VIGILANT

RS485 Comms Board (PA0773)

Installation Instructions

General Description

The Vigilant® PA0773 RS485 Comms Board provides an RS485/RS422 interface for a MX4428, F3200 FIP, PTM, NLDU, I-HUB, MODBUS BRIDGE, NDU, *MX1* and Remote FBP.

These instructions provide a summary for installing and configuring the PA0773 RS485 Comms Board. It should be used in conjunction with the relevant product installation instructions for whatever the PA0773 is being installed into.

The PA0773 is supplied as a circuit board module plus these instructions only. Other items may be included in higher-level ordering codes that also include a PA0773.

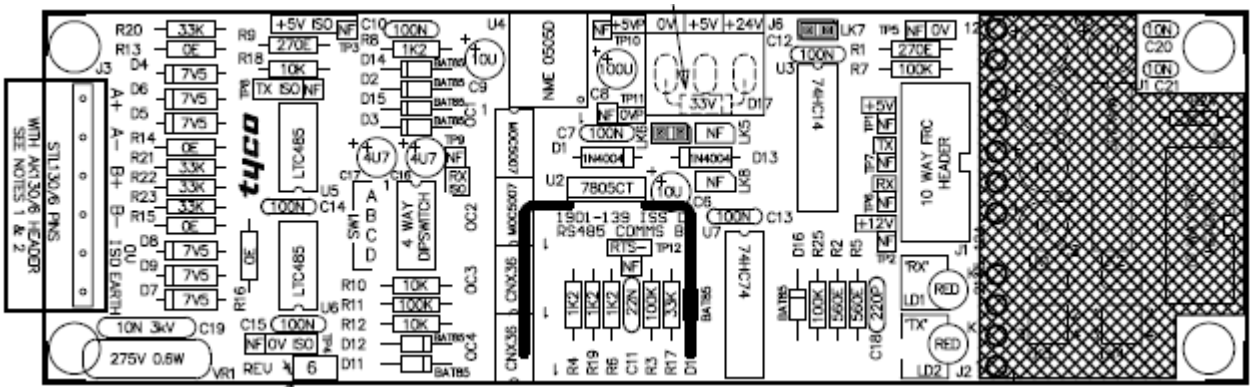


Figure 1 – PA0773 General Layout

Configuration

The PA0773 needs to be configured correctly for the application it is being used in. Consult the appropriate application technical information for details.

Links LK6 and LK7 determine the power source for the PA0773 – see Table 1.

Table 1 – PA0773 LK6/LK7 Power Options

LK6	LK7	Power Supply Option
Not Fitted	Not Fitted	+24V/0V on J6 powers the 5V-5V converter to the isolated supply. J1 provides +5V to internal logic. Both isolated.
Not Fitted	Fitted	+24V/0V on J6 powers the 5V-5V converter to the isolated supply. J1 (host) provides +5V to internal logic. J6 0V joined to logic 0V.
Fitted	Not Fitted	Do not use.
Fitted	Fitted	Either: 1) J6 24V/0V provides all power for board (no +5V from J1 host), or 2) Host provides +5V for all power via J1.

The 4-way DIP switch SW1 determines the operating mode of the RS485 communications – see Table 2.

Table 2 – DIP Switch Settings

MODE	SW1 SETTINGS			
	A	B	C	D
4 WIRE FULL DUPLEX – RX.TX ALWAYS	ON	ON	OFF	OFF
4 WIRE FULL DUPLEX – RX ALWAYS, TX RTS CONTROL	ON	OFF	OFF	OFF
2 WIRE HALF DUPLEX – RX ALWAYS, TX RTS CONTROL				
– A & B CHANNELS	ON	OFF	ON	ON
– A CHANNEL ONLY	ON	OFF	OFF	ON
2 WIRE HALF DUPLEX – RX IF NOT TX, TX RTS CONTROL				
– A & B CHANNELS	OFF	OFF	ON	ON
– A CHANNEL ONLY	OFF	OFF	OFF	ON

Typical Applications

Powered by Host +5V via J1 Flat Ribbon Cable

For most applications (currently all applications except the *MX1* below and Remote FBP overleaf), the PA0773 is powered by the host's +5V supply via the J1 10 way ribbon cable. In this case LK6 and LK7 must be fitted.

LK6	Fit
LK7	Fit

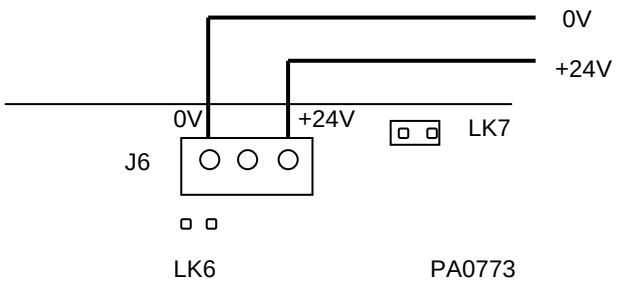
The external power supply connections on J6 must not be used. DIP switch settings as per other documentation applicable to the specific application.

Installed in *MX1* Panel for Connection to Remote FBP

The PA0773 fitted in an *MX1* panel for a connection to a Remote FBP must have LK6 not fitted and LK7 fitted. This uses the External 24V supply to power most of the PA0773, but the *MX1's* +5V provides the internal logic supply of the PA0773.

LK6	Not Fitted
LK7	Fit

The external +24V power supply must be connected to the J6A (+24V) and J6C (0V) on the PA0773 board.



The DIP switch SW1 must be set to:

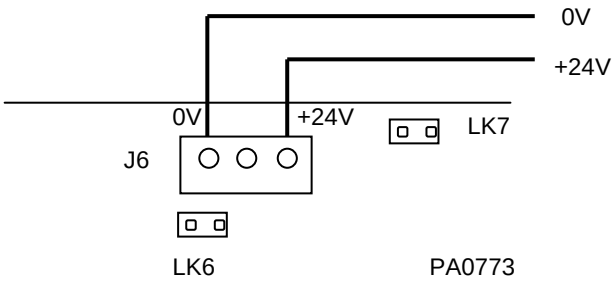
A	ON
B	ON
C	OFF
D	OFF

Installed in Remote FBP

The PA0773 is powered completely by the external +24V power supply when used in the *MX1* Remote FBP. There is no connection via the FRC to the PA1057 +5V supply. In this case LK6 and LK7 on the PA0773 board must be fitted.

LK6	Fit
LK7	Fit

The external +24V power supply must be connected to the J6A (+24V) and J6C (0V) on the PA0773 board.



The DIP switch SW1 must be set to:

A	ON
B	ON
C	OFF
D	OFF

Manufactured by: Tyco Safety Products
17 Mary Muller Drive, PO Box 19-545
Christchurch 8022, New Zealand
Tel +64-3-389 5096
Fax +64-3-389-5938

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