

TAG Controller

2

Page
64



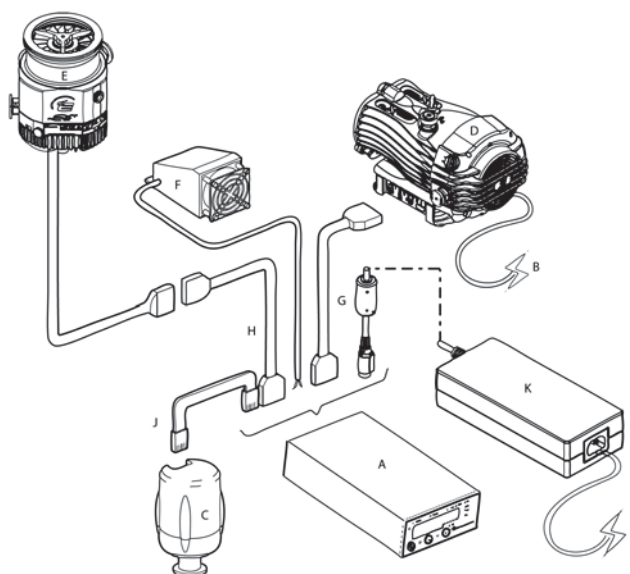
The TAG (Turbo & Active Gauge) controller is a small, compact, low cost pumping system Controller, which is suitable for a wide range of vacuum applications. It is a 24V controller that is compatible with all Edwards DX and nEXT turbopumps. It contains no power source and thus you either need to supply your own power or buy the optional power supply. In addition to a turbopump it can control a backing pump, a vent valve, an air cooler and an Edwards active gauge.

The TAG Controller is controlled by an easy to use interface. A large clear LED display shows the pump speed or vacuum pressure. The compact size of the controller is ideal for use on bench-tops or suitable mobile platforms.

Features & Benefits

- Compatible with all Edwards 24V turbopumps enabling pump control and speed display
- Start/stop control of a backing pump for full system control (external relay may be required)
- Turbomolecular pump start options: start with backing pump, start after time delay or start at pressure set point
- Vent valve control options: controlled vent from full speed, vent from half speed or no vent
- Pressure display from a compatible active gauge in mbar, Torr or Pa

Dimensions



A	TIC turbo and instrument controller, 200W	F	ACX75 air-cooler
B	Mains cable/line cord	G	XDD/DX/EXDC extension cable
C	WRG-S-NW25	H	XDD/DX/EXDC extension cable (optional)
D	XDD1 24Vdc diaphragm pump	J	Active gauge cable
E	EXT75DX ISO63	K	Power supply

Technical Data

Max input Power	240W
Mains input	
Electrical supply	24V d.c.
Power consumption (max)	5W
Auxiliary terminals	
Air cooling fan	24V d.c. 3.6W max
Turbo pump	24V d.c. 160W max
Dimensions	96 x 48 x 165mm
Mass	0.3kg
Operating temp	0°C to 40°C
Storage temp	-30°C to 70°C
Max ambient operating humidity	90% RH non-condensing at 40°C
Max operating altitude	2000 m
Enclosure rating	IP20. IP40 when panel mounted.

Ordering Information

Product Description	Order No.
TAG Turbo and active gauge controller	D39592000
Accessories & Spares	Order No.
Linecord 2M North Euro Plug	D40013030
Linecord 2M UK Plug	D40013025
Linecord 2m With US Plug	D40013120
XDD/DX/EXDC Extension Cable 1m	D39700835
XDD/DX/EXDC Extension Cable 2m	D39700836
XDD/DX/EXDC Extension Cable 5m	D39700837
200 W power supply	D39592800

