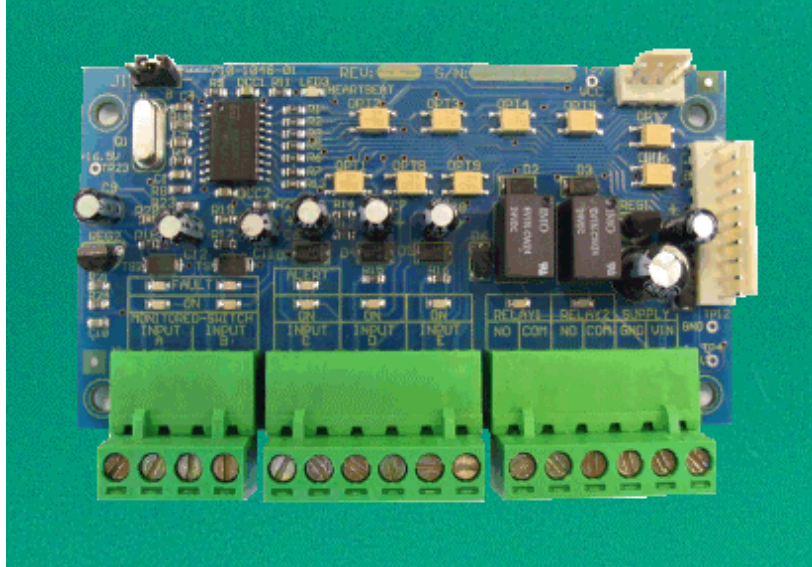


Shop Interface Unit



Product Data Sheet

Features

The Shop Interface Unit allows *Mx-4000* control panels to send and receive alarm signals from other equipment.

Input signals can be received from clean-contact inputs, with two of the inputs also supporting open circuit and short circuit fault monitoring on the external wiring.

A special input is also able to differentiate between an input that is pulsing (ALERT) or is on continuously (EVAC), allowing easy interfacing to older equipment that can not provide independent Alert and Evacuate signals.

Two fully programmable outputs are also provided to allow signals to be transmitted out to other equipment.

Models, Sales Order Parts:**Part No:****Mxp-029** : Shop Interface Unit**Applications / Limitations:****Inputs**

- Input A : Monitored switch input.
- Input B : Monitored switch input.
- Input C : Pulse/Continuous detecting input.
- Input D : Clean contact switch input.
- Input E : Clean contact switch input.

Outputs

- Relay 1 : Volt-free Normally open relay contacts
- Relay 2 : Volt-free Normally open relay contacts

The Interface is used in place of the standard **MXP-014** 8-way input board (i.e. don't attempt to fit both units to the same chassis).

Compatibility:

The Shop Interface unit mounts in the panels as follows:

Mx-4200, Mx-4400 & Mx-4800 control panels – directly onto the chassis.

Mx-4100/L control panel – on the rear face of the back box.

This interface is supported from panel software revision 016 onwards.

Item	Specification Details
Panel loading, quiescent state	12mA
Panel loading, all inputs activated. Relays off.	22mA
Panel loading, all inputs activated. Relays energised.	34mA
Relay Contact Rating	1 Amp 30V DC/AC max
Maximum Working Temperature	
As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice	

Installation

Installing the Mxp-029 in the Mx-4100/L

Mounting the Card

The card mounts on 4 pillars in the rear of the enclosure. See diagram opposite.

Remove the gear tray assembly and set aside in a safe place.

Screw in the four spacers supplied into the threaded inserts in the back box. Use the four M3 screws supplied to securely affix the card to the spacers.

Figure 1 opposite shows the location.

It is not possible to install or use the Mxp-029 in this position if the Mxp-014 8-Way Input Card / Mxp-007 2-Way Relay card is already installed.

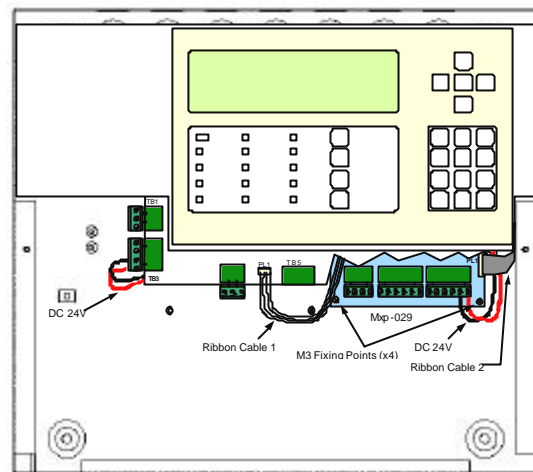


Figure 1

Internal Wiring

[1] 4-way Ribbon Cable #1

Connect between PL2 and the 4-way O/C Output connector on the base card.

