

Tri-Sen - Controlador para Turbinas TS310

TS310

Configurable Single or Dual Valve Governor



www.tri-sen.com



Description

The TS310 is a 1 or 2 valve, user configurable control system that will provide complete control for simple or complex prime movers.

Applications

The TS310 can be applied to steam or gas turbines, diesel or gas engines, compressor pumps, generator drives, expanders, and hydrotrubines.

Features

- Startup Sequencing and Speed Control
- Wide variety of configurable algorithms including:
 - ✓ Inlet pressure control
 - ✓ Extraction/admission control
 - ✓ Back pressure control
 - ✓ Process control (suction, discharge, MW)
 - ✓ Load limiting
- Field configuration for specific mechanical data and for a wide variety of sophisticated control and sequencing functions
- A high speed data link provides remote control and monitoring communication
- Rugged NEMA 4 enclosure for outdoor installation
- Automatic shift from DROOP control into frequency control when the utility grid is lost, and back to DROOP bumplessly when the utility tie breaker is closed again



Specifications

Inputs

- 2 Speed pickups (020 KHZ)
- 4 Analog Inputs (0-10 VDC)

Outputs

- 2 Analog (0-200 mADC) Contacts
- 8 total – input or output
- Standard Opto modules (selectable)

Communications

- 1 RS422 Port 0600 Baud

Display

- LCD 8 Digit (.5" High)
- NEMA 4 enclosure

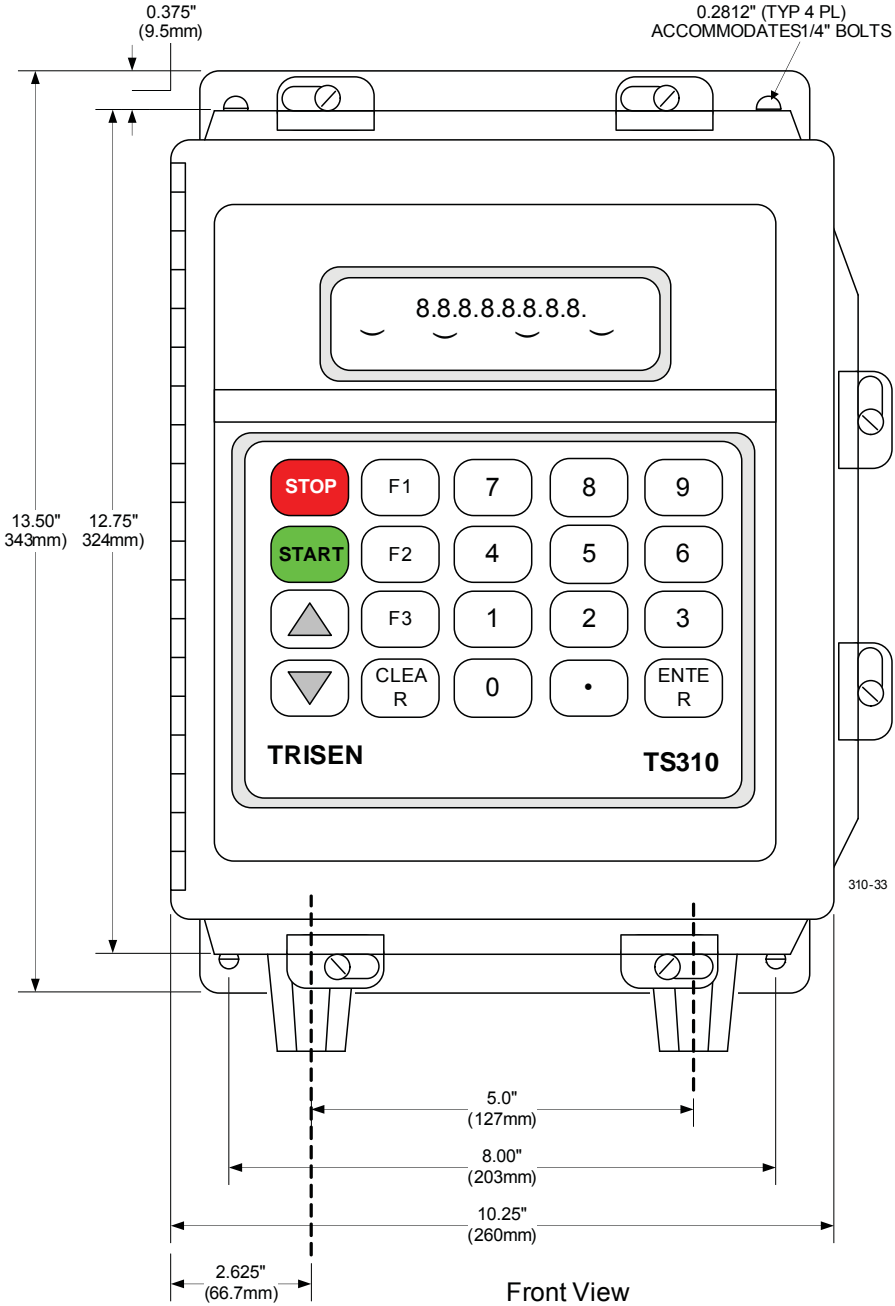
Environmental Specifications

- Temperature: 0-70° C (operating)
- Humidity: to 95% (non-condensing)

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Dimensions

- 13.5" H x 10.25" W x 5.56" D (panel mount or flush mount)



Ordering Information

<u>Model Number</u>	<u>Description</u>
Controls	
3100000-100	TS310 Steam Turbine Controller (90-250VAC), Surf Mt.
3100001-100	TS310 Steam Turbine Controller (24VDC), Surf Mt.
3100002-100	TS310 Steam Turbine Controller (90-250VAC) Flush Mt.
3100003-100	TS310 Steam Turbine Controller (24VDC) Flush Mt.
