

## SALIENT FEATURES

- DIN rail / Back panel mounted slim PLC
- Transistor or Relay outputs
- 32 Bit RISC processor
- DC inputs, DC Outputs
- Support for High Speed Counters(8 Channels Up-to 10KHz or 2 channels Up-to 25KHz) / Quadrature (2 pairs Up-to 10KHz or 4 pairs Up-to 5KHz) and Timers
- High Speed 3 PWM output (Up-to 10 KHz)
- Up-to 2 Serial Ports, 1 RS232, 1 RS485
- 1 USB Device Port
- DC powered units (24 V DC)
- IEC61131-3 programming environment and Native Ladder programming environment support
- CE approved



**Program Memory**  
13K Steps

**Expansions Connectivity**  
Up-to 8

**Program Language**  
LD, FBD, ST, IL, SFC

**Total Memory**  
190KB (Application + Logic)

**Execution Speed**  
85.0ns/contact  
342.85ns/coil  
533.33ns/16bit transfer  
523.80ns/16bit signed addition

## MODEL COMPARISON

Model		FL004-0806P	FL004-0806R	FL004-0806N
<b>Power Supply</b>	Rated Power	24VDC, 250mA		
	Power Consumption (With Expansions)	5W@24VDC		
<b>Digital Inputs</b>	Input Signal	DC Input Bi-directional		
	Total Channels	8		
	Isolation	3.7KV		
	High Speed Inputs	2 (25KHz), 8 (10KHz)		
	Quadrature Inputs	2 (10KHz), 4 (5KHz)		
<b>Digital Outputs</b>	Total Channels	6		
	Output Type	PNP	Relay	NPN
	Nominal Load Current	0.5A/channel at 24VDC	2A at 24VDC, 2A at 230VAC, 5A/common	0.5A/channel at 24VDC
	High Speed Output	Up-to 10KHz each (3 Channels with Dir.)	-	Up-to 10KHz each (3 Channels with Dir.)
<b>Comm. Ports</b>	Serial	2		
	Type	One 3.81 pitch PBT RS485 (2-Wire), One RJ45 RS232		
	USB Device	One micro 2.0		
<b>Environmental &amp; Approvals</b>	Operating Temperature	0 to 55 °C		
	Storage Temperature	-20 to 85 °C		
	Humidity	10 to 90 % non condensing		
	Vibration immunity	IEC60068-2-6		
	Shock immunity	IEC60068-2-27		
	Dimensions	100mm(H) X 26mm(W) X 70mm(L)		
	Weight (Approx.)	150 gms.		
Approvals	CE			
Expansion Connectivity		Up-to 8		

# MODEL DESCRIPTION

**RS485 Serial Port**  
1 communication port supports 2 - wire RS485 serial interface.

**USB Port**  
1 micro USB device for upload, Download and monitor of application / logic.

**Digital Inputs**  
24VDC inputs includes 8 high speed / 4 quadrature inputs Up-to25KHz frequency

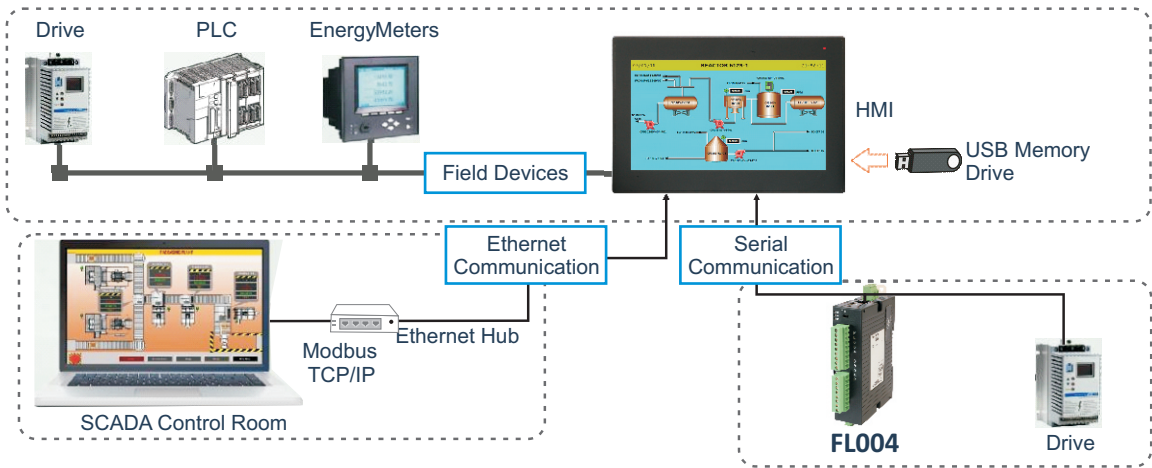
**Non-isolated Power Supply 24VDC**  
Recommended to use Isolated External power supply

