

# Throttle Actuator

Standard High-Torque with Remote Pendant



The Standard High-Torque Throttle Actuator consists of a totally enclosed planetary gear reduction, providing ample torque for actuating the most demanding mechanical throttle systems, while the optical encoder provides precise position feedback for optimum control. Combined with a Dyne Systems closed loop throttle control, this throttle actuator provides precise, repeatable control for position, speed and load modes and an additional level of test automation by eliminating the need for manual throttle operation. Remote Pendant enables easy control from within the test cell.

## Features: Actuator

- Totally enclosed gear head DC motor and optical encoder
- Throttle stroke range is 0.5" to 4"
- Actuator assembly is wash down waterproof, drip proof
- Maximum slew rate of 140 deg/sec with less than 120 in-lb opposing torque
- Maximum operating torque 120 in-lb
- Maximum available short-term stall torque: 400 in-lb
- Encoder senses position to +/- 0.005% FS
- Foot mount or "C face" mounting capability
- A 5" lever arm with adjustable rod end assembly is supplied for throttle linkage connection

## Features: Remote Pendant

- UP and DOWN pushbuttons to duplicate the functions of increasing or decreasing throttle position
- An ENTER pushbutton to allow entry of new calibration points
- A SOFT SHUTDOWN pushbutton
- LED indicators of UPPER LIMIT mode, LOWER LIMIT mode, limit acceptance, and FAULT

## Testing Applications

- Engine

### Dimensions

Actuator: 4" w x 8" l x 4" h  
Pendant: 5" w x 9" l x 4" h

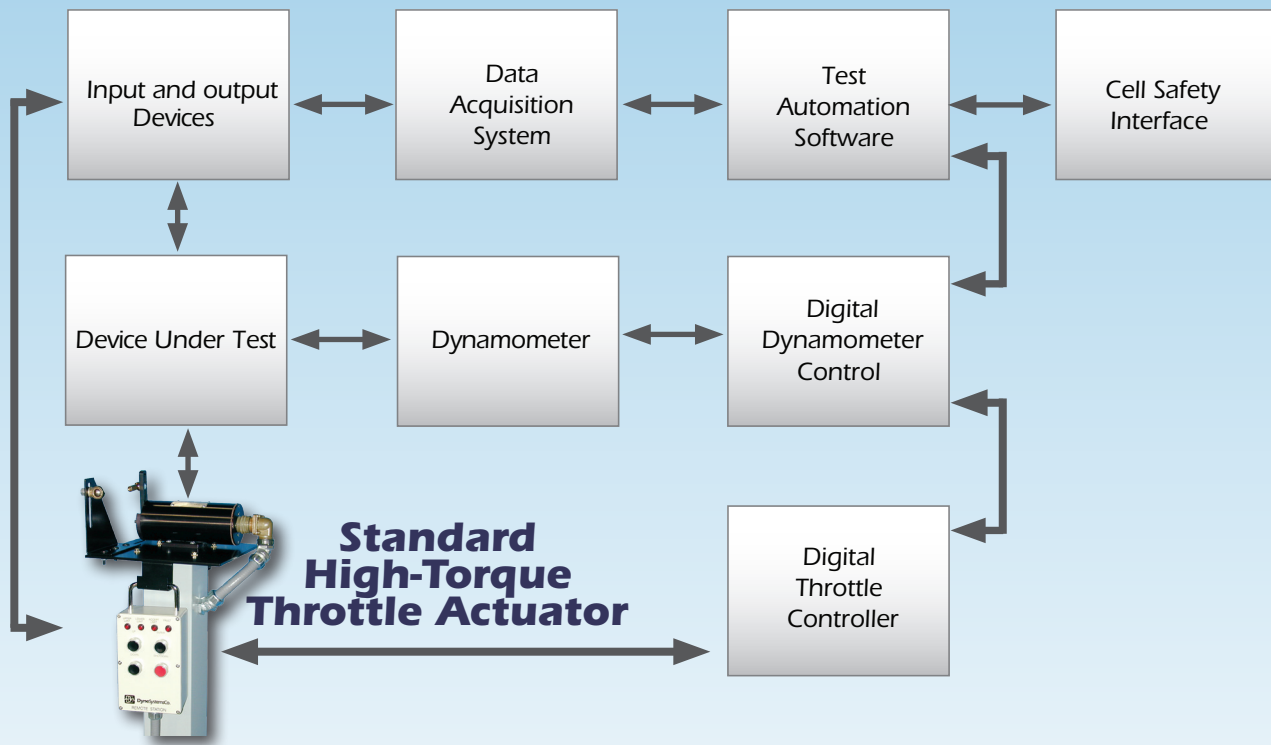
### Control Power

+/-20 V, 3.0 Amps

### Environmental Limits

Air Temperature: 0° to 70°C (158°F)

Relative Humidity: 0 to 95%  
No condensation allowed



## Dyne Systems Product Line

### Closed Multi-Loop Dynamometer & Throttle Control

- Inter-Loc V
- DS630 Inter-Loc V Throttle Controller

### Closed Single-Loop Dynamometer Control

- Dyn-Loc IV
- Dyn-Loc V

### Closed Loop Throttle Control

- DTC-1
- DS830 Stand-Alone Throttle Controller

### Open Loop Dynamometer Control

- DS820 Eddy Current PAU

### Closed Loop Water Flow Control

- EWC-1

### 5-Gas Exhaust Analyzer

- XM2000

### Data Acquisition

- Companion II: Dyne Systems proprietary
- Companion III: Yokogawa based
- Companion IV: NI cRIO based

### Test Automation Software

- Cell Assistant for Windows
- Cell Assistant for LabVIEW™ (VeriStand™)

### Test Cell Safety PLC Interface

- CIA I: Automation Direct / Koyo
- CIA II: Horner
- CIA III: ABB
- CIA IV: Allen-Bradley

### Throttle Accessories

- Actuator, Remote Pendant, Cables

### Eddy Current Dynamometers

- 5–5000 Hp

### AC Dynamometers and Drives

- 5–1600 Hp

### DC Dynamometers and Drives

- 5–1200 Hp