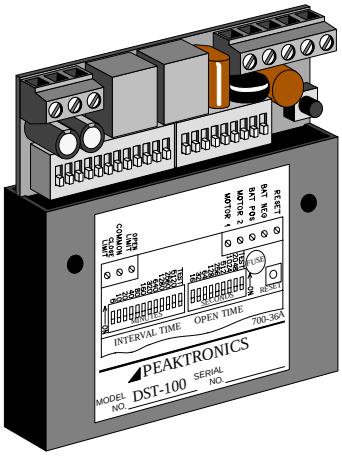
PEAKTRONICS

DST-100

DC Sequence Timer



DST-100
DST-100A

The Peaktronics DST-100 DC Sequence Timer is intended for controlling the open and closed times of DC actuators up to 5A locked rotor current. The unit is available in versions for 10-16VDC (DST-100) and 20-30VDC (DST-100A). With a low operating current of 100uA @ 25°C (typical), the unit is ideal for battery powered applications. The unit is rated for a storage temperature of -40 to 85°C and an operating temperature of 0 to 60°C with a relative humidity of 0 to 90% (non-condensing).

Its compact size allows the unit to be mounted inside most actuators, and its solid construction body makes it rugged and easy to mount (two #6 through holes are provided). Screw terminals and a wiring diagram on the unit allow for easy field installation and operation. The unit also includes an on-board replaceable fuse (TR5 type, 4.00A time lag 374 Series).

The DST-100 utilizes a quartz crystal timer that provides repeatable timed sequences. A 9-position switch bank allows the Open Time to be set from 16 to 4080 seconds (68 minutes) in 16 second increments. A 12-position switch bank allows the Interval Time to be set from 5 to 10,235 minutes (170.6 hours) in 5 minute increments. The unit also features dynamic braking which provides precision positioning at the end of travel points.

The on-board Reset switch can be used to terminate the timing cycle in progress and restarts a new timing cycle with the *open time*. Pressing and holding the Reset Button drives the actuator *open*; the Open Time period begins when the Reset Button is released. The RESET Input terminal allows the user to connect an external remote reset switch as well.

OPEN TIME

Each switch in the 9-position OPEN TIME switch bank selects a specific time period in seconds (as marked on the front label) when the specific switch is set to the ON position. The total *open time* is equal to the sum of all the selected time periods. For example, if the "16", "32", and "256" switches are set ON (all others OFF), then the *open time* will be 16 + 32 + 256 (or 304) seconds. The OPEN TIME Test Switch should be set to OFF for normal operation; when set to ON, the *open time* and *interval time* are divided by 64.

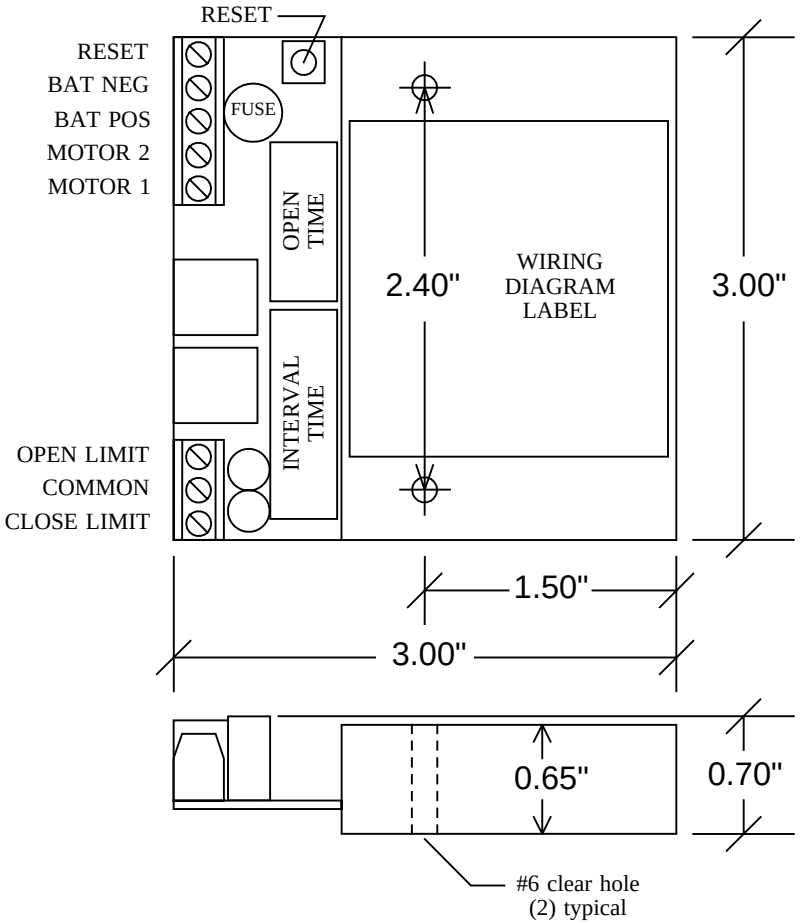
When an *open time* period begins, the unit applies the DC voltage to the motor, with the MOTOR 1 Output being positive and the MOTOR 2 Output being negative. The voltage to the motor is maintained until the OPEN LIMIT Input is disconnected from the COMMON Input terminal when the open limit switch is reached.

