-100K-M	ESP-F100K-M		-	2.2k/0.005k	100/0.01	10/0.001

Optional

MiniPrinter	
EPX58P-F	
EON311f0000	
Float Flat Push Tip	
AFG-FF32-M12	AFG-FF32-M18
EON419-0201	EON419-0301
1K-S, 2K-S, 5K-S, 10K-S	20K-S
Extension Adapter	
AFG-EX17-M12	AFG-EX33-M18
EON419-0202	EON419-0302
1K-S, 2K-S, 5K-S, 10K-S	20K-S
Pull Clamp	
AFG-RG12-M12	AFG-RG18-M18
EON419-0203	EON419-0303
1K-S, 2K-S, 5K-S, 10K-S	20K-S
Rs232 Cable	
ECB-MD8-DB9	
EON912d0000	
Desktop Stand	
AGN-DS80	

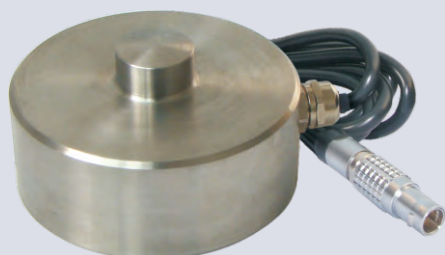
Specifications	Technique					
Rated Output(mV / V)	2.0±5%					
Zero Balance(F.S.)	±2%					
Non-linearity(F.S.)	0.03%					
Hysteresis(F.S.)	0.03%					
Repeatability(F.S.)	0.03%					
Creep [30min](F.S.)	0.03%					
Temp. Effect(F.S./10°C)	0.025 %					
Safe Overload(F.S.)	150%					
Input Impedance(Ω)	385±30					
Output Impedance(Ω)	350±3					
Model	Capacity	Order No.	Dimesions			
			W	H	B	M
ESP-F1K-S	1kN	EON 410s0001	51	76.2	19	M12
ESP-F2K-S	2kN	EON 410s0002				
ESP-F5K-S	5kN	EON 410s0005				
ESP-F10K-S	10kN	EON 410s0010	76.2	108	25.4	M18*1.5
ESP-F20K-S	20kN	EON 410s0020				



ESP-Fxx-S Load cell (S-beam)

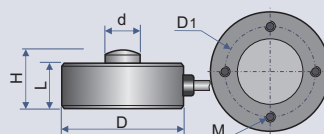


ESP-Fxx-R Load cell (Ring type)



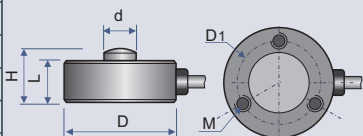
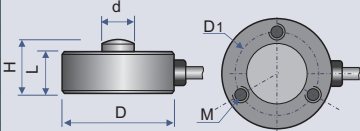
Specifications		Technique
Rated Output(mV / V)		2.0±1%
Zero Balance(F.S.)		±2%
Non-linearity(F.S.)		0.05%
Hysteresis(F.S.)		0.05%
Repeatability(F.S.)		0.05%
Creep [30min](F.S.)		0.05%
Temp. Effect(F.S./10°C)		0.03 %
Safe Overload(F.S.)		150%
Input Impedance(Ω)		385±10
Output Impedance(Ω)		350±3

Model	Capacity	Order No.	Dimesions					
			D	d	L	H	D1	M
ESP-F10K-R	10kN	EON 410r0010	82	22	32	44	68	4-M8
ESP-F20K-R	20kN	EON 410r0020						
ESP-F50K-R	50kN	EON 410r0050						
ESP-F100K-R	100kN	EON 410r0100	126	35	40	54	101	4-M10
ESP-F200K-R	200kN	EON 410r0200						



Specifications		Technique
Rated Output(mV / V)		1.5±10%
Zero Balance(F.S.)		±2%
Non-linearity(F.S.)		0.5%
Hysteresis(F.S.)		0.5%
Repeatability(F.S.)		0.5%
Creep [30min](F.S.)		0.1%
Temp. Effect(F.S./10°C)		0.05 %
Safe Overload(F.S.)		120%
Input Impedance(Ω)		350±30
Output Impedance(Ω)		350±5%

Model	Capacity	Order No.	Dimesions					
			D	d	L	H	D1	M
ESP-F1K-M	1kN	EON 410m0001	32	8	14	16	24.5	3-M5
ESP-F5K-M	5kN	EON 410m0005						
ESP-F10K-M	10kN	EON 410m0010						
ESP-F50K-M	50kN	EON 410m0050	38	11	14	16	30	3-M6
ESP-F100K-M	100kN	EON 410m0100	51	15	22	25	41	4-M10



ESP-Fxx-M Load cell (Mini Ring)



- Easy to Use, Rugged Construction
- Precision Manual Handwheel
- Capacities Up to 125 kg (250 lbf, 1200 N)
- Stand travels 3 mm for every turn
- Maintenance-free Design
- Weight: 7Kg

Technical drawing of the 1000 Series Vertical Stand, showing two views: a side view (left) and a front view (right).

