# F490A

### PORTABLE DIGITAL INDICATOR





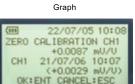
## Perfect for inspection of load cell embedded into facilities & quick load check!

- Small, lightweight and power-saving design best for field use 86(W) × 132(H) × 30(D) mm with weight of approx. 290 g It can be continuously used for about 30 hours (when using 1 pc of 350 Ω sensor)
- The measured data can be stored in csv format in its internal memory.
  - Recorded data can be referred to and copied using its USB interface.

The life time that these limit lives then the							
	ACEDS	A					
			0	D.			
	PAIN RECO	RD-DATA.					
E	ID .	7.77					
1	COUNT	DATE	TIME	014	DATA	UNIT	
4		2006/3/18	143458	1	10	14%	
5.		2 2006/3/11	14,25 06	1	9.967	MY	
4		3 2000/3/18	143512	1	9.900	MY	
3		4 2000/3/1E	143514	1	3.900	MY	
		5 2000/3/18	143517	1	7.0	669	
э.		6 2006/3/18	1435.00	. 1	3.900	MW.	
10.		7 2006/3/11	143525	1	3.000	MW.	
11		8 2008/3/18	14:05:09		9.0	169	
14.		2006/3/18	14,95.50	1	10 001	368	
ta.		0 2000/3/11	1435-07		9.900	MIX	
14.	. 1	2006/3/18	143541	1	3.556	NE	
14	1	2 2006/3/15	14,3540		3.356	165	
t di	1	2 2000-73-73	14.95.48	1	7.0	MY	

 Equipped with a variety of information display such as graph, recorded data, measured value (in mV/V equivalent) etc.

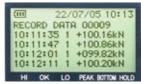




OK LO PEAK BUTTOM HOLD

Calibration value

Last calibration date/time & zero point of that time can be checked. Load cell malfunction can be found immediately.



Recording data



Measured value (in mV/V equivalent)

Display sensor output in terms of mV/V. Useful for sensor maintenance checkup.

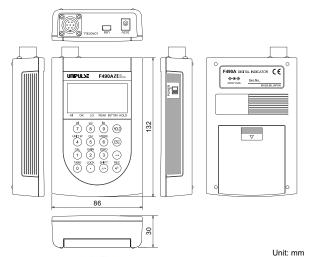
- Hold function
   Peak/ Bottom/ P-P/ Sample (data monitoring range can be set)
- Multi calibration function
   Stores 6 channels of calibration value; selectable arbitrary calibration value according to sensors at fields