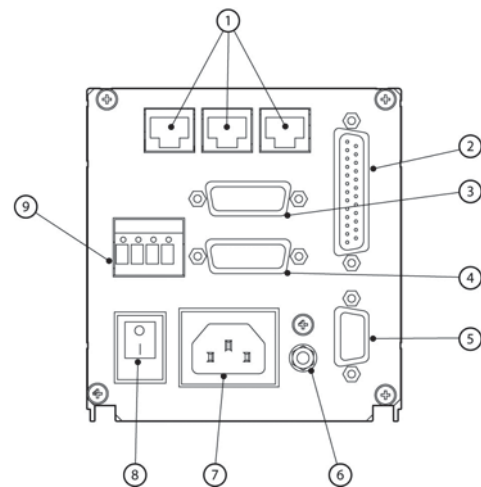


A compact turbo controller with a large clear graphical display, an intuitive user interface and serial communications providing full remote control and data logging functions via a new Windows™ based PC program. The controller automatically recognizes and supports one 24 V turbomolecular pump from the EXT/nEXT range. Cooling and vent valve support is provided directly from the controller. Mains backing pumps (up to nXDS20i/RV12) may be controlled via an optional relay box. 2 different power variants are available, 100W or 200W which determines the ramp speed of the turbo pump. In addition 200W models have the ability to power a 24Vdc backing pump such as our XDD1 or nXDS through a 15-way D. Turbo and instrument models add the ability to control up to 3 of our range of Active gauges (excluding IGC & Barocels).

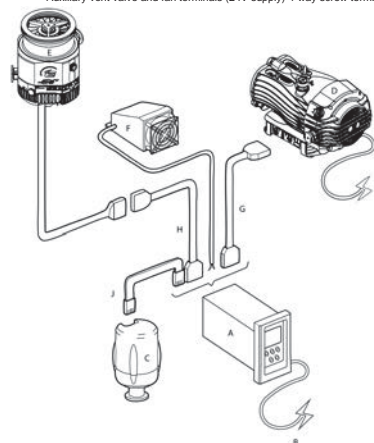
Features & Benefits

- TIC automatically recognizes and controls one 24 V turbomolecular pump from either the nEXT, DX or EXDC ranges. nEXT and DX turbos have full serial communication with TIC and may be both configured and report status via TIC.
- Both mains and 24 V backing pumps may be controlled by TIC. For larger vacuum systems the TIC may control mains backing pumps, up to and including nXDS10 and RV12, via the optional relay box.
- The optional external relay box enables mains backing pumps to be controlled and also provides interfaces for a turbo heater band, a backing line isolation valve and a logic bypass. See relay box section.
- In most instances, TIC systems may 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 may be panel or rack (¼ 19inch rack 3U) or bench mounted. With the addition of the bezel it becomes an attractive bench-top instrument. The large 128 x 64 pixel backlit graphics LCD and mobile phone style menu system simplifies programming and with a choice of summary screens excellent visibility of displayed parameters is assured.

Dimensions



1. Gauge inputs (FCC68 (RJ45) (turbo & instrument only)
2. Logic interface (25-way 'D' socket)
3. Backing pump 24V (15-way 'D' socket) (TIC200 only)
4. Turbo Pump 24V (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 (24V supply) 4-way screw term.



- A TIC turbo and instrument controller, 200W
- B Mains cable/line cord
- C WRG-S-NW25
- D XDD1 24Vdc diaphragm pump
- E EXT75DX ISO63
- F ACX75 air-cooler
- G XDD/DX/EXDC extension cable
- H XDD/DX/EXDC extension cable (optional)
- J Active gauge cable

Technical Data

Pump / TIC power	100W / 200W
EXT75DX	Fast / Fast
nEXT 80W	Slow / Slow
nEXT 160W	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	110 mm high x 105 mm wide x 245 mm deep
Front panel	106 mm wide x 128 mm high
Weight	3.5 kg
Operating temp	+0 ° to +40 °C
Storage temp	-30 ° to +70 °C
Max ambient operating humidity	90% RH non-condensing at 40 °C
Max operating altitude	3000 m
Electronic Design	EN 61010-1
Electromagnetic Compatibility	EN 61326 Industrial Location, Class B Emissions
Enclosure rating	IP20

Ordering Information

Product Description	Order No.
TIC Turbo Controller 100 W RS232	D39711000
TIC Turbo Controller 200 W RS232	D39712000
TIC Turbo & Instrument Controller 100 W RS232	D39721000
TIC Turbo & Instrument Controller 200 W RS232	D39722000
Accessories & Spares	Order No.
TIC Profibus Communications Module	D39754000
XDD/DX/EXDC Extension Cable 1m	D39700835
XDD/DX/EXDC Extension Cable 2m	D39700836
XDD/DX/EXDC Extension Cable 5m	D39700837
Linecord 2M UK Plug	D40013025
Linecord 2M North Euro Plug	D40013030
Linecord 2m With US Plug	D40013120
0.5M Active Gauge Cable	D40001005
1M Active Gauge Cable	D40001010
3M Active Gauge Cable	D40001030
5M Active Gauge Cable	D40001050
10M Active Gauge Cable	D40001100