Side View Dimensions:

- Base width: 196
- Main column height: 445
- Top section height: 230(max)

Front View Dimensions:

- Base width: 250
- Main column height: 56.8
- Top section height: 13.8

Top Section Detail:

- Width: 40
- Height: 25
- Number of holes: 10-Φ5



Digital Scale Kit	Tensile Frame Kit
EOT-SCL-200	AFG-TFR-1
EON900-0501	EON419-0501





Features

- Motorised driving
- Rugged construction
- Capacity Up to 650 N (140 lbf, 65kgf)
- Multiple operation mode
- Three-stage programmable cycle
- Teaching & Playback programming
- Force gauge data integration
- USB connect to PC
- Multiple limit protection functions

Specifications

Capacity

650 N (65 kg, 140 lbf)

Stroke

220 mm

Speed

Adjustable Range: 3~720 mm/min

Resolution: 0.1 mm/min

Accuracy: ± 1 mm/min

Displacement

Resolution: 0.01 mm.

Accuracy: ± 0.2 mm

Operation Mode

Manual, Cycle, Demo, Locating Move

Protection Functions

Position Limit

Force Limit (connected to force gauge)

Locked-rotor

Power Protection

Cycle Program

Three-stage cycle

Displacement-based (D-cycle)

Force-based (F-cycle)

Outputs

USB-B (connect to PC)

Rs232 outputs

Set point output,

Rs232 (connect with force gauge)

DC Supply: DC5V, 0.5A (USB-A, to Force Gauge)

Operating Environment

0 to 40°C, 20 to 80% RH

Power Supply

AC 100~240V, 1A

Dimensions

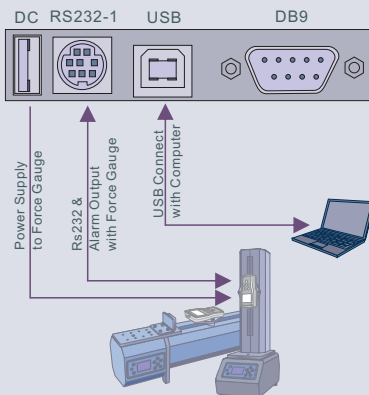
630X320X180mm (EST-FG2V)

640X125X278mm (EST-FG2H)

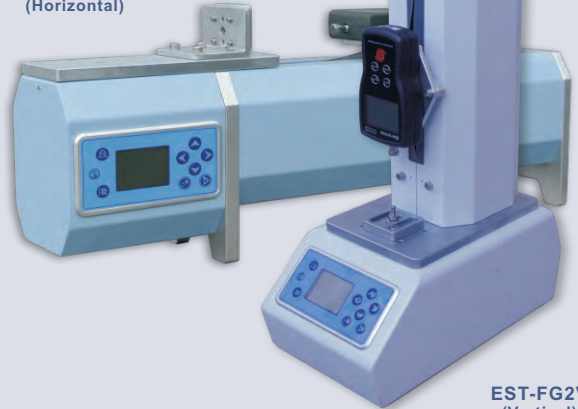
Weight

approx 13kg

Communication Interface

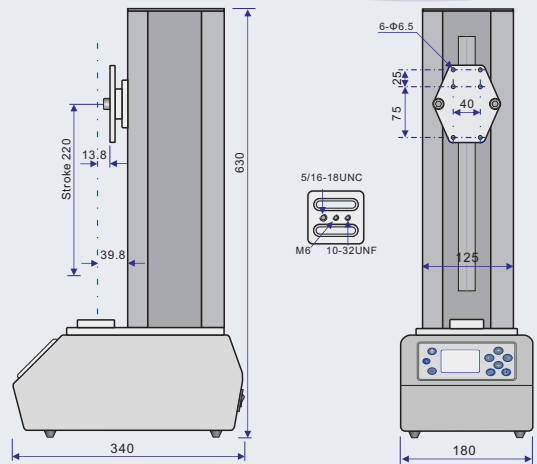


EST-FG2H
(Horizontal)

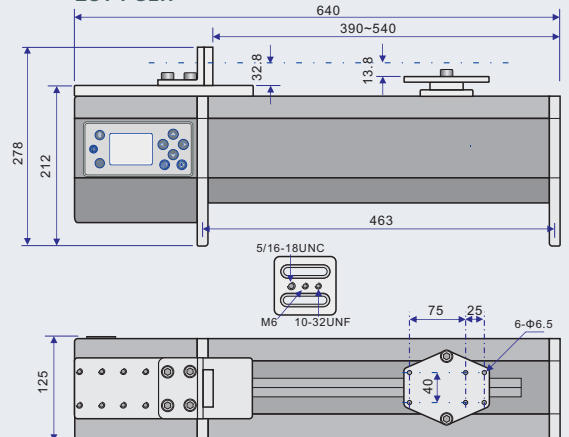


EST-FG2V
(Vertical)

EFG-FG2V



EST-FG2H



-  CE Certificate
-  FCC Certificate
-  Wireless Printing
-  Unit Conversion
-  Touch Pad
-  Connect to PC
-  Multiple Probe(Sensor)
-  Automatic Sensor Identification
-  Power by Batteries
-  Chargeable
-  Go/NG
-  Overload Alarm
-  Automatic Direction Identification
-  Diagram Display
-  Sensor Data Integration
-  AC Power

Address:

A Zone 6th Floor 11# Building 3th Section of HongChangRong Industrial Park Huangtian Xixiang
Bao'an District Shenzhen China
Tel.: +86 755 29888771
Fax.: +86 755 29888774
Email: manager@polygon-instru.com
<http://polygon-instru.com/>