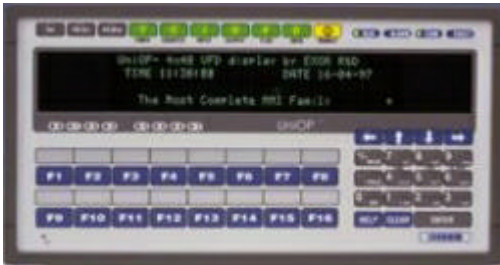# UniPlus - Industrial PLC Workstation
UniOP™ - Universal Operator Panel Family

- 2 or 4 Line x 40 Character VFD or LCD
- Numeric Keypad
- 45 Programmable Keys
- Keyboard Macro Editor
- Recipe Capabilities
- UniNET Networking Capabilities
- Links Directly to PLC Programming Port
- NEMA 4/12 Compliant Enclosure

The MKDF-02(04) and MKDR-04 models fulfill the need for a powerful yet cost effective operator interface system. Displays are available with two or four lines and your choice of a LCD or VFD display. Each line can contain up to 40 characters. Each page can contain up to 32 lines which can be accessed by scrolling with the arrow keys. The MKDR-04 display has a contrast control and the MKDF-02(04) has a brightness control. This control is provided to adjust the display for easy viewing under nearly any condition.

Display Variables
PLC internal variables can be shown on any of the many display pages. The number of variables that can be viewed at one time is limited only by the display size. UniOP also provides scaling (linear conversion) of the displayed data. The final value can then be shown in several useful formats including bargraph, date, time, decimal, bit, hexadecimal, floating point, and string. Data entry with valid range verification is also available for each data type.

Data Entry
The integral keypad offers 45 programmable function keys (16 with user LEDs). Slide-in legends make it easy to customize and document the operation of each key which has an LED.

UniOP also features an internal battery-backed real time clock. Time and date information from the clock are periodically updated in the PLC to enable processing based on time-of-day, day-of-week or any other period.

Security
An eight-level password protection scheme protects critical system features from undesired access.

Alarms
UniOP can monitor and display up to 1024 alarms. Attributes and unique messages for each alarm can be defined. Operator acknowledgment can also be required. The last 256 alarm events detected by the UniOP are retained in an internal event list. This list can be viewed on screen or printed on a serial printer to obtain a permanent record.

Adaptability
Custom display screens are developed using the UniOP Designer™ for Windows™ programming software. Your completed project file can be downloaded to the display through the serial port and permanently stored in a Flash EPROM.

Keyboard Macro Editor
A feature that allows you to configure your UniOP keys to do a variety of functions locally in the UniOP. For example: turning pages, setting attributes, setting LEDs, writing to the PLC, going to the alarm list, uploading or downloading a recipe set and many more. This can save many hours of ladder logic programming.

Recipes

This feature allows you to create a recipe with up to 255 parameter sets for each page of the project file. UniOP has a total of 16K reserved for recipe storage. You can upload or download a parameter set from or to the PLC. Once a parameter set has been downloaded to the PLC, the data contained within the parameter set can be modified.

UniNET

The UniNET network allows you to design networks of varying configurations; from two panels with one PLC to multiple panels with multiple PLCs. Data can be written to or retrieved from the PLCs in many different locations at one time. The UniNET network creates a bridge between UniOP panels which allows data to be shared by all PLCs in the network, regardless of the type or manufacturer.
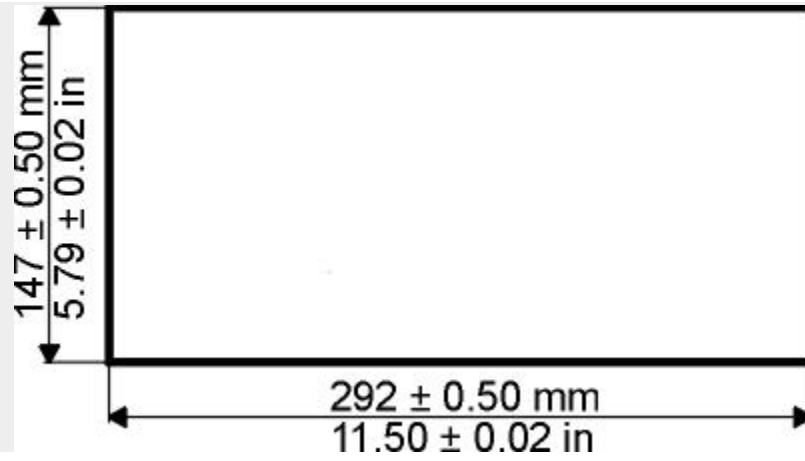
Important Features

- NEMA 4/12 compliant enclosure
- CE approved
- UniNET network capabilities
- Keyboard Macro Editor
- Recipe configuration
- One RS-232 / RS-422 / RS-485 / 20mA current loop serial port, speeds up to 38,400 baud for direct PLC connection
- One RS-232 port for PC or printer communications
- One auxiliary port for high speed bus network communications

- Real time clock with battery back-up
- 45 programmable keys
- 128 KB internal memory standard Flash EPROM
- Unlimited number of variables per page
- 1024 prioritized alarms
- Historical event list (last 256 events)
- Eight-level password protection
- Prints reports, alarm list, and event list to serial printer
- Displays ASCII standard character set

Specifications

Physical Dimensions	
Cutout Width and Height	See drawing below
Cutout Depth	80 mm (3.15")
Front Panel Thickness (max.)	9 mm (0.35")
Faceplate height	165 mm (6.50")
Faceplate Width	311 mm (12.24")
Weight	1.9 kg (4.2 lb)
Environment	
Operating Temperature	0 to 50 °C (32 to 122 °F)
Humidity	0 to 95% RH (non-condensing)
Power Requirements (MD02R)	250 mA maximum, 24 VDC
Power Requirements (MKDF-02)	500 mA maximum, 24 VDC
Power Requirements (MKDF-04)	700 mA maximum, 24 VDC
Power Requirements (MKDR-04)	400 mA maximum, 24 VDC
Display	
Type	Liquid Crystal
Size	4 lines x 40 characters/line
Character Height	5.15 mm (13/64 inch)
Type	Vacuum Flourescent
Size	2 or 4 lines x 40 characters/line
Character Height	5.9 mm (15/64 inch)
Keypad	
Technology	Tactile Feedback (tested 5M times)
Warranty	
	All products are warranted for one year against defects in material and workmanship.

Ordering Information	
Description	**Part No.**
VFD, 2 x 40	MKDF-02
VFD, 4 x 40	MKDF-04
LCD, 4 x 40	MKDR-04

Panel Cutout Dimensions

147 ± 0.50 mm
5.79 ± 0.02 in

292 ± 0.50 mm
11.50 ± 0.02 in

Specifications subject to change without notice