

# FX32LA

## USER'S MANUAL

**DOTECH**  
SENSING & CONTROL

DOTECH INC.

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INNOBIZ  
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- This product may cause an electric shock in handling. Please do not attempt to open it with power turned on.
  - This product should be installed in a place fixed secured by a rack or panel.
  - This product can be used under the following environmental condition.
    - Indoor Pollution Degree 2
    - At an altitude of 2000m or below
  - Power input must be within the designated ranges.
  - To supply or cut off power for this product, please use circuit break (250V/10A) or switch of IEC 60947-1 or IEC 60947-3 standard and install it within a close distance allowing convenient operation by user.
  - Please be understood that if this product is dismantled or modified discretionary, after sales service will not be able to be provided.
  - Input and output wire to be used for this product should be inflammable grade PV1 (V-1 grade or above), the thickness of the wire should be AWG No. 20 or above.
  - In order to prevent it from an inductive noise, please maintain the high-voltage wire and power wire separated.
  - Please avoid installing the product in a place where a strong magnetism, noise, severe vibration and impact exist.
  - When extending the sensor wire, use a shield wire and do not extend it unnecessary long.
  - The sensor wire and signal wire should be away from the power and load wires using conduits separately installed.
  - Please avoid using the product near a device generating strong high frequency noise (high-frequency welding machine, high-frequency sewing machine, high-frequency radiotelegraph, high capacity SCR controller).
  - Products damages other than those described in the guarantee conditions provided by the manufacturer shall not be responsible by us.
  - If this unit is used to control machineries (Medical equipment, vehicle, train, airplane, combustion apparatus entertainment, processing and transportation equipment, elevator and various safety device etc.) enabling to effect on human or property, it is required to install fail-safe device.
- ※The aforementioned precautions must be observed, and if you fail to do so, it may cause a product's breakdown.  
※The specifications, dimensions, and etc. are subject to change for enhancement without a prior notice.

### 1. Overview



#### : Ordering guide

Model	Description
FX32LA-00	Basic model
FX32LA-R4	With RS485 comm. function (Modbus RTU)

#### : Basic specifications

Items	Descriptions
Dimension	87(W)mm X 30(H)mm X 114(D)mm
Power supply	100 - 240 Vac, 50 / 60 Hz
Power consumption	MAX 6 VA
Display	FND, LED
Connection	Screw terminal, Wire range : 24~12 AWG
Input	1P current sensor
Operation	Temp. - 10 ~ 50 °C, Humidity 90 %RH or less
Storage	Temp. - 20 ~ 60 °C, Humidity 90 %RH or less

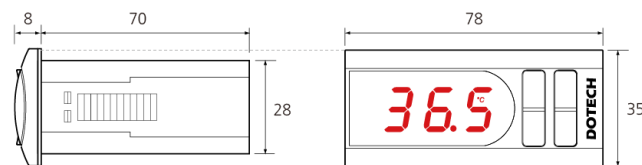
#### : Sensor specifications

Model	Description	
JC36S500-V	Measuring range (50/60Hz)	0 ~ 500 Arms
	Output voltage	0 ~ 5 Vdc
	Output impedance	5.8KΩ
	Response	300 msec
	Operation	Temp. -20 ~ 50 °C, Humidity 85 %RH or less
	Storage	Temp. -30 ~ 90 °C, Humidity 85 %RH or less

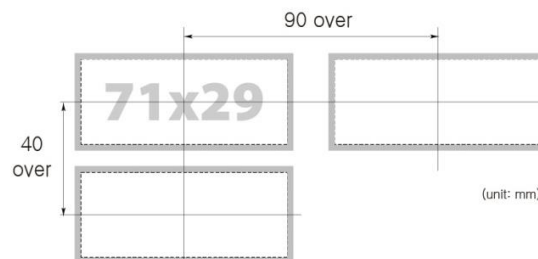


### 2. Installation

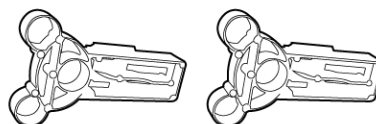
#### : Dimension & Panel Cut (mm)



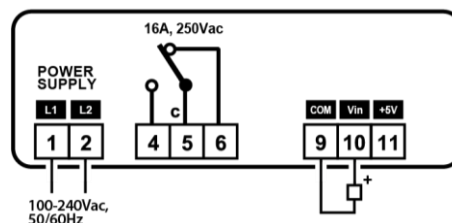
DOTECH Standardized Dimensions (Panel Cut Size : 71 X 29mm)



