

## FMI-100

### Digital Force Gauge

#### Features

- Accurate measurement with high resolution
- Fast data collection at 1000 Hz for precise capture of force peak
- Selectable engineering units for force and weight measurement
- Rugged aluminium die cast housing
- Long life sensor with 200% overload protection
- Reversible display for test stand application



#### Details



FMI-100 series instruments are digital force gauges designed for quality control and simple tests in various industrial applications. The series cover a wide measuring range up to 500 N (50kg).

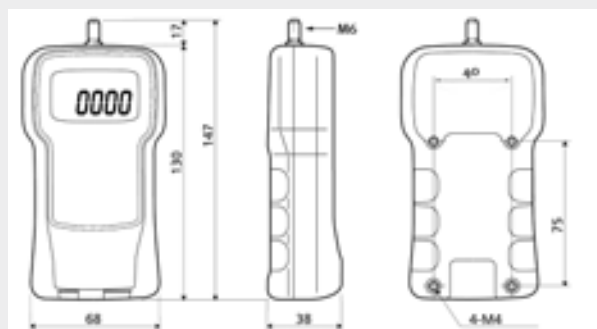
The robust sensor module offers high resolution combined with very high overload capability and is able to measure tensile and pressure forces (pull-/push operation). The captured values are displayed in selectable engineering units. The reversible display allows easy readout also in test stand application.

The high sampling rate (1000Hz), which is achieved through high-speed data processing, captures the peak value very precisely. This enables accurate measurements of tensile strength with high repeatability. The captured values are saved in the memory and can be recalled after the test.

The advantage of the FMI-100 series is the combination of high accuracy and high resolution in one instrument with simple operations.

## Order Info

### FMI-100.....



Standard

**20N ... FMI-100B2** Instrument with integrated rechargeable NiCd-battery,  
**50N ... FMI-100B5** 230VAC adaptor/charger, attachable accessories (flat,  
**200N ... FMI-100C2** notched and cone head, hook, chisel, extension rod, hanger)  
**500N ... FMI-100C5** operation manual and carrying case.

Option

**FMI-950** V-Hook  
**FMI-951** Chuck  
**FMI-952** Clamping jaw (small)  
**FMI-955** Film gripping jaw

## Spec

### FMI-100B2 FMI-100B5 FMI-100C2 FMI-100C5

		0...20 N	0...50N	0...200 N	0...500 N
<b>Measuring Range</b>					
<b>Resolution</b>		0,01 N		0,1 N	
<b>Measuring Principle</b>		bi-directional strain gauge			
<b>Operation Mode</b>	standard	indicates actual value in N   kgf   Lb			
	peak	highest value in N   kgf   Lb			
<b>Accuracy</b>	@ 23°C (F.S.)	+/- 0,2% (+/- 1/2 digit)			
	Tk (absolute)	automatically at power on			
	Tk (relative)	+/- 0,02% (°K)			
<b>Overload</b>	max. admitted	200 % (F.S.)			
<b>Display</b>	type	LCD, 4-digit, 12mm high			
	update time (Standard)	1000 msec   500 msec   333 msec   200 msec   100 msec   50 msec (selectable)			
	update time (Peak)	1 msec			
<b>Memory</b>		peak value			
<b>Power Supply</b>	type	integrated NiCd-battery   AC-adaptor/-charger 230VAC (50Hz)			
	max . battery life	8...12 h			
	Low Batt indication	◇			
<b>Temperature Range</b>	operation	0...40° C			
<b>Weight</b>		450 g			
<b>Dimension</b>	LxWxH	147 x 75 x 38 mm			
<b>Housing Material</b>		aluminium dye cast			
<b>Test stand Fixing</b>		4 x M4, length 6mm			

## FMT-W30C5

## Pull Tester with memory and limit settings

## Features

- For tensile testing of wire terminals in accordance with DIN, EN, BS, IEC, UL, SAE and MIL standards
- Easy to use with automatic peak value recording, very high accuracy and reproducibility of measurement results
- Independent power supply with integrated solar cell
- Rugged design for quality control applications in laboratories and in production facilities



## Details



This instrument is designed for measuring tensile strength of soldered or solder-free cable joints with end sleeves, pins, solder pins or similar wire terminal components.