When the selected *open time* expires, the unit applies the reverse polarity to the motor (MOTOR 1 negative and MOTOR 2 positive) to close the actuator. The voltage is maintained until the CLOSE LIMIT Input is disconnected from the COMMON Input terminal when the close limit switch is reached.

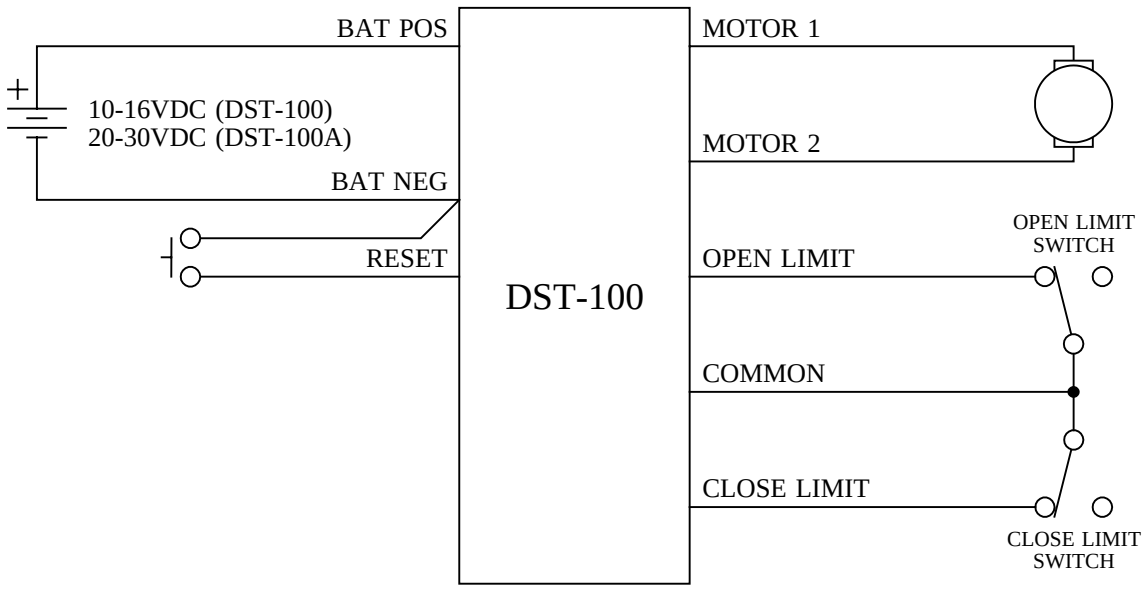
INTERVAL TIME

After the completion of an *open time* sequence, the motor outputs are turned off, leaving the actuator in the *closed* position, for the remainder of the *interval time* period. Each switch in the 12-position INTERVAL TIME switch bank selects a specific time period in minutes (as marked on the front label) when the specific switch is set to the ON position. The total *interval time* is equal to the sum of all the selected time periods. For example, if the "80", "160", and "640" switches are set ON (all others OFF), then the *interval time* will be 80 + 160 + 640 (or 880) minutes. When the selected *interval time* period expires, a new timing cycle starts with the *open time* sequence. The INTERVAL TIME Test Switch should be set to OFF for normal operation; when set to ON, the *interval time* is divided by 150.

OUTLINE



BLOCK DIAGRAM



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