

32-1101 REV 1

Series DC advanced digital controllers are designed to expand the functionality and programmability of our range of motorized test stands, including models ESM, 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.



Ordering Information

Model No.	Description
DC4010	Advanced digital controller for ESMH, 110V
DC4020	Advanced digital controller for ESM, 110V
DC4030	Advanced digital controller for TSFM500, 110V
DC4040*	Advanced digital controller for TSTM, 110V
09-1162	Multi-function cable, Series 5/4 gauge to controller
09-1143	Multi-function cable, BGI indicator to controller
09-1056	Serial cable, controller to PC

* 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, DC4020U,

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



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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 5 / BGI gauge
- 09-1056 serial cable
- 09-1162 / 09-1143 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 a Series 5/4/BGI gauge and 09-1162 / 09-1143 multi-function cable). The user programs the desired percentage of full scale of the gauge.

■ Auto-return

The test stand travels to a limit (limit switch, force set point, or travel set point, depending on the test stand), stops, and reverses direction at full speed to the other limit.

■ 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, DC4020, and DC4030 / RPM and deg/s for DC4040.

■ Password Protection

Prevents unauthorized changes to test parameters.

Dimensions

in [mm]

