

# SEPARATELY EXCITED ELECTRONIC MOTOR SPEED CONTROLLER

**MODEL 1244 SepEx®**



**CURTIS**



## DESCRIPTION

Curtis PMC Model 1244 SepEx® programmable controllers provide smooth and seamless regenerative control of separately excited motors. An advanced MOSFET power section provides very high efficiency, silent operation and reduced motor and battery losses.

## APPLICATION

Curtis PMC SepEx® controllers are designed for small material handling and other light industrial vehicles using separately excited motors. These include low lifts, stackers, personnel carriers and other industrial vehicles.

## FEATURES

- Full bridge control of the motor field allows reversing without the use of direction contactors.
- Fully compatible with the Model 1307 Programmer for programming, diagnostic and test information.
- Armature current controlled at all times, reducing arcing and brush wear.
- Regenerative braking increases usable battery energy and reduces motor heating.
- Neutral braking provides automatic braking in neutral - simulates the feel of compression braking. Braking level adjustable.
- MultiMode™ allows four user selectable vehicle operating profiles.
- Programmable to match individual separately excited motor characteristics.
- Meets or exceeds EEC fault detect requirements with circuitry and software to detect faults in the throttle circuit, MOSFET drive circuits, and driver outputs.
- Vehicle speed is controlled and limited at top end via motor field control.
- Passive regen provides vehicle speed control at any throttle position when going down ramps.
- Linear temperature cutback on armature and field drive current limits. No sudden loss of power under any thermal conditions.
- Undervoltage cutback reduces motor current to maintain the battery voltage above the under-voltage point.
- PWM drivers for contactors are programmable for pullin and holding currents to reduce power dissipation and allow the use of common contactors.
- HPD and SRO interlock options ensure proper startup sequence.
- Emergency reverse (belly button) input causes immediate reversal upon activation.

# MODEL 1244 SepEx®

## FEATURES continued

- Integral fault detect LED flashes error code information.
- Two fault outputs provide diagnostic information to dash mounted displays.
- Fully protected inputs and outputs.
- Hour meter enable output active only when vehicle is moving.
- Active power on self test and continuous diagnostics during operation.
- Internal and external circuits ensure proper software operation.

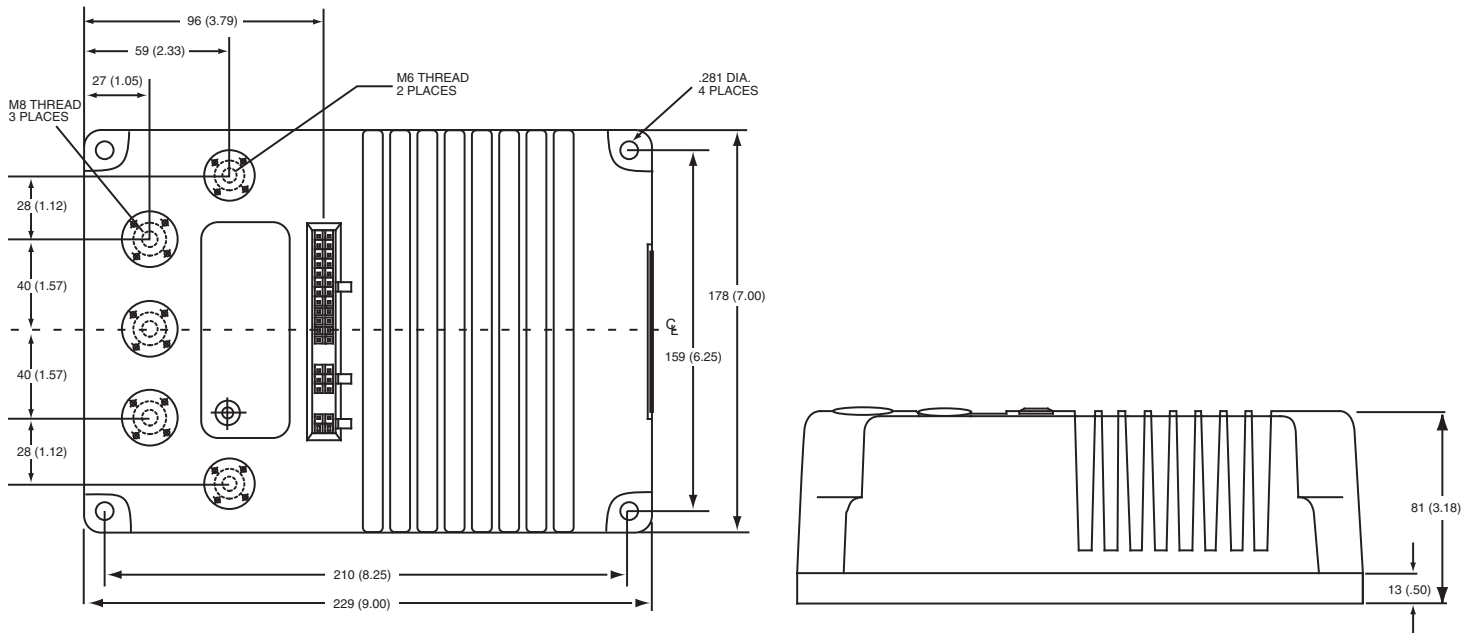
## Meets or complies with relevant US and International Regulations

- Manufactured under ISO 9001 certified Quality Management System.
- UL Recognized Component Status.