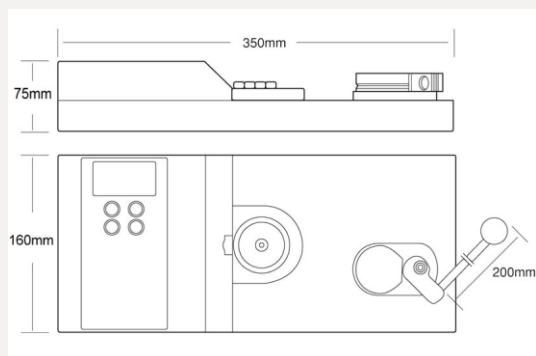
With its measuring range of 0...500N it is possible to test wires with cross sections between 0,05mm<sup>2</sup> (AWG 30) and 10mm<sup>2</sup> (AWG 8).

Test samples are inserted into the receptacle adaptor, which has 12 different slot widths (from 0.5mm to 6.0mm), covering all the prevalent wire strengths and terminal types. The traction force is applied by an easy gliding lever system which simultaneously clamps the wire and creates a consistent pull with minimal effort.

The traction force is collected at an accuracy of +/-0,5% and is shown on the display at a resolution of 0,1N. The peak value, at which the cable is torn, will be automatically saved in the memory. All test results are summarized in a consolidated statistical report.

## Order Info

### FMT-W30C5



Standard

Pull Tester complete with terminal adapter and easy-glide clamp and pull lever assembly, USB interface (software optional) and operation manual.

Option

**FMT-820N1**

**Calibration Cert.** acc. VDI/VDE 2624 page 2.1 R (pull)

**FMT-W30SW**

**FMT\_WireTestPro** - Documentation and reporting software for MsExcel with statistical evaluation of test results, selection table with all relevant cross sections and test standards acc. to IEC / ISO and SAE, Upgrade option for pull tester to extend measuring range up to 1000 N.

## Spec

### FMT-W30C5

<b>Measuring range</b>		0,0...500,0 N (0...1000N upgrade function with software FMT-W30SW)
<b>Wire Diameter</b>	Terminal adapter with	0,5   0,8   1,0   1,3   1,5   2,0   2,5   3,0   3,5   4,0   5,0   6,0 mm
	Clamping device	0,1 ... 6,0 mm (continuously variable)
	Dia. range IEC 60352-2	Cross section 0,05 ... 10 mm <sup>2</sup> (AWG8...30)
	Dia. range SAE AS7928 II	AWG 12 ... 28
<b>Resolution</b>		0,5 N
<b>Accuracy</b>	@ 23°C (F.S.)	+/- 0,5% (+/- 1/2 digit)
	Tk (absolute)	Automatic readjustment while starting
	Tk (relative)	+/- 0,02% (°K)
<b>Operation Mode</b>	Standard	displays the actual value in N   kgf   lbf
	Peak	displays the peak value in N   kgf   lbf
<b>Overload</b>	max. admissible	200 % (F.S.)   Alarm bei 120% (F.S.)
<b>Display</b>	Type	LCD, 4-stellig, 12mm hoch
	Update time (Standard)	1000 msec   500 msec   333 msec   200 msec   100 msec (einstellbar)
	Update time (Peak)	ca. 1 msec
<b>Memory</b>		Peak value
<b>Power Supply</b>	Type	Solar cell
<b>Interface</b>		USB 2.0
<b>Temperature Range</b>	Operation	0°... 40° C
	Storage	-5°... 60° C (rF < 80%)
<b>Weight</b>		approx. 13 kg
<b>Dimensions</b>	LxWxH (without lever)	350 x 160 x 65 mm
<b>Housing Material</b>		anodised aluminium, surface tempered steel, stainless steel V2A

## FMT-100WT

### Digital Force Gauge for terminal connections

#### Features

- For tensile strength testing of wire terminals in accordance with BS, EN, DIN, IEC, UL, SAE and MIL standards
- Simple to use with automatic peak value recording, very high accuracy and reproducibility of measurement results
- Battery operation possible using integrated NiCd-accumulator (rechargeable)
- Solid design for quality control applications in laboratories and in production facilities