#### **Specifications**

Analog	Excitation voltage	DC 3 V±10%, Output current: Within 35 mA				
	Signal input range -3.0 to +3.0 mV/V					
	Calibration range	-3.0 to -0.05 mV/V, +0.05 to +3.0 mV/V				
	Accuracy	Non-linearity: Within 0.02% FS (at 3.0 mV/V input)				
		Zero drift: Within 0.3 μV/°C RTI				
		Gain drift: Within 5 ppm/°C				
	A/D converter	Speed: Selectable from 80, 400, or 1200 times/sec.				
		Resolution: 24 bit (binary) Approx. 1/30000 at 3.0 mV/V input				
Display	Display unit	128 × 64 dot black and white LCD				
	Measured value	5 digits: -99999 to +99999, Character height: 14 mm				
	Status display	Status Display 1: R (Recording)/ A (AC adapter on use)/ U (USB in connection)/ N (NOV RAM reading)/ B (Backup battery abnormal)				
		Status Display 2: HI/ OK/ LO/ PEAK/ BOTTOM/ HOLD				
Record	Recording function	- Records when [REC] key is pressed				
		- Records when stability is detected				
		- Records the Hold value when the Hold is cancelled				
		- Interval recording (Records data at every fixed interval)				
		- Records graph data (Records data displayed in graph)				
	Recording media	Internal memory				
	Recording method	Text form of CSV format				
	Recording data	ID, number of recordings, recording date, recording time,				
		measured channels, measured values, unit				
	Number of recording data	a 20000 data				
Hold	Peak/ Bottom/ P-P/ Sample					
	Data monitoring range: All ranges/ level/ level+time					
Measuring mode	Load measuring/coun	ting				
Interface	USB interface					
Display mode	Measured value, grap	h, recorded data, measured value (in mV/V equivalent)				
General	Power supply	Internal power supply: AA alkaline battery or				
specifications	voltage	Nickel metal-hydride rechargeable battery (4 pcs)				
		External power supply: Special AC adapter (5 V, 1.6 A for AC 100 V)				
		(Optional accessories)				
	Power	Approx. 60 mA (when a 120 Ω sensor is connected, backlight OFF				
	consumption	Approx. 70 mA (when a 120 $\Omega$ sensor is connected, backlight ON)				
	De alore e acousa acousalor	Lithium battery for storing of setting values and recorded data				
	backup power supply	Eliman battery for storing or setting values and recorded data				
	Backup power supply	(stores up to 5 years or more)				
	Continuous	(stores up to 5 years or more)				
		(stores up to 5 years or more) Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF				
	Continuous					
	Continuous usage duration	(stores up to 5 years or more) Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF Approx. 12 hours (when connected to 120 $\Omega$ sensor with backlight OFF)				
	Continuous usage duration Operating	(stores up to 5 years or more) Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF Approx. 12 hours (when connected to 120 $\Omega$ sensor with backlight OFF) Operation temperature: $-10$ to $+40^{\circ}$ C				
	Continuous usage duration Operating conditions	(stores up to 5 years or more) Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF Approx. 12 hours (when connected to 120 $\Omega$ sensor with backlight OFF) Operation temperature: $-10$ to $+40^{\circ}$ C Humidity: 80% RH or less (non-condensing)				
Attachments	Continuous usage duration Operating conditions External dimension Weight	(stores up to 5 years or more) Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF Approx. 12 hours (when connected to 120 $\Omega$ sensor with backlight OFF) Operation temperature: $-10$ to $+40^{\circ}$ C Humidity: 80% RH or less (non-condensing) 86(W) × 132(H) × 30(D) mm (Not including projections)				
Attachments Optional	Continuous usage duration Operating conditions External dimension Weight AA alkaline battery	(stores up to 5 years or more)  Approx. 30 hours (when connected to 350 Ω sensor with backlight OFF Approx. 12 hours (when connected to 120 Ω sensor with backlight OFF) Operation temperature: -10 to +40°C Humidity: 80% RH or less (non-condensing) 86(W) × 132(H) × 30(D) mm (Not including projections) Approx. 290 g (including the 95 g weight of battery) Sensor connector1 CD-ROM1 Operation manual1				
	Continuous usage duration Operating conditions External dimension Weight AA alkaline battery AP0516: Special AC ac	(stores up to 5 years or more) Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF Approx. 12 hours (when connected to 120 $\Omega$ sensor with backlight OFF) Operation temperature: $-10$ to $+40^{\circ}$ C Humidity: 80% RH or less (non-condensing) 86(W) × 132(H) × 30(D) mm (Not including projections) Approx. 290 g (including the 95 g weight of battery)				
Optional	Continuous usage duration Operating conditions External dimension Weight AA alkaline battery AP0516: Special AC a AP0520A: Special AC	(stores up to 5 years or more)  Approx. 30 hours (when connected to 350 $\Omega$ sensor with backlight OFF, Approx. 12 hours (when connected to 120 $\Omega$ sensor with backlight OFF)  Operation temperature: $-10$ to $+40^{\circ}$ C  Humidity: 80% RH or less (non-condensing)  86(W) × 132(H) × 30(D) mm (Not including projections)  Approx. 290 g (including the 95 g weight of battery)  Sensor connector1 CD-ROM1 Operation manual1  dapter (for AC 100 V), CA81-USB: USB Type-A - miniUSB cable 1.8 m				
Optional	Continuous usage duration Operating conditions External dimension Weight AA alkaline battery AP0516: Special AC a AP0520A: Special AC	(stores up to 5 years or more)  Approx. 30 hours (when connected to 350 Ω sensor with backlight OFF Approx. 12 hours (when connected to 120 Ω sensor with backlight OFF Operation temperature: —10 to +40°C Humidity: 80% RH or less (non-condensing) 86(W) × 132(H) × 30(D) mm (Not including projections) Approx. 290 g (including the 95 g weight of battery)  Sensor connector1 CD-ROM1 Operation manual1 dapter (for AC 100 V). CA81-USB: USB Type-A - miniUSB cable 1.8 m adapter (for free power source), minal block connector, TM400 AC CABLE EU: AC cable (for Europe)				

<sup>\*</sup> Please note that there are possibilities of individual differences in a color tone on display devices such as LEDs, fluorescent display tubes and LCDs due to manufacturing process or production lots

### External dimension





With a 4-wire terminal block connector (sold separately), a cable with loose ends is easily connectable