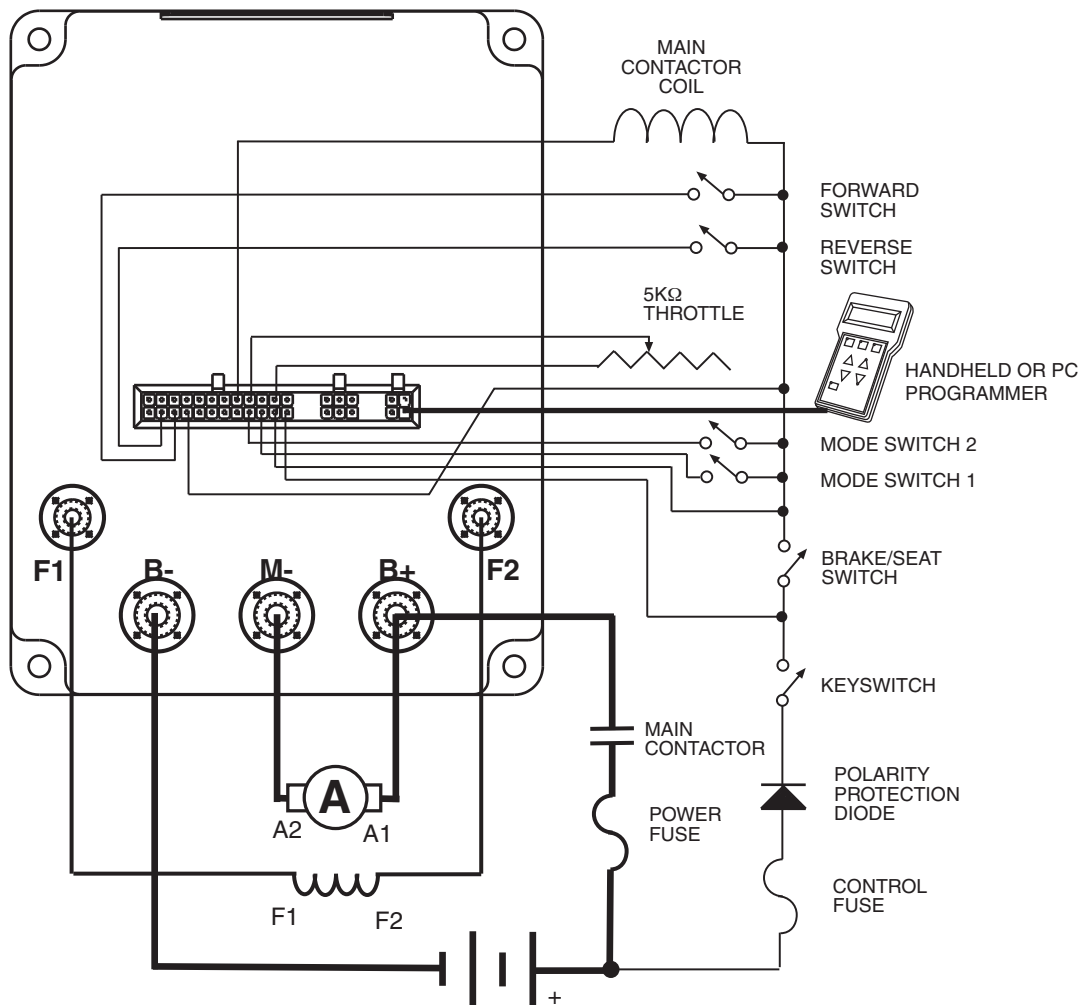
## MODEL CHART

| CURTIS PMC MODEL | VOLTAGE<br>(volts) | ARMATURE RATING<br>(amps)<br>2 minutes | FIELD RATING<br>(amps)<br>2 minutes |
|------------------|--------------------|--|-------------------------------------|
| 1244-44XX        | 24-36              | 400                                    | 60                                  |
| 1244-45XX        | 24-36              | 500                                    | 60                                  |
| 1244-46XX        | 24-36              | 600                                    | 60                                  |
| 1244-47XX        | 24-36              | 700                                    | 60                                  |
| 1244-54XX        | 36-48              | 400                                    | 50                                  |
| 1244-55XX        | 36-48              | 500                                    | 50                                  |
| 1244-56XX        | 36-48              | 600                                    | 50                                  |
| 1244-64XX        | 36-80              | 400                                    | 50                                  |
| 1244-65XX        | 36-80              | 500                                    | 50                                  |
| 1244-66XX        | 36-80              | 600                                    | 1 minute<br>50                      |

## DIMENSIONS mm



## TYPICAL WIRING DIAGRAM



## OPTIONS

- Electro-magnetic brake control.
- Internal precharge circuit eliminates external resistor and excessive arcing on main. (Standard on 36-48 and 36-80 volt models)
- Auxiliary contactor driver for power steering pump.
- Reverse signal output for backup alarm, lights, etc.
- Closed-loop speed control utilizing a pulse speed sensor.
- CAN interface to allow control, programming and status access through standard communication port.

**WARRANTY** Two year limited warranty from time of delivery.