#### Details



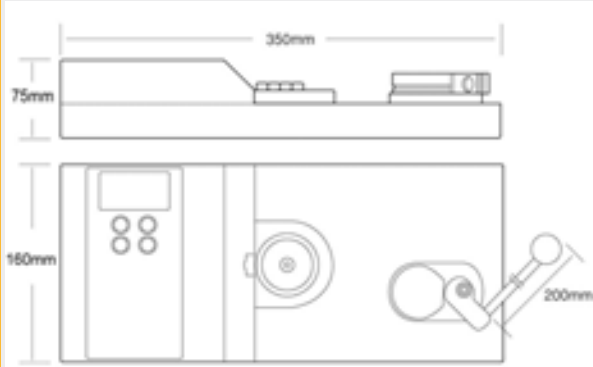
This instrument is designed for measuring tensile strength of soldered or solder-free cable joints with end sleeves, pins, solder pins or similar wire terminal components.

With its measuring range of 0...500N it is possible to test wires with cross sections between 0,05mm<sup>2</sup> (AWG 30) and 10mm<sup>2</sup> (AWG 8).

Test samples are inserted into the receptacle adaptor, which has 12 different slot widths (from 0.5mm to 6.0mm), covering all the prevalent wire strengths and terminal types. The traction force is applied by an easy gliding lever system which simultaneously clamps the wire and creates a consistent pull with minimal effort.

The traction force is collected at an accuracy of +/-0,5% and is shown on the display at a resolution of 0,1N. The peak value, at which the cable is torn, will be automatically saved in the memory.

## Order Info



Standard

**FMT-100WT** Instrument with terminal adapter and easy-glide clamp and pull lever assembly, universal AC-adaptor /-charger and operation manual.

Option

**FMT-110 WT** as above, subject additional RS232-Interface and appropriate connection cable for serial I/O port (9p-D-Sub).

## Spec

### FMT-100WT

### FMT-110WT

		FMT-100WT	FMT-110WT
<b>Measuring Range</b>		0,0...500,0 N	
<b>Wire Diameter</b>	Terminal adapter width	0,5   0,8   1,0   1,3   1,5   2,0   2,5   3,0   3,5   4,0   5,0   6,0 mm	
	Clamping device	0,1 ... 6,0 mm (continuously variable)	
	Dia. range IEC 60352-2	Cross section 0,05 ... 10 mm <sup>2</sup> (AWG8...30)	
	Dia. range SAE AS7928 II	AWG 12 ... 28	
<b>Resolution</b>		0,1 N	
<b>Accuracy</b>	@ 23°C (F.S.)	+/- 0,5% (+/- 1/2 digit)	
	Tk	automatic ally readjustment while starting	
<b>Operation Mode</b>	Standard	displays the actual value in N   kgf   lbf	
	Peak	displays the peak value in N   kgf   lbf	
<b>Overload</b>	max. admissible	200 % (F.S.)   alarm at 120% (F.S.)	
<b>Display</b>	Type	LCD, 4-digit, 12mm high	
	Update time (Standard)	1000 msec   500 msec   333 msec   200 msec   100 msec   50 msec (selectable)	
	Update time (Peak)	1 msec	
<b>Memory</b>		Peak value	
<b>Power Supply</b>	Type	internal NiCd-battery (up to 12h)   AC-adapter /-charger 100...240VDC (50Hz)	
<b>Interface</b>	RS232C	without	Baud rate selectable 2,4 kB   4,8 kB   9,6 kB   19,2 kB
	Analogue output	without	-1 ... 0 ... +1 VDC
<b>Temperature Range</b>	Operation	0°... 40° C	
	Storage	-20°... 60° C (rF < 80%)	
<b>Protection Code</b>		IP 40	
<b>Weight</b>		app. 14 kg	
<b>Dimensions</b>	LxWxH (without lever)	350 x 160 x 65 mm	
<b>Housing Material</b>		anodised aluminium, surface tempered steel , stainless steel V2A	