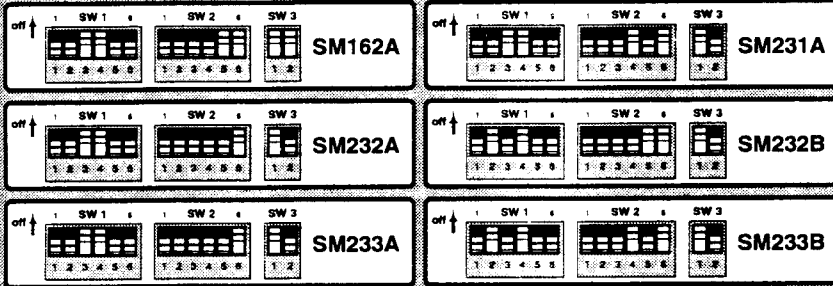


DIP Switch Settings for Compumotor SM Motors* (with foldback enabled) see page 8

*Switches shown configured for initial tuning, with peak current approximately twice motor's continuous current rating. See *Tuning* (pg 39) for procedure to iteratively increase peak current.



TQ10X Drive Compumotor

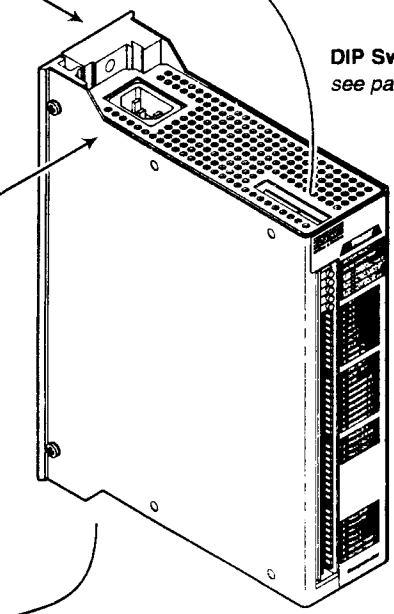
TQ10X Status LEDs see page 96

MOTOR FAULT	Red indicates short circuit in motor cabling, or indicates motor overtemperature.
DRIVE OVERTEMP	Red indicates drive has exceeded temperature limit.
REGEN/OVERVOLTAGE	Illuminates green during regen event; illuminates red if regen causes overvoltage.
PEAK CURRENT/IN FOLDBACK	Illuminates green during peak current output; illuminates red while drive is in foldback.
POWER ON/NOT ENABLED	Illuminates green when AC power is applied; illuminates red when AC power is applied but drive is not enabled.

Heatsink see page 12 - 15

DIP Switches see page 8

AC Power Connector see page 29



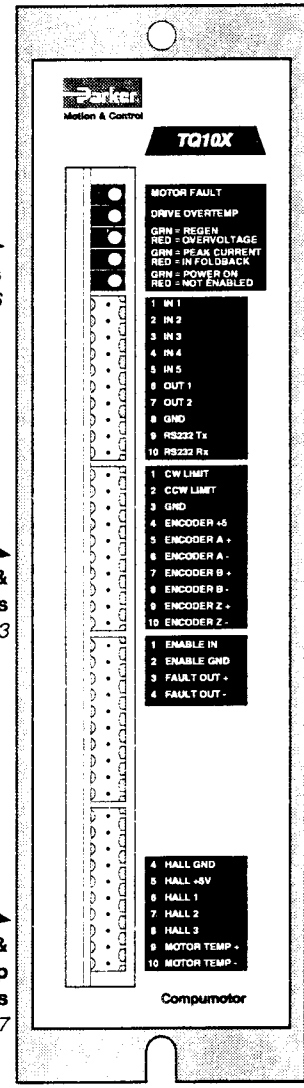
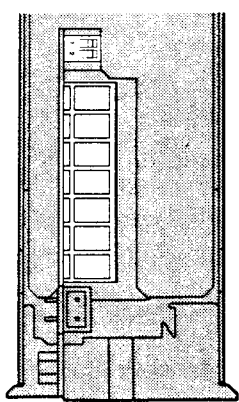
Motor Connector & DIP Switches (underneath drive) page 18