[2] 10-way Ribbon Cable #2

Connect between PL1 and the 10-way connector on the display card (see Figure 4 for location on the display card).

NOTE: It will be necessary to disassemble the base card from the gear tray assembly to obtain access to this connector. M3 nylock nuts secure the base card to the assembly – keep these safe for re-assembly.

[3] Power Connections

Connect 24V DC cable between AUX+ to TB1 VIN and AUX 0V to TB1 GND.

Run the cable along the rear wall of the back box and tie in place with cable ties. OBSERVE THE POLARITY OF CONNECTIONS.

Installing the Mxp-029 in the Mx-4200/Mx-4400/Mx-4800

Mounting the Card

The card mounts on 4 pillars in the bottom left hand corner of the control panel chassis adjacent to the Mx4200/Mx 4400 base card.

See Figure 2 opposite.

Use the four M3 screws supplied to securely affix the card to the chassis (the supplied spacers are not required).

It is not possible to install or use the Mxp-029 in this position if the Mxp-014 8-Way Input Card is already installed.

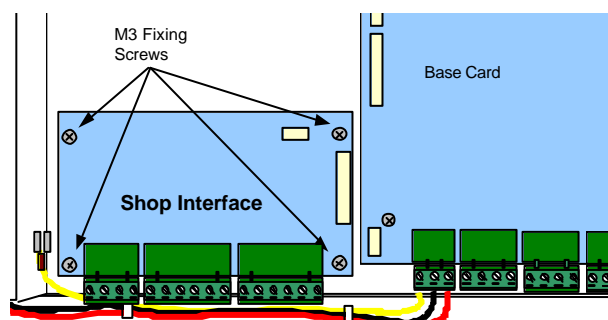


Figure 2

Internal Wiring

[1] 4-way Ribbon Cable #1

Connect between PL2 and the 4-way O/C Output connector on the base card.

[2] 10-way Ribbon Cable #2

Connect between PL1 and the 10-way connector on the display card.

[3] Power Connections

Connect 24V DC cable between AUX+ to TB1 VIN and AUX 0V to TB1 GND.

OBSERVE THE POLARITY OF CONNECTIONS

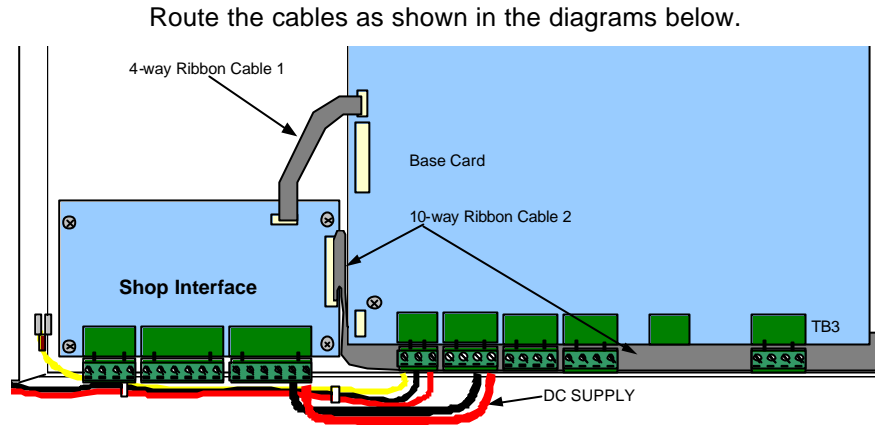


Figure 3

Route the 10-way ribbon cable between the input card and the base card and then beneath the base card along the bottom edge.

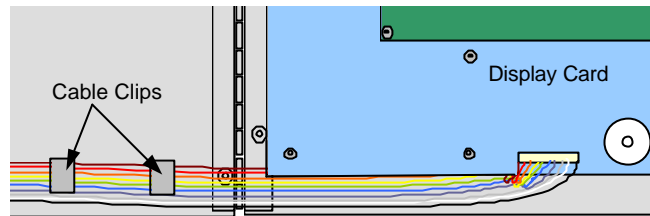


Figure 4

Route the cable around the hinge and along the display plate. Affix the supplied adhesive ribbon cable clips in the positions shown. This is to prevent undue strain on the cable connections.

External Wiring

Field wiring connections are shown in the diagram opposite.

NB: These circuits are classed as Safety Extra Low Voltage (SELV) circuits. Route away from mains wiring.

Inputs A and B can be monitored for open and short circuit conditions.

The monitored inputs circuits should be wired as per the diagram opposite.

