

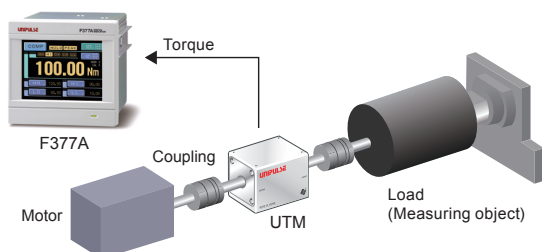
F377A

GRAPHIC DISPLAY/TOUCH PANEL TYPE
DIGITAL INDICATOR
FOR VOLTAGE & CURRENT OUTPUT SENSOR



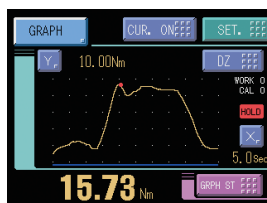
- Can be directly connected to voltage or current output sensor (Voltage: $\pm 10V$; Current: $\pm 20mA$)
- RoHS-compliant product
- 2000 times/sec high-speed processing
- Analog monitor output
Voltage output is proportionate to the input signal making the recording on recorder convenient.
At voltage input: Approx. 0.6V per 1V
At current input: Approx. 0.3V per 1mA
- A variety of interfaces
RS-232C/BCD output/D/A output/DeviceNet/CC-Link
- I/O input: minus common
I/O output: selectable between sink and source type

Example of use combined with torque meter UTM



Waveform Display

Input signal from the sensor is displayed as real-time waveform display.



The Hold point is marked in red

Work Selection (Multi Hold)

This function compares the required points in the waveform with the Hi/Lo limits. It can store up to 16 types of settings (settings such as types of holds or Hi/Lo limits) which can be selected via external signals.

[Types of holds]

Sample, Peak, Bottom, P-P, Average, Inflection Point, Relative Maximum, Relative Minimum, Relative Difference

[Setting of range]

Externally specified range (Peak, Bottom, P-P, Average)
Externally + time specified range (Peak, Bottom, P-P, Average)
Level + time specified range (Peak, Bottom, P-P, Average)
Level (Peak, Bottom)

- Multi calibration function
Stores calibration values (types of analog output sensors/zero calibration/actual load calibration/equivalent input calibration etc.) for 4ch portions and can be selected via touch panel or external signal
- Alarm function
Monitors if the measured value is abnormal
 - Hi/Lo limit for alarm in comparison setting
 - A/D input range
 - Overflow
 - Digital zero regulation value
- Storing of measured data and setting values

Extended Functions

Extended functions through simple screen operation

● Double hold

2 types of Hold functions can be simultaneously performed.

● Previous value comparison

The difference generated after deducting the measured value held earlier can be compared with the Hi/Lo limit.

● Relative value comparison

(only during Double hold)

The difference (relative difference) between Value A Hold and Value B Hold can be compared with the Hi/Lo limit.

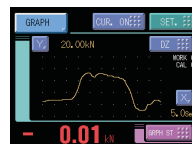
● Auto reset selection

2 selection from below.

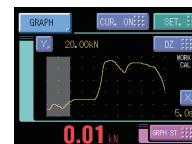
- Hold reset is automatically performed at the start of each Hold Section.
- Hold value is maintained until the T/H signal is input.

● Pre trigger display function

Graph is plotted by tracking back the time by the percentage set for Pre Trigger Display.



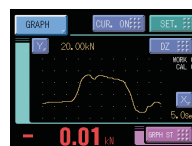
OFF



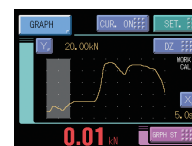
ON

● Filter characteristic selection

You can select CR characteristic digital filter from LPF or HPF.
(On you can select conventional digital filtering by the moving-average method)



