

TIC TURBO AND INSTRUMENT CONTROLLER

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A compact system controller with a large clear graphical display, an intuitive user interface and serial communications, providing full remote control and data logging functions via Windows™ based PC program.

The TIC can automatically control and power 1 turbomolecular pump from the nEXT85 to the nEXT400, and can control the larger nEXT pumps, ie. the nEXT930, when coupled with their dedicated power supply.

Cooling and vent valve support is provided directly from the controller. Two different power variants are available, 100W or 200W which determines the ramp speed of the turbomolecular pump. In addition, 200W models have the ability to power and control a 24V d.c. backing pump such as our XDD1, and control a nXDS/nXRi through a 15-way 'D' socket. Other mains pumps (such as RV) are controllable via the separate relay box. Both the 100w and 200w variants have the ability to control and read three active gauges (such as the APG100 or the WRG). This can truly be a mini system controller for small processes.



Features and benefits

- TIC automatically recognises and controls one turbomolecular pump from the nEXT range. nEXT turbomolecular pumps have full serial communication with TIC and may be both configured and report status via TIC.
- Both mains and 24V backing pumps may be controlled by TIC. For larger vacuum systems the TIC may control mains backing pumps from the nXDS and nXRi ranges.
- The optional external relay box enables a wider range of backing pumps (such as our RV range) to be controlled and also provides interfaces for a turbo flange heater band, a backing line isolation valve and a logic bypass.
- TIC systems can be simply and quickly configured using the range of standard cables on offer, there is therefore no need for the customer to prepare loom assemblies or relay boxes and special interfaces.
- TIC is packaged in a compact case and can be panel/rack (1/4 19 inch rack 3U) or bench mounted with the included bezel to increase usability.
- The large 128 x 64 pixel backlit graphics LCD, coupled with a simple menu system simplifies programming and with a choice of summary screens excellent visibility of displayed parameters is assured.
- Edwards range of active gauges are compatible with these controllers; APG100, APGX-H, WRG, AIM, AIGX, and ASG2.

TECHNICAL DATA

	Units	TIC turbo and instrument controller
Pump/TIC power	W	100/200
nEXT 80 W		Slow/Slow
nEXT 160 W		Slow/Fast
Mains input		
Electrical supply		90 to 264 V a.c. 47 to 63 Hz
Power consumption (max)		215 VA
Peak inrush current		10.3 A @ 110 V a.c./23.0 A @ 230 V a.c.
Earth stud		M4
Auxiliary terminals		
Air cooling fan		24 V d.c. 3 W max, ACX70, ACX75 & ACX250H
Vent valve		24 V d.c. 2 W max, TAV5 & TAV6
Dimensions		
Electronics housing	mm	110 high x 105 wide x 245 deep
Front panel	mm	106 wide x 128 high
Weight	kg	3.5
Operating temp	°C	+0 to +40
Storage temp	°C	-30 to +70
Max ambient operating humidity		90% RH non-condensing at 40 °C
Max operating altitude	m	3000
Electronic design		EN 61010-1
Electromagnetic compatibility		EN 61326 industrial location, class B emissions
Enclosure rating		IP20

ORDERING INFORMATION

Product description	Order number
TIC turbo & instrument controller, 100 W RS232	D39721000
TIC turbo & instrument controller, 200 W RS232	D39722000
TIC relay box, RV pump/heater band/isolation valve	D39711805

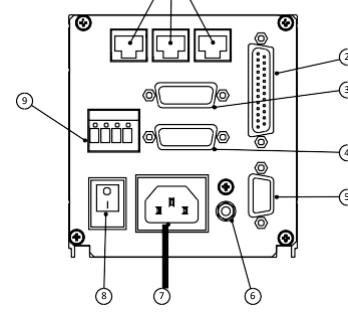
EXTENSION CABLE

Product description	Order number
XDD/DX/EXDC extension cable 1 m	D39700835
XDD/DX/EXDC extension cable 2 m	D39700836
XDD/DX/EXDC extension cable 5 m	D39700837

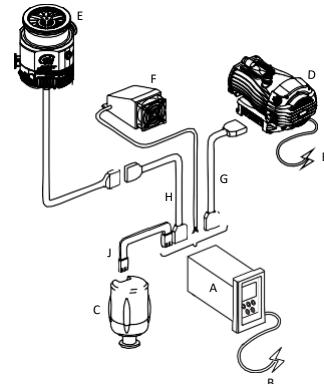
LINECORD

Product description	Order number
Linecord 2 m UK plug	A50505000
Linecord 2 m north Euro plug	A50506000
Linecord 2 m with US plug	A50507000

DIAGRAMS



TIC Turbo and Instrument Controller – Back view



TIC Turbo and Instrument Configuration

1. Gauge inputs (FCC68 (RJ45))
2. Logic interface (25-way 'D' socket)
3. Backing pump 24 V (15-way 'D' socket) (TIC200 only)
4. Turbo Pump 24 V (15-way 'D' socket)
5. RS232/485 (9-way 'D' socket)
6. Earth stud (M4)
7. Mains input (CEE/IEC 320 plug)
8. Mains on/off switch
9. Auxiliary vent valve and fan terminals

COMMUNICATIONS MODULE

Product description	Order number
TIC Profibus Communications Module	D39754000

ACTIVE GAUGE CABLE

Product description	Order number
0.5 m active gauge cable	D40001005
1 m active gauge cable	D40001010
3 m active gauge cable	D40001030
5 m active gauge cable	D40001050
10 m active gauge cable	D40001100



EZZI VISION

Vacuum and Thin Film Technology

CONTACT US

T: 1800 GO EZZI
E: sales@ezzivision.com.au
W: ezzivision.com.au

VIC: 13/62 Ramset Drive, Chirnside Park,
VIC 3116, Australia

NSW: Unit 1, 80 O'Riordan St, Alexandria,
NSW 2015, Australia

WA: Unit 11, 24 Baile Road, Canning Vale,
WA 6155 Australia

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Edwards Ltd, registered in England and Wales No. 6124750, registered office: Innovation Drive, Burgess Hill, West Sussex, RH15 9TW, UK.

GLOBAL CONTACTS

EMEA		ASIA PACIFIC	
UK	+44 (0) 1444 253 000 (local rate) 0845 921 2223	China	+86 400 111 9618
Belgium	+32 2 300 0730	India	+91 20 4075 2222
France	+33 1 4121 1256	Japan	+81 47 458 8836
Germany	0800 000 1456	Korea	+82 31 716 7070
Italy	+ 39 02 48 4471	Singapore	+65 6546 8408
Israel	+ 972 8 681 0633	Taiwan	+86 3758 1000
AMERICAS			
USA		USA	+1 800 848 9800
Brazil		Brazil	+55 11 3952 5000