

## Twenty-four channel Pneumatic Actuator Controller



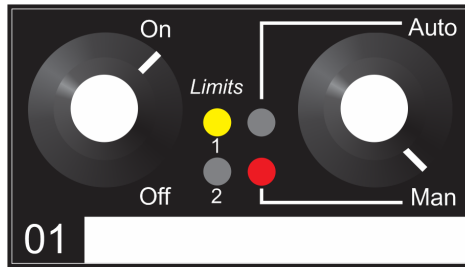
<b>Features</b>	<ul style="list-style-type: none"><li>• Twenty-four independent switched 24 VDC outputs for level controlled pneumatic actuator solenoids</li><li>• Dual limit switch inputs for each channel with LED position indication</li><li>• Full remote control via RS-232, USB or fast serial fiber optic</li><li>• Individual manual override capability for each channel.</li><li>• Available with individual 9-pin channel connectors, or grouped on 25 pin connectors.</li></ul>
<b>Applications</b>	<ul style="list-style-type: none"><li>• Multiple actuator systems.</li><li>• General 24 V solenoid switching applications</li></ul>

<b>Specifications</b>	
Number of channels	24
Output	+ 24V DC switched
Maximum switched current	75 mA per channel with all outputs on. 100 mA maximum per channel (built-in fuse rating)
Limit switch inputs	Two per channel (extended and retracted limits) Opto-isolated, switch inputs to ground to activate. +24 V outputs to switches limited by 5 kohm.
Power input	+24V (+/- 2V) DC, 2.5 A maximum. Standby current (no actuators driven), 200 mA



**Specifications (continued)**

Controls	Auto / manual locking rotary switch for each channel, front panel Actuator in / out rotary switch for each channel, front panel Two rotary switches for loop address and comms mode/baud rate, rear panel
Displays	In limit switch made LED (each channel) Out limit switch made LED (each channel) Auto mode selected LED (each channel) Manual mode selected LED (each channel) Status LEDs (power, device status, comms mode, data transmission rcv/xmit), rear panel.



Case	Stainless steel sheet, aluminium alloy front panel 19" rack mounting, 2U high.
Weight	3.6kg (8.0 lb).
Operating environment	Temperature 10 to 35C Humidity < 70%, non-condensing Vibration < 0.2g all axes (1 to 100Hz)
Shipping and storage environment	Temperature -10 to 50C, Humidity < 80%, non-condensing Vibration < 2g all axes, 1 to 100Hz

**Interfacing**

Interfaces	RS-232, 8-bit ASCII. Selectable baud rate. SCPI protocol.
	USB, 8-bit ASCII 3 Mbit/sec
	Fiber-optic loop, 10 Mbit/sec serial, 9-bit asynchronous binary. Ethernet connection to host through A360, A500 or A560 loop controllers.
Host computer	Windows or Linux PC required. Diagnostic host program supplied for Windows. IG2 channel access interface layer available for EPICS systems.



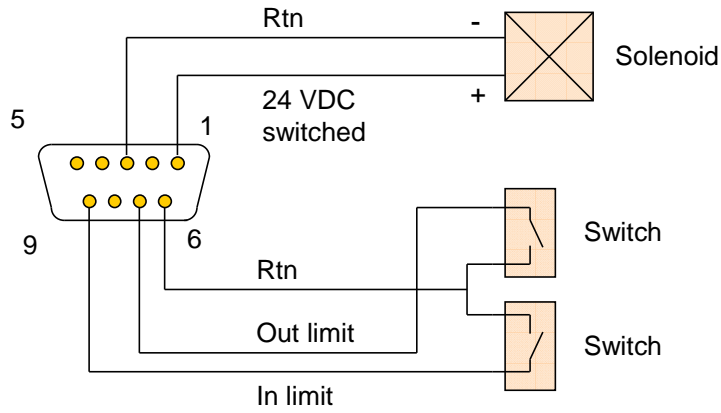
**Connectors**

Actuator control and readback:  
Individual connectors standard configuration (24 identical)

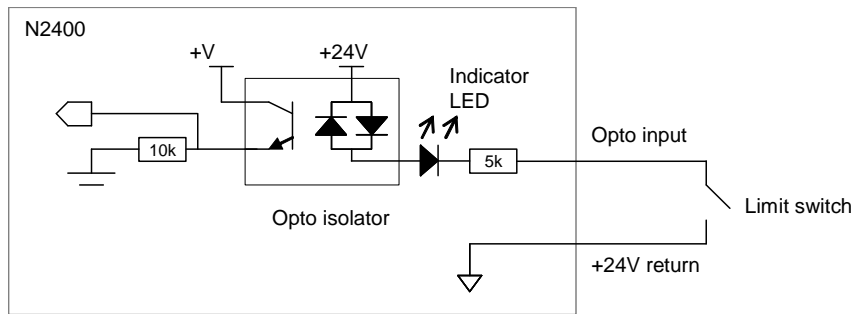
9 pin DSub female

1	Switched 24 VDC out	6	+24 V return
2	n/c	7	Limit "In" opto input
3	+24 V return	8	n/c
4	n/c	9	Limit "Out" opto input
5	+24 V return		

Typical connection arrangement



Limit switch input circuit



USB

USB B type female.