TIC Relay Boxes



Two relay boxes are available for use with our TIC controllers:

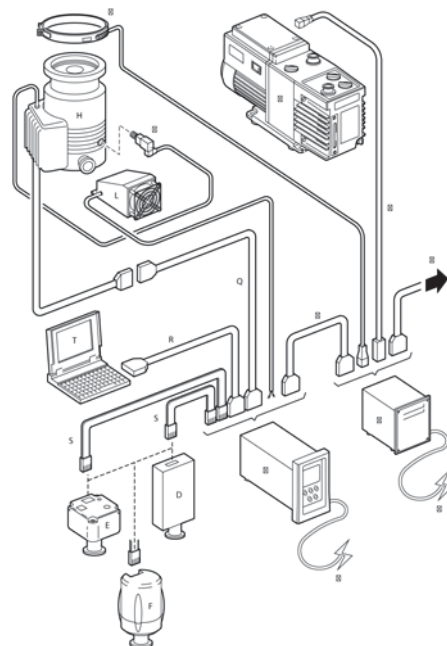
- A small backing pump relay box is compatible with TIC turbo only and turbo and instrument controllers
- A small backing pump and instruments relay box is compatible with TIC turbo and instrument controllers

The small backing pump relay boxes are able to control mains backing pumps up to RV12/XDS10. The relay box also controls a mains heater band and backing line isolation valve. In addition the small backing pump and instrument relay box includes three 250 V a.c. 3 A changeover relays, which are activated by the gauge open collector set point outputs.

Features & Benefits

- Enables TIC to control mains backing pumps, up to and including XDS10 and RV12.
- Provides interfaces for a turbo heater band, a backing line isolation valve and a logic bypass. All relay boxes include a logic bypass facility for further system integration.
- TIC relay is packaged in a compact case and may be panel or rack (¼ 19inch rack 3U) or bench mounted.
- TIC relay will operate from mains supplies with voltages up to 240 V ac.

Dimensions



A.	TIC200 turbo and instrument	K.	TAV5 vent valve
B.	Mains cable / line cord	L.	ACX air cooler
C.	Relay box	M.	TIC logic interface cable
D.	APG100 Pirani gauge	N.	IEC320 M/F cable
E.	AIGX Ion gauge	P.	TIC logic interface cable
F.	AIM Penning gauge	Q.	XDD/DX/EXDC extension cable
G.	XDS scroll pump	R.	TIC RS232 interface cable
H.	EXT/nEXT turbopump	S.	Active gauge cable
J.	BX heater band	T.	PC with RS232 interface

Technical Data

Mains input	
Connector type	CEE/IEC320 inlet
Max rating	240V a.c.
Earth stud	M4
Heater band outlet	
Connector type	CEE/IEC320 inlet
Max rating	240V a.c. 1A
Fuse	20mm x 5mm, 250V, 1A type F
Backing pump outlet	
Connector type	CEE/IEC320 inlet
Max rating	240V a.c. 10A
Fuse	20mm x 5mm, 250V, 10A type T
Setpoint connector	
Connector type	12-way positronic PLC plug
Max rating	250V a.c. or 30V d.c., 3A (resistive)
Mating half (supplied)	12-way positronic PLC socket with hood
Backing line isolation valve connector	
Connector type	3-way DIN socket
Max rating	24V d.c. 0.5A
Lead type	3 core 0,5mm ²
Weight	695g
Operating temperature	+0°C to +40°C
Storage temperature	-30°C to +70°C
Max ambient operating humidity	90% RH non-condensing at 40°C
Max operating altitude	3000m
Electronic design	EN61010-1
Enclosure rating	IP20

Ordering Information

Product Description	Order No.
TIC Relay Box Sml Bkg	D39711805
TIC Relay Box Inst & Sml Bkg	D39721806
Accessories & Spares	Order No.
Linecord 2M North Euro Plug	D40013030
Linecord 2M UK Plug	D40013025
Linecord 2m With US Plug	D40013120
TIC Logic Interface Cable 2m	D39700833
TIC RS232 Interface Cable 2m	D39700834
XDD/DX/EXDC Extension Cable 1m	D39700835
XDD/DX/EXDC Extension Cable 2m	D39700836
XDD/DX/EXDC Extension Cable 5m	D39700837