



## TDC-A Dynamometer Controller



### Features:

- "Bumpless" Mode Switching
- Get the most out of any dynamometer with TDC-A.
- Faster response over a wider range
- Built-in interfaces, designed-in reliability
- The perfect companion for any Dyno Controller

### Applications:

- Vehicles
- Engine test
- Gas turbine
- Engine machines
- Internal combustion engines
- Middle and small power rating machines
- "EC" to eddy-current dynamometer
- "WB" to water-brake dynamometers
- "DC" to DC dynamometers

### Description:

Single supplier, Advance Instrument can supply and fill your shopping list with products for precisely and simultaneously regulating dynamometer and throttle control.

The Series TDC-A controllers regulate speed and load of eddy-current, water-brake and universal dynamometers.

And you can complete your system with a Throttle Controller and Throttle Actuator. Through the controllers, the throttle function can control Speed, Load, Rack Position, Fuel Flow Rate, Manifold Vacuum or Power.



## TDC-A Dynamometer Controller

### Specification:

- Specifications
  - " EC " to eddy-current dynamometer
  - " WB " to water-brake dynamometers
  - " DC " DC dynamometers.
- RPM Control
  - Regulation
    - $\pm 1$  rpm from 100 to 10,000 rpm (EC)
    - $\pm 2$  to  $\pm 5$  from 100 to 10,000 rpm (WB)
  - Response - 700 rpm / Sec

Errors	Eddy-Current	Water-Brake	DC
Accumulative (3 mo., 20 F span)	1 rpm, typical	5 rpm, typical	1 rpm, typical
	2 rpm, max	10 rpm, max.	2 rpm, max
Temp. Coef., max	0.015 rpm/F.	0.4 rpm/F.	0.015 rpm/F.
Time Drift, max.	0.3 rpm/mo	0.3 rpm/mo.	0.3 rpm/mo.

- Load Control
  - Regulation - 0.1% for EC; 0.25% for WB
  - Response - Instantaneous, a function of dynamometer, 1.6 Hz standard feedback roll off
  - Accumulative Error (3 months, 20 F range) - Less than 0.01% FS
- Load Signal Conditioning
  - Excitation - 5 wire, 0-10VFS
  - Temperature Coefficient - (0.6 uV  $\pm$  5.5 ppm FS.)
  - / F RTI Aging - (0.5 uV  $\pm$  2 ppm)/month RTI
- Operating Conditions
  - Temperature: 0 to 70 C. ,
  - Humidity: 0 to 90%, non-condensing
  - Power Requirements: 115/230 VAC (+10%), 50/60 Hz Single phase, 3 wire.
  - Dimensions: (H x W x D) 7 x 19 x 12 inches; 17.8 x 48.3 x 30.5 cm