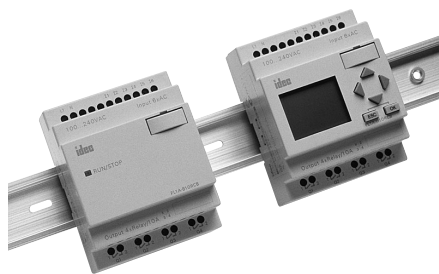


IDEC SmartRelay
IDEC SmartRelay –the smart and expandable solution


Get smart with the fully programmable IDEC SmartRelay, a compact, expandable CPU that can replace multiple timers, relays and counters. Each CPU houses a real-time clock and calendar, and supports optional expansion I/O modules to enhance your control and monitoring applications. Program and edit using either the "smart" on-board selection buttons and display interface, or our even "smarter" software, WindLGC. The IDEC SmartRelay is the ideal solution for managing automatic lighting, access control, watering systems, pump control, or ventilation systems in factory or home automation.

Highlights of the FL1C series

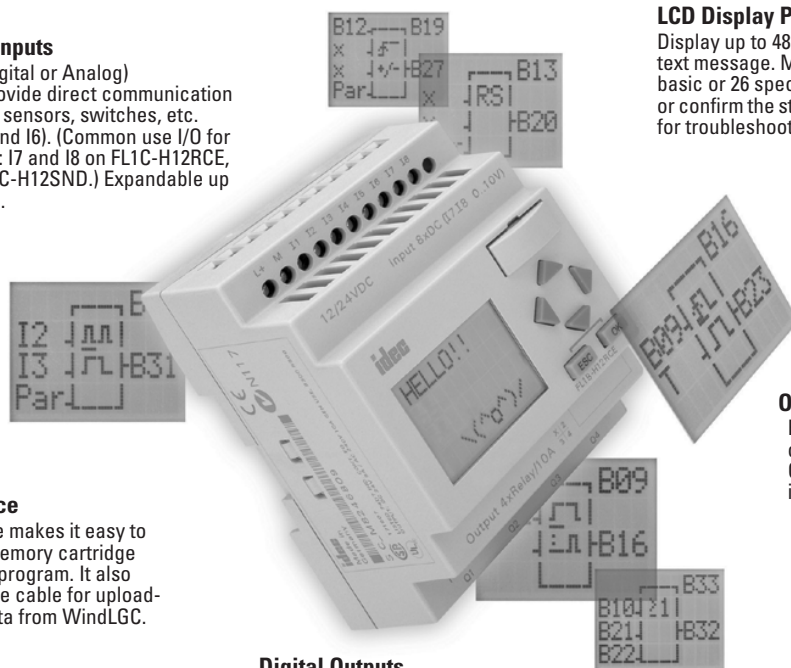
- 32-bit processor
- 130 connectable blocks
- 4 new function blocks
- 4 x12 backlight display
- Timer and counter frequency up to 2KHz
- Online monitor
- Ladder programming
- Invert of inputs saves NOT function blocks

Digital/Analog Inputs

(6 Digital plus 2 Digital or Analog)
Multiple inputs provide direct communication with pushbuttons, sensors, switches, etc. (2kHz max. on I5 and I6). (Common use I/O for digital and analog: I7 and I8 on FL1C-H12RCE, FL1C-B12RCE, FL1C-H12SND.) Expandable up to 24 digital inputs.

LCD Display Panel

Display up to 48 characters as a text message. Monitor any of the 8 basic or 26 special function blocks, or confirm the status of the program for troubleshooting.


Multifunction Interface

A multifunction interface makes it easy to insert and remove the memory cartridge that controls the circuit program. It also supports the PC interface cable for uploading and downloading data from WindLGC.

Digital Outputs

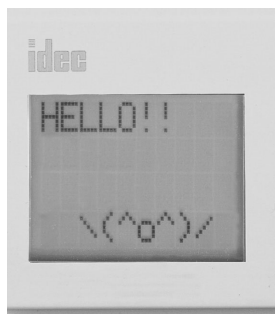
Use the outputs to control lights, small-sized motors and solenoid valves up to 10A. Expandable up to 16 digital outputs.

Operational Control Buttons

Easy programming interface uses only six buttons. No tools necessary. Cursor keys can also be configured as inputs.

Other Key Features

- Password protection
- Daylight savings time
- UL/c-UL listed, IEC61131/VDE0631, EMC Compliant, C-tick listed
- FM approved for Class 1, Div 2 Class 1, Zone 2 hazardous locations.

Other Characteristics

Text Display

It can display messages with background lighting up to 48 characters long from a selection of 97 character types.


Operational Buttons

Use the selection buttons for easy confirmation or modification of the circuit being displayed. The cursor keys can be configured as inputs.


Memory Cartridge

FL1C-PM3 is a memory cartridge with know-how protection. Not only is it possible to save your program, but also to protect it from unintended modification, copying or deletion.

Not required for operation.


Expansion Modules

Optional expansion I/O modules allow you to add digital input, output and LONWORKS®/AS-Interface communication modules as well as analog inputs to your system. Just snap-on and go – no special software or cables required.

