FC400-CCL
FC400-DAC
FC400-EIP
FC400-ECT

DIN-RAIL MOUNT
WEIGHING INDICATOR

UNIPULSE NEW!

It is suitable for many weighing applications such as hopper scale, packing scale, weight level meter, etc….

EtherCAT   EtherNet/IP

CE RoHS2

FC400-CCL: A weighing system can be configured easily using CC-Link network.
FC400-DAC: Either voltage or current output, corresponding to the indicated value, is available.
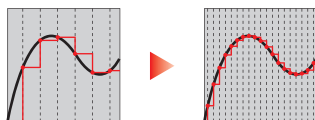FC400-EIP: A weighing system can be configured easily using EtherNet/IP network.
FC400-ECT: A weighing system can be configured easily using EtherCAT network.

High sampling rate & resolution

High-Speed A/D conversion and powerful digital processing capability of 1200 times/sec.
High display resolution of 1/100000 (max).

Measurement can be performed quickly and precisely due to high speed A/D conversion.
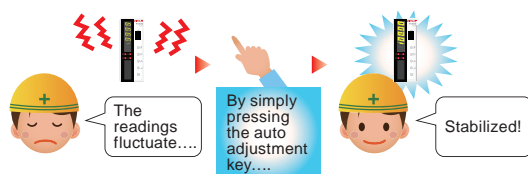
Application software for USB interface

With communication through USB interface, logging, graph display, setting parameters, and calibration can be done.

High performance filter & auto filter adjustment

With combination of low pass filter (0.1 to 300Hz) which corresponds to various vibration and moving average filter (OFF, 2 to 512) that is effective for periodic vibration, automatic searching for optimal value with accuracy and stability can be achieved. (You can manually adjust the settings too)

The readings fluctuate….

By simply pressing the auto adjustment key….

Stabilized!

Compact size

It can be fit into a limited space!
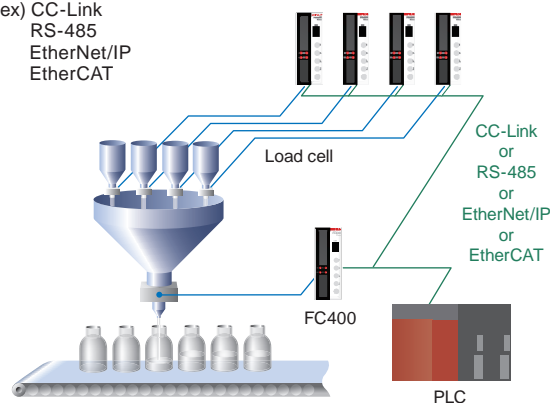Light weight & compact body for 35mm DIN rail mount.

Various interfaces

FC400-CCL：Equipped with CC-Link, SI/F, USB interface
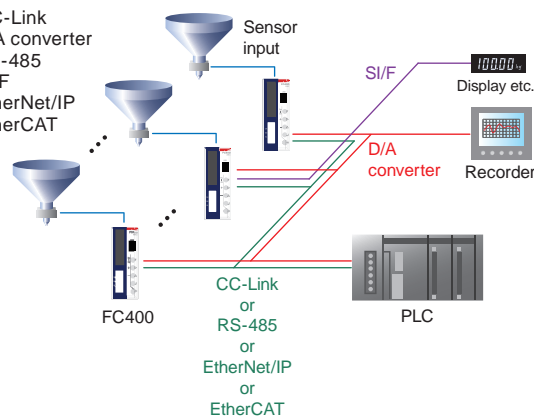FC400-DAC：Equipped with D/A converter, RS-485, USB interface
FC400-EIP：Equipped with EtherNet/IP and USB interface
FC400-ECT：Equipped with EtherCAT and USB interface

ex) CC-Link
    RS-485
    EtherNet/IP
    EtherCAT

Load cell

CC-Link
or
RS-485
or
EtherNet/IP
or
EtherCAT

FC400

PLC

ex) CC-Link
    D/A converter
    RS-485
    SI/F
    EtherNet/IP
    EtherCAT

Sensor input

SI/F

Display etc.

D/A converter

Recorder

FC400

CC-Link
or
RS-485
or
EtherNet/IP
or
EtherCAT

PLC

ex) USB

FC400

USB

PC

Basic weighing process control function

Equipped with weighing sequence function to control feeding/discharge gate.

Input conversion value display

The output signal level of load cell can be displayed in mV/V/ for monitor purpose.
Malfunction indicator or faulty sensor can be differentiated easily.
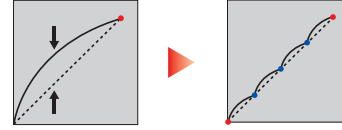
6-digit display

24bit A/D converter enables 6-digit display

Equivalent input calibration

Theoretical calibration can be performed easily by registering the capacity and rated output of load cells.

Multipoint calibration (linearization)

Three additional points can be defined in the middle between zero and span for better linearity. Eventhough the scale has poor linearity, it can be corrected to be a highly accurate scale.