**RS232 Serial Port**  
1 RJ45 connector for RS232 serial interface with other devices.

**Digital Outputs**  
Digital outputs includes relay, PNP & NPN transistorized pulse output of 10KHz frequency.

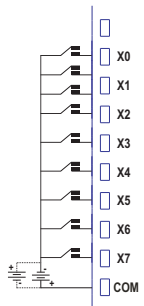
**Up-to 8 expansions**

# PLC BASED CONTROL APPLICATION

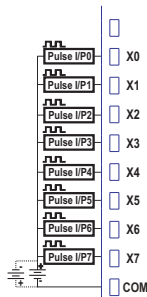


# WIRING DIAGRAM

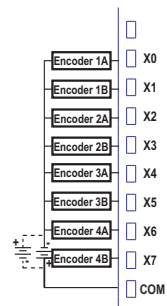
Digital Inputs



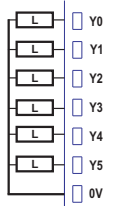
HSC Inputs: Single Phase counter



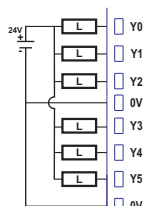
Quadrature



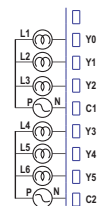
Digital Outputs: (P-Type)



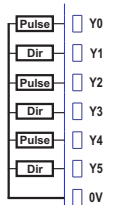
Digital Outputs: (N-Type)



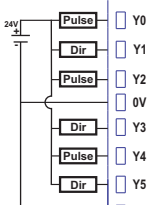
Digital Outputs: (R-Type)



PWM Output: (P-Type)



PWM Output: (N-Type)



## DIGITAL EXPANSION MODULES

Model	Digital I/P	Digital O/P	Description
FLD0800	8	0	8 Digital Inputs
FLD0008N	0	8	8 Digital Outputs (NPN)
FLD0008R	0	8	8 Digital Outputs (Relay)
FLD0808N	8	8	8 Digital Inputs, 8 NPN Outputs
FLD0808R-L	8	8	8 Digital Inputs, 8 Relay type Outputs Digital module

## ANALOG EXPANSION MODULES

Model	Analog I/P	Analog O/P	Description
FLA0400-14	4	0	4 Analog Inputs ( 0-10 VDC / 0-20mA / 4-20 mA ), 14 Bit
FLA0400-16	4	0	4 Analog Inputs ( 0-10 VDC / 0-20mA / 4-20 mA ), 16 Bit
FLA0400T	4	0	4 TC Analog Inputs (B, R, S, E, J, K, N, T)
FLA0400R	4	0	4 RTD Analog Inputs (PT100 / PT1000)
FLA0002L	0	2	2 Analog Outputs (0-10 VDC / 4-20 mA), 12 Bit
FLA0004L	0	4	4 Analog Outputs (0-10 VDC / 4-20 mA), 12 Bit
FLA0402L	4	2	4 Linear inputs (0-10V) / 4-20mA / 0-20mA), 16 Bit 2 Analog outputs (0-10V / 4-20mA / 0-20mA), 12Bit
FLA0402U-12	4	2	4 Universal Inputs (0-5 V / 0-10 V / 0-100 mV / 0-50 mV / 0-20 mA / 4-20 mA / RTD PT-100, PT-1000 / Thermocouple - B, R, S, E, J, K, N, T) 2 Analog Outputs (0-10 V / 4-20mA), 12 Bit
FLAD0202N-S0	2	2	2 Load cell inputs, 2 NPN transistor outputs

**Note:**Presently FL004 Series PLCs Support Digital and Analog Expansions modules as per the above list.  
Please contact factory regarding possibility of supporting other Expansions modules not listed above.