Status LEDs page 96

Inputs & Outputs page 23

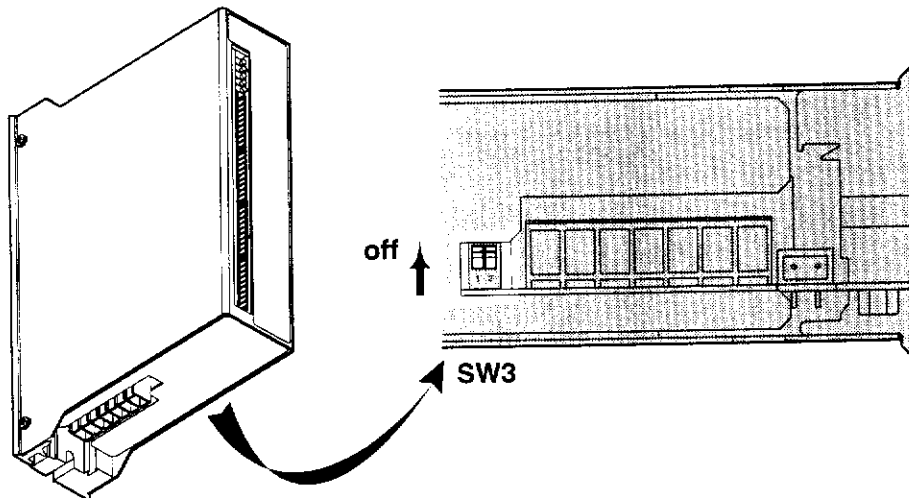
Hall & Motor Temp Signals page 17

SW 3
V Bus +
Regen Resistor
V Bus -
Phase A
Phase B
Phase C
Motor Ground



2 SET DIP SWITCHES (BOTTOM OF DRIVE)

Switch 3 (SW3) is a 2-position DIP switch located on the bottom of the drive, near the motor connector.



DIP Switch 3 – Location

Set it to control the drive's motor pole compensation, based upon your motor's electrical time constant. The following table shows switch settings for Compumotor SM Series servo motors.

TQ10X DIP SWITCH #3*

*Located on Bottom of Drive

off
↑

MOTOR POLE COMPENSATION		
	1	2
Compumotor		
SM Motor Settings		
SM161A, SM162A	off	off
SM231A, SM232A & B, SM233A & B	off	on
Reserved	on	off
Reserved	on	on

If you use a non-Compumotor motor, see the *Appendix* at the end of this user guide for information about setting DIP switches for your motor.

OFFSET POTENTIOMETER – Do NOT ADJUST

Located next to DIP SW3 is a small potentiometer that controls the drive's offset. It was adjusted at the factory, and requires no further adjustment.

WARNING

Do not adjust the offset potentiometer. Lethal voltages are present inside the drive. Adjusting the potentiometer with AC power applied can be hazardous to personnel.

3 MOUNT THE DRIVE

The TQ10X has an "open frame" enclosure—sheet metal encloses the front and sides, but the top and bottom are open. A TQ10X-EHS drive has top and bottom covers, and an attached heatsink and fan. You can purchase the heatsink or covers separately, and install them on your drive.

USING MOTORS OTHER THAN COMPUMOTOR SM SERIES MOTORS

Test all motors carefully. Verify that the motor temperature in your application is within the system limitations. *The motor manufacturer's maximum allowable motor case temperature must not be exceeded.* You should test the motor over a 2-to-3 hour period. Motors tend to have a long thermal time constant, but can still overheat, which results in motor damage.

CONFIGURING THE TQ10X DRIVE'S DIP SWITCHES

Set the TQ10X's 12 DIP switches located on top of the drive, and 2 DIP switches located on the bottom of the drive. The following drawing shows DIP switch settings for selected motors.

TQ10X DIP SWITCH SETTINGS

off ↑

SW 1

1 6

SW 2

↑ off

PEAK CURRENT			
(amps)	1	2	3
0	off	off	off
1.5	on	off	off
3.0	off	on	off
4.4	on	on	off
6.0	off	off	on
7.4	on	off	on
8.9	off	on	on
10.0	on	on	on

TIME AT PEAK			
(seconds)	4	5	6
1.0	on	on	on
1.2	on	on	off
1.4	on	off	on
1.6	on	off	off
3.3	off	on	on
5.0	off	on	off
10.0	off	off	on
Foldback Disabled	off	off	off

LOOP GAIN			
	4	5	6 (setting number)
off	off	off	0
on	off	off	1
off	on	off	2
on	on	off	3
off	off	on	4
on	off	on	5
off	on	on	6
on	on	on	7

Less Gain ↑
↓ More Gain

FOLDBACK RATIO		
2	3	
off	off	Foldback Disabled
on	off	56%
off	on	50%
on	on	40%

FOLDBACK FAULT	
1	
on	Fault on Foldback
off	No Fault on Foldback

DIP Switch Settings for Motors other than Compumotor SM Motors (with foldback enabled)

C. S. M.
MPM8924-BPE

C. S. M.
MPM6644-APE

OEM3401; Initial Setting for Other Motors

C. S. M.
MPM8924-BPE

C. S. M.
MPM6644-APE

OEM3401; Initial Setting for Other Motors

DIP Switch Settings – Non-Compumotor SM Motors

If you are unsure of which settings to use for your motor, start with the setting shown above for the OEM3401 motor. If the motor gets hot when it is stopped, reduce the loop gain setting (DIP SW2 — #4, #5, #6).