moving-average method



CR characteristic

Specifications

ANALOG	Voltage input	-10 ~ +10V Input impedance: 1MΩ or more
	Current input	-20 ~ +20mA Input resistance: Approx. 250Ω
	Zero/Gain adjustment range	Automatic adjustment by digital processing
	Equiv. input calibration range	-10.00~-2.00V, +2.00~+10.00V or -20.00~-4.00mA, +4.00~+20.00mA
	Equiv. input calibration error	Within ±0.1%/FS
	Accuracy	Non-linearity Within 0.02%/FS ±1digit (at 10V or 20mA input) Zero drift 0.2mV/°C RTI or within 0.4μA/°C RTI Gain drift Within 0.01%/°C
	Analog filter	Low pass filter (-6dB/oct); Selectable from 30, 100, 300, 1kHz
	A/D converter	Speed: 2000 times/sec; Resolution: 24 bit (binary) approx. 1/30000 at 10v or 20mA input
	Analog monitor output	Output level: Approx. 0.6V per 1V input or approx. 0.3V per 1mA input; Load resistance: 2kΩ or more
DISPLAY	Display unit	TFT color LCD
	Display area	71 (W) × 53 (H) mm
	Dot structure	320×240 dot
	Measured value	5 digits: -99999~+99999 Sign: Minus sign on most significant digit
HOLD	1) Sample; 2) Peak; 3) Bottom; 4) P-P; 5) Average; 6) Inflection Point; 7) Relative Maximum; 8) Relative Minimum; 9) Relative Difference; 10) Sample & Peak; 11) Sample & Bottom; 12) Sample & P-P; 13) Sample & Average; 14) Sample & Inflection Point; 15) Sample & Relative Maximum; 16) Sample & Relative Minimum; 17) Sample & Relative Difference; 18) Peak & Bottom; 19) Peak & P-P; 20) Bottom & P-P; 21) Average & Peak; 22) Average & Bottom; 23) Average & P-P; 24) Relative Maximum & Relative Minimum; 25) Relative Maximum & Relative Difference; 26) Relative Minimum & Relative Difference	
COMPARISON FUNCTION	Higher Hi (HH) limit setting, Lower Lo (LL) limit setting, High (HI) limit setting, Lower (LO) limit setting	
CALIBRATION VALUE SELECTION	Stores up to 4 types of calibration values that can be interchanged	
EXTERNAL SIGNAL	External output signal (8)	Hi/Lo comparison output (HH, HI, OK, LO,LL)/RUN output/ Hold end output/Graph plotting end output Vce = 30 V (max), Ic = 30mA (max)
	External input signal (10)	Work selection input/hold control input/digital zero input (DZ)/ graph plotting control input/calibration selection input Ic = 10 mA or less
INTERFACE	SIF: 2-wire type serial interface	
	232: RS-232C communication interface	
	BCO: BCD parallel data output interface (Option)	
	DAV: D/A converter voltage output (Option)	
	DAI: D/A converter current output (Option)	
	ODN: DeviceNet interface (Option)	
	CCL: CC-Link interface (Option) (Only one option can be installed)	
OPTION	ISC: I/O Source board	
GENERAL SPECIFICATIONS	Power supply voltage	DC24V (±15%)
	Power consumption	18W max
	Inrush current (Typ)	55A, 1 msec (cold start at room temperature)
	Operation condition	Temperature : Operation temperature -10~+40°C Storage temperature -20~+60°C
		Humidity : 85% RH or lower (non-condensing)
	External dimension	96 (W) × 96 (H) × 138 (D) mm (not including projections)
	Weight	Approx. 1.0kg

ATTACHMENTS	FCN series I/O connector (with cover).....	1
	Jumper wire	1
	Operation Manual	1
	BCD output connector (when BCD output option is selected)	1
	Mini driver (when D/A converter option is selected))	1
	DeviceNet connector (when DeviceNet option is selected))	1
	CC-Link connector (when CC-Link option is selected)).....	1
OPTIONAL ACCESSORIES	CA372-I/O: Cable with FCN connector at one-end 3m	
	CA81-232X: miniDIN-D-Sub9p cross cable 1.5m	
	CN50: FCN series I/O connector (with cover)	
	CN55: FCN series I/O connector (with diagonal cover)	
	CN60: Round DIN 8p connector for RS-232C	
	CN51: BCD output connector	
	CN71: CC-Link connector	
	CN80: Analog I/O connector terminal	
	CND01: DeviceNet connector	
	GMP96x96: Rubber packing	

Model Constitution

F377A □ □
① ② ③

① Standard unit

② I/O output

Sign	Output type
Standard	Sink type(NPN output)
ISC	Source type(PNP output)

③ Interface

Sign	Interface
BCO	BCD output(Sink type)
DAV	D/A converter(Voltage output)
DAI	D/A converter(Current output)
ODN	DeviceNet
CCL	CC-Link

Standard installation : SI/F, RS-232C
1 function can be carried in addition to a standard.

External Dimension