Part Numbers

Base Module Part Number

Part Number	Rated Voltage	Input Signal	Input Type	Output Signal	With Display	With Clock	Input/Output
FL1C-H12RCE	12/24V DC	DC I7and I8 are used for digital/analog	PNP	Relay Output	Yes	Yes	8/4
FL1C-B12RCE					—		
FL1C-H12SND	24V DC			Transistor Source Output	Yes	—	
FL1C-H12RCA	24V AC/DC	AC/DC	PNP/NPN	Relay Output	Yes	Yes	
FL1C-B12RCA					—		
FL1C-H12RCC	100-240V AC/DC		PNP		Yes		
FL1C-B12RCC					—		

Expansion Module Part Number

Part No.	Module	Power Voltage	Input	Output	Total I/O
FL1B-M08B2R2	Combination I/O Module	12/24V DC	DC input	Relay output	8 (4 in/4 out)
FL1B-M08B1S2		24V DC	DC input	Transistor output	8 (4 in/4 out)
FL1B-M08C2R2		100-240V AC/DC	AC/DC input	Relay output	8 (4 in/4 out)
FL1B-M08D2R2		24V AC/DC	AC/DC input	Relay output	8 (4 in/4 out)
FL1B-J2B2	Analog Input Module	12/24V DC	Analog input	—	2 (2 in/0 out)
FL1B-CL1C12	LONWORKS® Communication Module*	24V AC/DC	—	—	—
FL1B-CAS2	AS-Interface Communication Module*	30V DC	—	—	—



* For more information see Section M, Communications & Networking.

Starter Kit Part Number

Part Number	Description
SMARTSTART-BAC-C	FL1C-B12RCC, WindLGC software, and programming cable
SMARTSTART-BDC-C	FL1C-B12RCE, WindLGC software, programming cable, and simulator switch
SMARTSTART-HAC-C	FL1C-H12RCC, WindLGC software, and programming cable
SMARTSTART-HDC-C	FL1C-H12RCE, WindLGC software, programming cable, and simulator switch

Accessories

Part Number	Description	Note
FL1C-PM3	Memory Cartridge	Memory cartridge with know-how protection
FL9Y-LP1CDW	Programming Software: WindLGC Ver. 4	CD w/Online Manual
FL1A-PC1	PC Interface Cable	Connection of SmartRelay to PC
BAA1000 BNDN1000	35MM DIN Rail	Aluminum, 1m/3.28ft
BNL6	Mounting Clips	
MT-101	Memory Cartridge Removal Tool	
FL1B-PSP1	Direct Mounting Slides	
FL1B-Y1371-SW8	8pt simulator switch	used with 12, 24V DC base module only
FL9Y-B827	FL1C user's manual	
FC4A-USB	USB/RS232 converter	

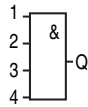


Function Blocks

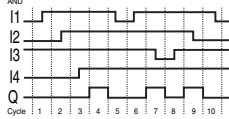
General Function Blocks

• AND

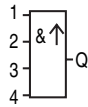
Series connection of normally open contacts



• AND (Edge)

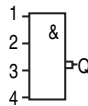


Edge detection with edge evaluation (pos. edge)

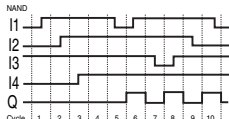


• NAND

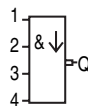
Parallel connection of normally closed contacts



• NAND (Edge)

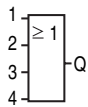


Edge detection with edge evaluation (pos. edge)



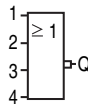
• OR

Parallel connection of normally open contacts



• NOR

Series connection of normally closed contacts



• XOR

Double changeover contact



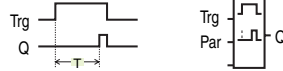
• NOT

Connection of closed contact



Special Function Blocks

• On-delay



• Off-delay



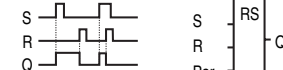
• On-/Off-delay



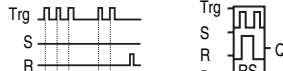
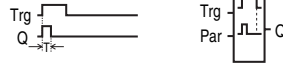
• Retentive on-delay



• Latching relay



• Current impulse relay

• Interval time-delay relay/
Pulse output• Edge-triggered interval
time-delay relay

• Seven-day time switch



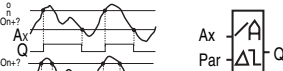
• Twelve-month time switch



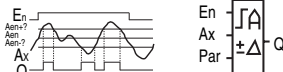
• Up/down counter



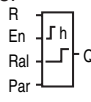
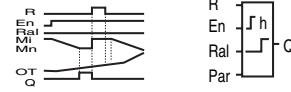
• Analog differential trigger



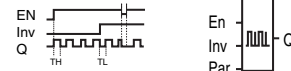
• Analog value monitoring



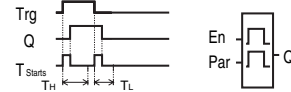
• Operating hours counter



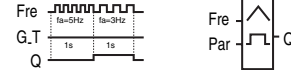
• Asynchronous pulse generator



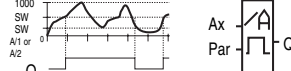
• Random generator



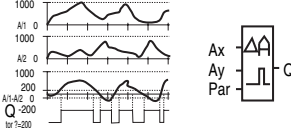
• Frequency trigger



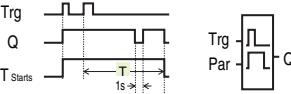
• Analog trigger



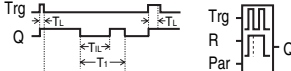
• Analog comparator



• Stairwell light switch



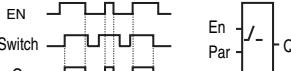
• Dual-function switch



• Message texts



• Softkey



• Analog amplifier



• Shift register