Specifications

Analog	Excitation voltage	DC5V±5% Output current：within 90mA DC2.5V±5% Output current：within 45mA （depending on settings） Ratiometric method （Up to 6 350 load cells can be connected in parallel）	
	Signal input range	−2.5 to 5.1mV/V	
	Zero adjustment range	Automatic adjustment by digital processing -0.5 to 2.0mV/V	
	Span adjustment range	Automatic adjustment by digital processing 0.01 to 3.0mV/V	
	Gain correction	Up to three point multi-point calibration is possible using linearization function	
	Min. input sensitivity	0.15μV/count	
	Accuracy	Non-linearity： within 0.01%FS Zero drift： 0.0002%FS/℃ typ. Gain drift： 1ppm/℃ typ.	
	Filter	Digital low-pass filter 0.1 to 300 Hz Moving average filter OFF, 2 to 512 times	
	A/D converter	Speed： 1200 times/sec Resolution： 24bit	
Display	Display unit	Character height 8mm Numerical display by 7-segment green LED	
	Display value	Up to 6 digits.	
	Display frequency	Selectable from 1, 3, 6, 13, 25 times/sec.	
	Status display	RUN, SD, RD, ERR（FC400-CCL） MS, NS（FC400-EIP） RUN, ERR（FC400-ECT）	
External signal	Output signal （5）	Transistor's open collector output Vceo=30V, Ic=50mA	
	Input signal （3）	Selectable/configurable Input is ON when shorted to COM terminal by contact (relay switch, etc.) or non contact (transistor, open collector, etc.). *DC24V external power supply is required.	

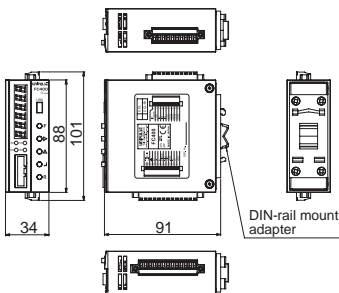| Interface	CC-Link interface（FC400-CCL） D/A converter（Voltage and current output）（FC400-DAC） EtherNet/IP interface（FC400-EIP） EtherCAT interface（FC400-ECT） RS-485 interface（Selectable from Modbus-RTU or UNI-Format）（FC400-DAC） SI/F 2-wire type serial interface（FC400-CCL） USB interface	
General specification	Power supply voltage	DC24V（±15%）
	Power consumption	3W typ.（FC400-DAC） 4W typ.（FC400-CCL、FC400-EIP、FC400-ECT）
	Operating conditions	Temperature：Operating temperature range：-10 to +50℃ Storage temperature range：-20 to +85℃ Humidity： 85%RH or less(non-condensing)
	Dimensions	34（W）×88（H）×91（D）mm（Projections excluded）
	Weight	Approx. 210g（FC400-CCL、FC400-DAC） Approx. 230g（FC400-EIP、FC400-ECT）
Attachment	Quick manual…2 Jumper wire…2 Mini driver…1 CC-Link connector…1（FC400-CCL） Various I/O connector …FC400-CCL、FC400-EIP、FC400-ECT：2、FC400-DAC：3	
Accessories	CA81-USB：miniUSB-computer USB cable 1.8m CN74：CC-Link connector (Same accessory as the attached one) CN75：CC-Link connector (Y type branch connector) CN76：CC-Link connector (Terminator connector) CN87：10p connector for external I/O (Same accessory as the attached one) CN85：13p connector for power source/sensor/RS-485 （Same accessory as the attached one） CN86：3p connector D/A converter(Same accessory as the attached one)	
CE MARKING CERTIFICATION	EMC directive EN61326-1	

＊EtherNet/IP is a registered trademark of ODVA.
＊EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.
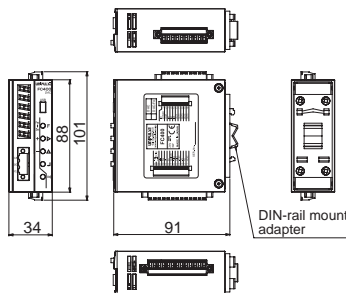
Structure of product code

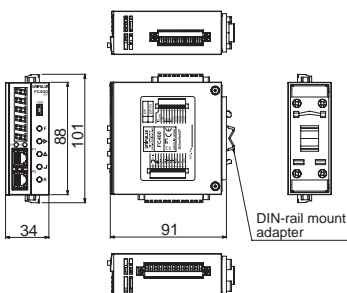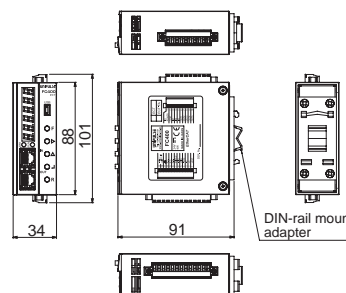| Model	Interface
FC400-CCL	CC-Link, SI/F, USB
FC400-DAC	D/A converter（Voltage and current output），RS-485, USB
FC400-EIP	EtherNet/IP, USB
FC400-ECT	EtherCAT, USB

External dimension

■FC400-CCL

■FC400-DAC

■FC400-EIP

■FC400-ECT

Unit：mm