Bracket 2 ea for mounting



#### : Wiring Diagram

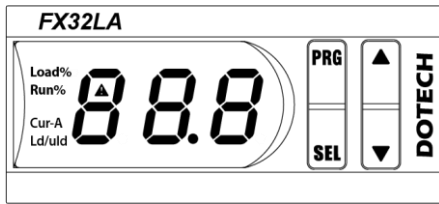


#### : Terminal

No.	Definition	Description
1	POWER	24 Vac / Vdc, 50 / 60 Hz power input
2		
4	OUT1	When the signal of OUT1 is activated (Close)
5		Common signal
6		When the signal of OUT1 activated (Open)
9	COM	Common signal
10	Vin	+Signal input terminal
11	+5V	+5Vdc output signal

### 3. User Interface

: Lamp & Operation Button



LED	Description
Load%	On when displaying measured load factor
Run%	On when displaying measured operating factor
Cur-A	On when displaying present current value
Ld/uld	On when present current value is higher than set value of load
Button	Description
PRG	Program setup
SEL	Upward button (Increase)
▲	Downward button (Decrease)
▼	Selection and storage
PRG ▲	Initialization for measured value when pressing for 5 seconds simultaneously
SEL	Parameter display will be changed when pressing SEL button. Load factor → Operating factor → Present current
PRG ▼	Initialization when pressing for 10 seconds simultaneously

: Setting Group Table

Address	Description	Code	Unit	Step	Minimum	Maximum	Default
4 0031	Unload current	<i>ULd</i>	A	1	0	500	40
4 0032	Load current	<i>Ld</i>	A	1	0	500	60
4 0033	Quiescent current	<i>SEp</i>	A	1	0	500	2
4 0034	Operating current	<i>SEr</i>	A	1	0	500	5
4 0036	Initialization for measured value	<i>rSt</i>		0= OFF		1= ON	OFF

: Trip / Alarm Message

No.	Description	Code	Setting details	Operating at detection	Way to clear
1	System fault	<i>SY5</i>	Reset default value and power up gain	Immediately stop	Manual reset
2	Disconnection/Short circuit	<i>SHt</i>	Sensor is disconnected or short circuited. Please ask for service	Immediately stop	Automatic reset

※ In case of occurring error, error message will be flickering in every 0.5 seconds.

### 5. Communication Protocol

: Specifications of communication

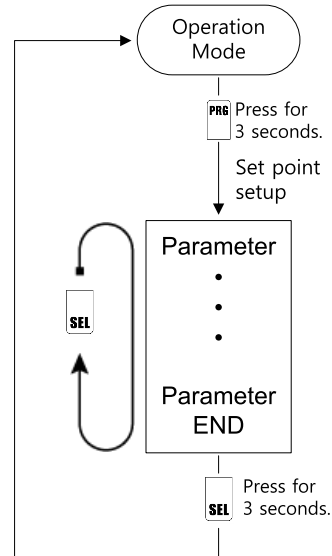
Items	Description
Transmission line connection	Multiple line
Communications method	RS485 (2-wire, half-duplex)
Baud-rate	BPS default 9600 BPS
Parity, Data, Stop bit	None, 8 Data, 1 Stop
Protocol Type	Modbus RTU MODE
Maximum Read Word	100 Word
Media Type	BELDEN 9841 / 9842, LG LIREV-AMESB
Poll interval	100msec

: Communication table for status

Address	Description	Unit	Type	Size (Word)	FX32LA	MMI
4 0003	Measured load factor	%	Analog	INT 16	0.0 ~ 100.0	X 10
4 0004	Measured unload factor	%	Analog	INT 16	0.0 ~ 100.0	X 10
4 0005	Measured operating factor	%	Analog	INT 16	0.0 ~ 100.0	X 10
4 0006	Present current value	A	Analog	INT 16	0 ~ 500	-

### 4. Parameter

: Parameter change



- Press PRG button for 3 seconds to change parameters of setting group table.
- Movement to next menu and storage of set value during parameter setup are performed by SEL button.
- Set value will be flickering in every 0.5 seconds and change set value using ▲ or ▼ key.
- Present value will be displayed if pressing SEL button for 3 seconds after finished setup.
- If there is no input for 3 minutes during setup, it will be returned to operation mode.