Spare Parts	
0087-5678	TS310 Main Board w/ Rev. 14 software
0087-7164	TS310 Termination Board, less I/O modules
3100018-001	TS310 Keyboard
3100015-100	TS310 Power Supply Assy, 90-250 VAC, VT25-371-10/XX
3100016-100	TS310 Power Supply Assy, 10-40VDC, VT25-372-10/XX
4100001-001	Cable TS310 I/O Ribbon (We only use one size that fits both flush and surface.)
7061-0000	IAC5, 90-140 VAC/DC
7061-0001	IAC5A, 180-280 VAC/DC
7049-0000	IDC5, 10-32 VDC
7022-0000	OAC5, 3A @ 140V
7022-0001	OAC5A, 3A @250V
7023-0000	ODC5, 3A @60V
7023-0001	ODC5A, 1A @ 200V
7045-0000	OAC5-5, 3A @280V
7026-0003	Opto22 Dry Contact Relay, OU5, N.O.
7026-0005	Opto22 Dry Contact Relay, OU5, N.C.
Manual	
93-2952	TS310 Manual
Optional Accessories	
85-2782	M360 Simulator
99-6813	RS232 Communication Kit
89-9930	P324 Battery Backup for 110VAC, 10-40VDC Power Supply
3100020-001	Service Kit (fuses, diodes, etc.)

TS310 Note:

Contact Tri-Sen for Elliott YR Retrofit Kit

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Configuration Specification Sheet

Enter the corresponding letter(s) or number(s) for each category (example: AS11AAAEEEEFF).
Once completed, fax or email this form to Tri-Sen along with your purchase order.

1. 2. 3. 4. 5. 5. 5. 5. 5. 5. 5.

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1. Software		2. Cover Type		3. Power		4. Voltage		5. Digital Input/Output Modules		
A	01	F	Flush Mount	1	Single	1	90-250 AC	0		
B	02	S	Surface Mount	2	Battery**	2	10-40 DC	A	IAC5	N.O. AC Input 90-140 VAC/DC
						3	20-60 DC	B	IAC5A	N.O. AC Input 180-280 VAC/DC
								C	IDC5	N.O. DC Input 10-32 VDC/AC
								D	OAC5	N.O. AC Output 3A at 12-140V
								E	OAC5A	N.O. AC Output 3A at 24-280V
								F	ODC5	N.O. DC Output 3A at 5-60V
								G	ODC5A	N.O. DC Output 1A at 5-200V
								H	OAC5A-5	N.O. AC Output 3A at 24-280V
								I	OU5	N.O. Dry Contact 10VA max.
								J	OU5	N.C. Dry Contact 10VA max.

** Battery back-up requires 120VAC