RS-232

Six pin mini-DIN ("PS/2")

1	Tx	4	n/c
2	Rx	5	n/c
3	Gnd	6	n/c

Fiber optics

Two 1mm Avago HFBR ST bayonet

Power in

2.1mm threaded jack. Mates with Switchcraft S761K or equivalent.

Ground

M4 threaded stud

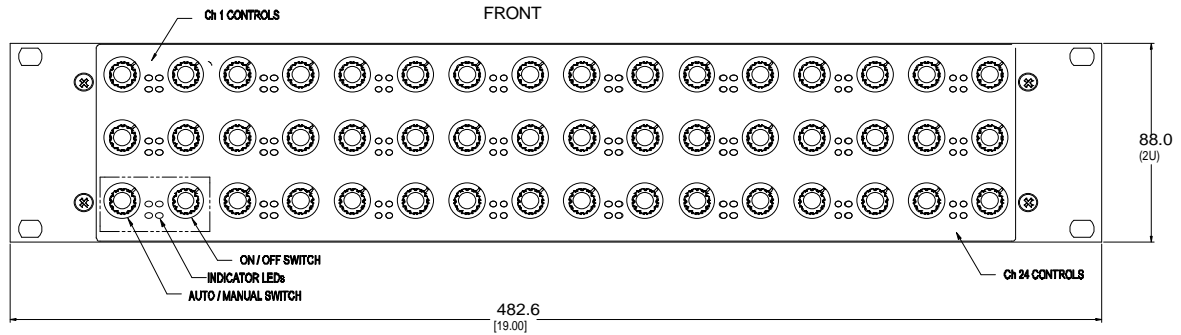
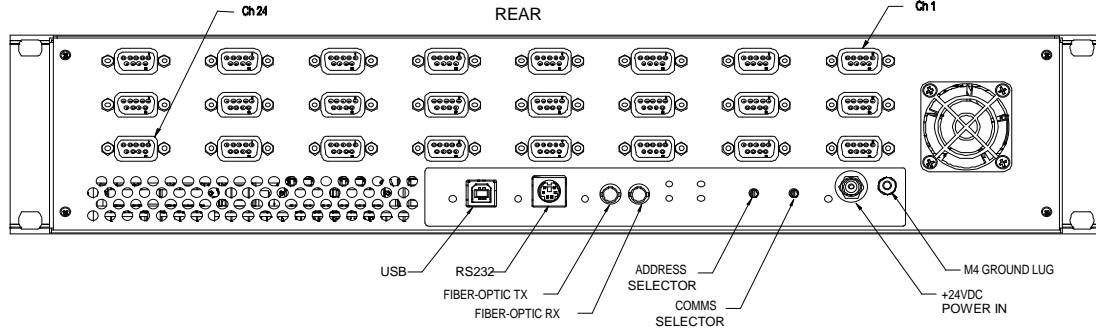


**Connectors (-D25 optional rear panel)**

Actuator control: Banked connectors optional configuration (2 identical)	25 pin DSub female			
	1	Switched 24 VDC out 1 (13)	14	+24 V return
	2	Switched 24 VDC out 2 (14)	15	+24 V return
	3	Switched 24 VDC out 3 (15)	16	+24 V return
	4	Switched 24 VDC out 4 (16)	17	+24 V return
	5	Switched 24 VDC out 5 (17)	18	+24 V return
	6	Switched 24 VDC out 6 (18)	19	+24 V return
	7	Switched 24 VDC out 7 (19)	20	+24 V return
	8	Switched 24 VDC out 8 (20)	21	+24 V return
	9	Switched 24 VDC out 9 (21)	22	+24 V return
	10	Switched 24 VDC out 10 (22)	23	+24 V return
	11	Switched 24 VDC out 11 (23)	24	+24 V return
	12	Switched 24 VDC out 12 (24)	25	+24 V return
	13	Chassis		

