Using the AT-F Keyboard

1. Operation

The AT-F keyboard is an extended functional keyboard that can be attached to UniOP panels and includes the complete set of ASCII keys with QWERTY layout.
When attached to a UniOP panel, the AT-F keyboard adds the possibility of performing direct ASCII data entry. The AT-F keyboard offers full compatibility with the simpler ET-F keyboard.

The AT-F keyboard is shown in the picture below:

Figure 1 - The AT-F keyboard

If connected, the AT-F keyboard will be automatically recognized by the system and the ASCII data entry function will be enabled.

The keyboard is divided in three main parts:
? the ASCII keypad
? the numeric keypad
? the function keys

1.1. The ASCII Keypad

The ASCII keypad has a standard US PC keyboard layout.

The following functions are supported:
- Shift key: let you select between lowercase/uppercase letters and betwen numbers/symbols
- Caps lock: select between lowercase/uppercase for letters
- ✍ : performs the backspace functions when in ASCII data entry mode
- Alt: the combination Alt+'3 digit number' let you enter any character with code 1 to 255 even if not available in the keyboard. For example entering Alt+128 will recall the special character code 128. Special characters usually change when you change panel model.
- PrtScr: recalls the printout function of the panels
- Enter: terminates a data entry session and confirms the value just entered
- F1 - F12: operate as standard keys F1 to F12

The following keys are not supported:
- Esc
- Ctrl
- Tab
- Scroll Lock
- Pause Break

1.2. The Numeric Keypad

The numeric keypad performs the standard functions of the UniOP numeric keypad. All keys can be used in data entry (numeric and ASCII) and can be associated Macro Editor commands.

The following functions are supported:
- the key 0/Ins works as in the other UniOP panels and recalls the Data Entry function by default. During Data Entry it works normally as the 0 key
- the key 9, when not in data entry, recalls the printout function
- the key - can be used to enter negative numbers
- the key . can be used to enter the decimal point.

The following keys of the numeric keypad are not supported:
- /
- +

The Num Lock function is always on. The keys are always associated their numeric meaning.

1.3. The Function Keys

The AT-F keyboard has 36 function keys. The first 12 are labelled F1 to F12 and are located at the top of the ASCII keypad.

The remaining 24 function keys are not labelled and are located at the bottom left of the keyboard. They are recognized by the system as F13 to F36. Each of the me as a programmable LED indicator. You can insert a legend below the 24 function keys.

1.4. How to do ASCII Data Entry

To use the ASCII data entry function you will have to:
- create a data field of ASCII type with the Read/Write option enabled
- download the project to the UniOP panel
- go to Data Entry Mode
- the field can now be edited with the ASCII keys

The Backspace key will delete the last entered character and move the cursor one place to the left.

2. Key and LED Assignment

The AT-F keyboard can still be used in conjuction with powerful features such as the Keyboard Macro Editor and the Reserved Data Area.

2.1. Macro Editor

The following keys can be programmed normally using the Keyboard Macro Editor:

- F1 to F36
- 0-9 in the numeric keypad

Note that keys in the ASCII keypad cannot be associated commands with the macro Editor.

Each of the function keys F13 to F36 have a programmable LED indicator. The LED's are referred in the Macro Editor as L1 to L24.

> *Note that this is a difference from all the other panels where the LED on function key F1 is normally referred as L1.*

2.2. Reserved Data Area

When using the AT-F keyboard, the Keyboard Update Area and the LED registers in the PLC Status Area in the RDA are as described in the figures below.

	bit 15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	bit 0
Addr	F16	F15	F14	F13	F12	F11	F10	F9	F8	F7	F6	F5	F4	F3	F2	F1
Addr+1	F32	F31	F30	F29	F28	F27	F26	F25	F24	F23	F22	F21	F20	F19	F18	F17
Addr+2	7	6	5	4	3	2	1	0				Enter	✍	✍	✍	✍
Addr+3													+/-	.	9	8

Figure 2 - The Keyboard Update Area

Note that the ASCII keypad (except F1-F12) is not available in the RDA, and that function keys F33-F36 are also not available in the RDA.

	bit 15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	bit 0
Addr	PR (Page Request)															
Addr+1	L16	L15	L14	L13	L12	L11	L10	L9	L8	L7	L6	L5	L4	L3	L2	L1
Addr+2									L24	L23	L22	L21	L20	L19	L18	L17
Addr+3													C3	C2	C1	C0

Figure 3 - The PLC Status Area

3. Physical Dimensions

Cutout Width	293 mm (11.54")
Cutout Height	203 mm (8.00")
Cutout Depth (without cables)	41 mm (1.62")
Front Panel Thickness (max)	5 mm (0.20")
Face-plate Width w/bezel	310 mm (12.22")
Face-plate Width w/bezel	111 mm (4.38")
Weigth	1.6 Kg (3.5lbs)

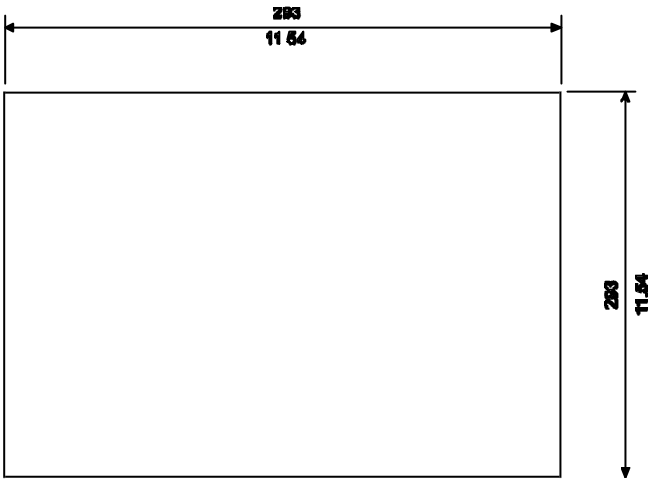

Figure 4 - Panel cutout dimensions