The 470Ω (operating) resistor and 10kΩ (E.O.L) resistor arrangement should be made adjacent to the switch contacts to ensure that correct fault monitoring of the total circuit (including the wiring) between the input contact and the Shop Interface unit is maintained.

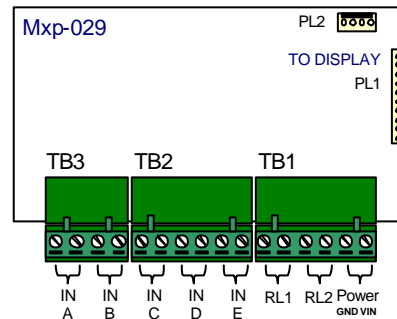


Figure 5

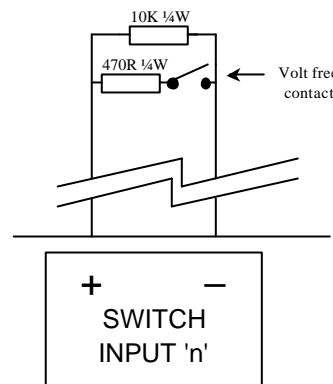


Figure 6

Configuration

Programming can also be performed from the PC configuration program.

Shop Interface Input	PC Program Inputs	Purpose	Settings required at PC
INPUT A	Panel S/W-1	Switch Input	Set Zone, Text & Action
	Panel S/W-2	Cable Fault	Set Zone, Text & Action=Fault ¹
INPUT B	Panel S/W-3	Switch Input	Set Zone, Text & Action
	Panel S/W-4	Cable Fault	Set Zone, Text & Action=Fault ¹
INPUT C	Panel S/W-5	EVAC Input	Set Zone, Text & Action for EVAC
	Panel S/W-6	ALERT Input	Set Zone, Text & Action for ALERT
INPUT D	Panel S/W-7	Switch Input	Set Zone, Text & Action
INPUT E	Panel S/W-8	Switch Input	Set Zone, Text & Action

ALERT / EVAC Input

Input C can be used to detect if a signal from an external source is off, pulsing or on continuous (e.g. to detect an ALERT or EVAC. signal from an external clean contact). The shop interface will activate the EVAC signal if the signal stays on for more than 1.3 seconds. If the pulsing rate is very slow, this time period can be extended to 2.6 seconds by placing jumper J1 in position B.

The example below shows sample text for each of the inputs – the actual device and zone text can be freely changed to describe from where the input signal is coming for a specific application.

Address	Type	Device Location Text	Zone
Panel SCC-C	Sounder	Sounder C	200
Panel SCC-D	Sounder	Sounder D	200
Panel S/W-1	Switch	Shop Unit Input A	101
Panel S/W-2	Switch	Shop Unit Input A	101
Panel S/W-3	Switch	Shop Unit Input B	102
Panel S/W-4	Switch	Shop Unit Input B	102
Panel S/W-5	Switch	Shop Unit Alert Input C	103
Panel S/W-6	Switch	Shop Unit Evac Input C	104
Panel S/W-7	Switch	Shop Unit Input D	105
Panel S/W-8	Switch	Shop Unit Input E	106

¹ The action only needs setting to fault if monitored inputs are required. If simple switch inputs are required, leave this action as "unused".

Programmable Outputs

Relays 1 and 2 are programmed in the same way as the relays on the MXP -008 8-way relay card.

Shop Interface Output	PC Program Output	Purpose	Settings required at PC
RELAY 1	Panel O/C-1	Programmable Output	Set Text & Output Group
RELAY 2	Panel O/C-2	Programmable Output	Set Text & Output Group

The sample PC program below shows these relays allocated to output Groups 190 & 191 respectively (these group numbers are arbitrary – any output group can be used). For ease of recognition, the text for each input has also been changed to indicate that it is part of the Shop Interface – again any text as appropriate for the application can be used.

Output Information :- Panel

Address	Type	Device Location Text	Zone	Group
Panel SCC-A	Sounder	Sounder A	200	1
Panel SCC-B	Sounder	Sounder B	200	2
Panel SCC-C	Sounder	Sounder C	200	3
Panel SCC-D	Sounder	Sounder D	200	4
Panel REL-1	Relay	Relay 1	200	200
Panel REL-2	Relay	Relay 2	200	199
Panel O/C-1	Relay	Shop Interface Relay 1	200	190
Panel O/C-2	Relay	Shop Interface Relay 2	200	191

Can Silence
 Inverted Output
 Allow Walk Test
 Allow Investigation

O/P Group Text: " "

Please take care to program Panel outputs “Panel O/C-1” & “Panel O/C-2” on the PC for these outputs (the REL-1 & REL-2 relays are those mounted on the panel baseboard!).