Advanced Digital Controllers Series DC

Series DC advanced digital controllers are designed to expand the functionality and programmability of our range of motorized test stands, including models ESMH, TSFM500/TSFM500H, and TSTM/TSTMH. These controllers are available with new test stands or may be used with any existing Mark-10 motorized test stands. Simply unplug the old controller, and plug in the Series DC controller. These highly sophisticated controllers offer PC control capability, extended speed ranges, programmable cycling, auto return, overload protection, and more. Specifications vary between Series DC advanced motorized test stands. Refer to the respective data sheets for detailed information.

Features

- **Computer Control**
  A bi-directional RS-232 port is provided to interface with a PC. A command set is provided. The following are required with PC control:
  - Series 7/5 force gauge or Model 7i/5i indicator
  - 09-1056 serial cable
  - 09-1162 multi-function cable

- **Digital Angle Indication (DC4040)**
  Rotational travel is indicated in degrees or revolutions, with RS-232 output of angle data.

- **Programmable Angle Limits (DC4040)**
  The TSTM test stand can stop at or cycle between programmable upper and lower angle limits. Programmable in degrees or revolutions.

- **Overload Protection**
  Protects the gauge against overload (requires one of the above mentioned instruments and 09-1162 multi-function cable). The user programs the desired percentage of full scale of the gauge.

- **Auto-return**
  The crosshead moves to a limit switch, force (requires one of the above mentioned instruments), or travel position (TSTM only), stops, and reverses direction at full speed to the other limit switch, force or travel position.

- **Cycling / Dwell Time**
  Same as Auto-return, but with the ability to program the number of cycles up to 99,999 cycles. Dwell time allows the operator to program the length of time, up to 9,999.9 seconds, in 0.1 second intervals, for which the test stand stops between cycles. Independent speeds may be programmed.

- **Programmable Button Functions**
  UP / CW and DOWN / CCW button operation can be configured in three user-configurable modes: Maintained: a short push produces continuous motion until STOP is pressed, Momentary: test stand moves only while the button is pressed, and Auto: short push produces maintained motion, while holding down the button will produce momentary motion.

- **Independent Up / CW and Down / CCW Speeds**
  Programmable independent speeds for up / clockwise and down / counterclockwise directions.

- **Selectable Speed Units of Measurement**
  in/min and mm/min for DC4010 and DC4030 / RPM and deg/s for DC4040.

- **Password Protection**
  Prevents unauthorized changes to test parameters.

Ordering Information

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>DC4010</td>
<td>Advanced digital controller for ESMH, 110V</td>
</tr>
<tr>
<td>DC4030</td>
<td>Advanced digital controller for TSFM500, 110V</td>
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<tr>
<td>DC4040*</td>
<td>Advanced digital controller for TSTM, 110V</td>
</tr>
<tr>
<td>09-1162</td>
<td>Multi-function cable, gauge/indicator to controller</td>
</tr>
<tr>
<td>09-1056</td>
<td>Serial cable, controller to PC</td>
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</tbody>
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* TSTM must be retrofitted with angle encoder for digital angle indication.

All models include 110V AC adapters. Add suffix ‘E’ for euro plug (220V), ‘U’ for UK plug (220V), or ‘A’ for Australian plug (220V). Ex: DC4010E, DC4030U, DC4040A

Series DC controllers include a test stand connection cable and user’s guide.