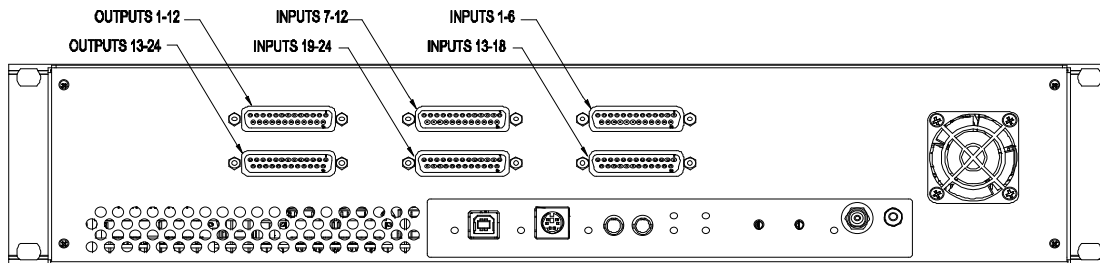
Limit switch readback: Banked connectors optional configuration (4 identical)	25 pin DSub female			
	1	Limit In 1 (7, 13, 19)	14	+24 V return
	2	Limit Out 1 (7, 13, 19)	15	+24 V return
	3	Limit In 2 (8, 14, 20)	16	+24 V return
	4	Limit Out 2 (8, 14, 20)	17	+24 V return
	5	Limit In 3 (9, 15, 21)	18	+24 V return
	6	Limit Out 3 (9, 15, 21)	19	+24 V return
	7	Limit In 4 (10, 16, 22)	20	+24 V return
	8	Limit Out 4 (10, 16, 22)	21	+24 V return
	9	Limit In 5 (11, 17, 23)	22	+24 V return
	10	Limit Out 5 (11, 17, 23)	23	+24 V return
	11	Limit In 6 (12, 18, 24)	24	+24 V return
	12	Limit Out 6 (12, 18, 24)	25	+24 V return
	13	Shield		

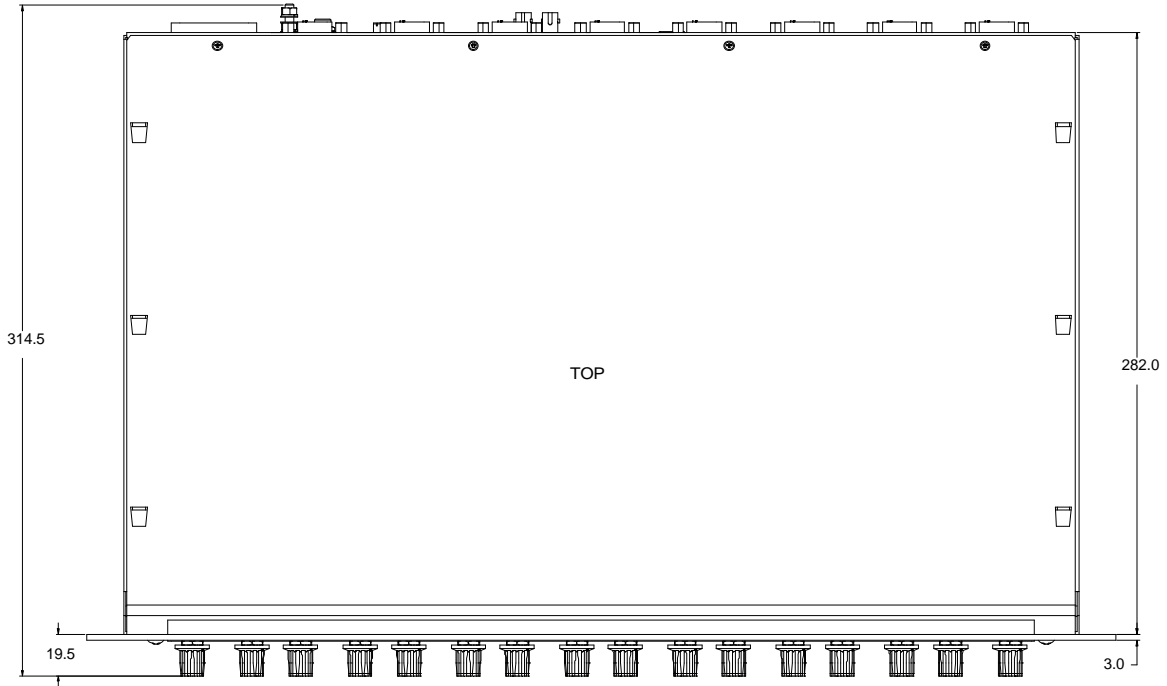
Standard rear panel (N2400)



Dims mm

Alternative rear panel (N2400-D25)





Dims mm

**Ordering information**

- N2400** N2400 twenty-four channel actuator controller with standard rear panel connectors (24 x DSub 9-pin), user manuals, software drivers, PSI Diagnostic host software.
- N2400-D25** N2400 twenty-four channel actuator controller with alternative rear panel (5 x D25 connectors), user manuals, software drivers, PSI Diagnostic host software.

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