## SUPPORTED PROTOCOLS

ABB PLCs
Allen Bradley DF1
Baldor
Danfoss Drive
Delta PLCs
Fatek PLCs
FlexiLogics Slave Driver
FlexiLogics Master Driver
FL Smidth Loadcell
GE SNP
GE SNP- X
Idec PLCs
LG Master K Series PLC
LG Master K 300S
Mitsubishi FX
Mitsubishi Q Series PLCs (Serial)

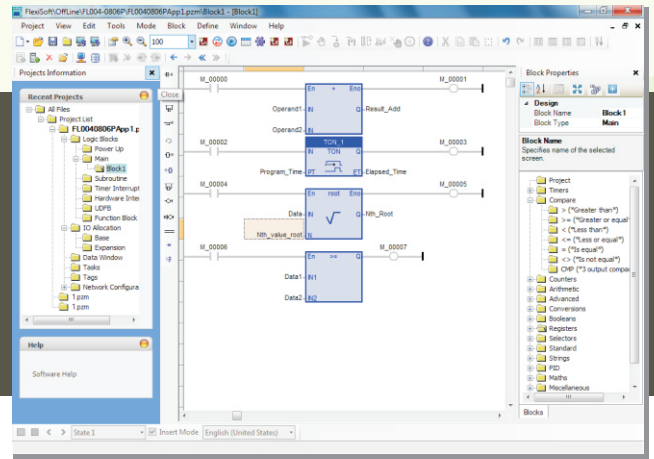
Modbus ASCII (Unit as Master)
Modbus RTU (Unit as Master)
Modbus RTU (Unit as Slave)
Omron Inverter Memo BUS
Omron Host Link
Panasonic FP Series
Siemens Micromaster Driver (USS)
Toshiba (Link Port) Series PLCs
Toshiba Inverters PLCs
Toshiba T Series
TriPLC
Twido PLCs
Unitelway PLCs
Universal Serial Driver(ASCII)

## SOFTWARE OVERVIEW

**FlexiSoft®**  
Build and Run

### Configuration Software

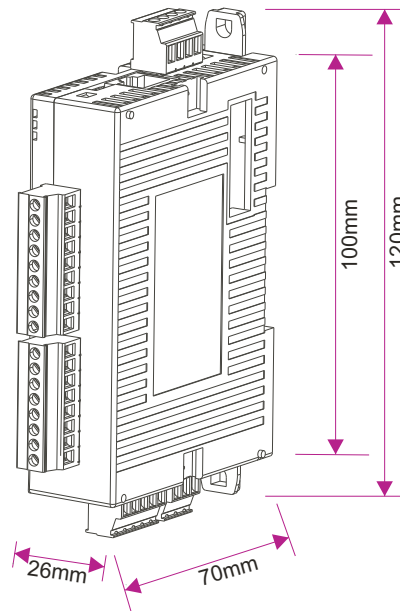
FlexiSoft® is a compact, Windows® based software to configure the PLC. This image from FlexiSoft® shows the snap shot of Programming window.



## ORDERING INFORMATION

Models	Description
<b>FL004-0806P</b>	8 Bi-directional digital inputs(2 single phase HSC up-to 25KHz or 8 single phase HSC up-to 10KHz or 4 Quadrature up-to 5KHz or 2 Quadrature up-to 10KHz), 6 PNP-transistor type digital outputs, (3high speed outputs up-to 10KHz),13K Steps Memory
<b>FL004-0806R</b>	8 Bi-directional digital inputs(3 single phase HSC up-to 25KHz or 2 Quadrature up-to 5KHz), 6 Relay type digital outputs, 13K Steps Memory
<b>FL004-0806N</b>	8 Bi-directional digital inputs(2 single phase HSC up-to 25KHz or 8 single phase HSC up-to 10KHz or 4 Quadrature up-to 5KHz or 2 Quadrature up-to 10KHz), 6 NPN-transistor type digital outputs, (3high speed outputs up-to 10KHz),13K Steps Memory

## DIMENSIONS



Please contact factory for more information. We welcome an opportunity to develop new, custom drivers and customized units.



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