

# SEPARATELY EXCITED ELECTRONIC MOTOR SPEED CONTROLLER

MODEL 1243 SepEx®



CURTIS



## DESCRIPTION

Curtis PMC Model 1243 SepEx® programmable controllers provide smooth and seamless regenerative control of separately excited motors. An advanced MOSFET power section, combined with a sophisticated microprocessor provides very high efficiency, silent operation and reduced motor and battery losses.

## APPLICATION

Curtis PMC Model 1243 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

### Unparalleled Driving and Braking Feel

- Regenerative braking allows shorter stopping distances, increases usable battery energy, and reduces motor heating. The half bridge armature drive topology allows regenerative braking down to zero vehicle speed.
- "Ramp Restraint" feature provides automatic electronic braking that restricts vehicle movement while in neutral.
- Vehicle speed is controlled by the throttle, at all times including down hills.
- "Load Compensation" provides improved loaded versus unloaded speed regulation by compensating for losses in the armature.

### Fully Programmable

- Fully compatible with the Curtis Models 1311 and 1314 programmers for programming, test, and diagnostic information.
- MultiMode™ feature allows four user selectable vehicle operating profiles. Each profile has separate drive current limits, brake current limits, acceleration rates, brake rates and maximum speeds.

### Easy to Install and Maintain

- No direction contactors are required. The full bridge field driver topology allows motor reversing without the use of direction contactors.
- Simple wiring and installation by the elimination of the direction contactors and the use of positive battery connections for all inputs and driver outputs.
- Can be configured to match most separately excited motors and vehicle applications.
- An auxiliary driver output supports an electro-magnetic brake, pump contactor, or hour meter. A programmable delay allows for customization of this driver output.
- An integral fault LED flashes helpful error code information. Two fault outputs provide diagnostic information for dash mounted displays. Diagnostic faults are logged and the history is viewable through a Curtis Model 1311 and 1314 programmer.

### Powerful Safety Features

- Meets or exceeds EEC fault detection requirements. Circuitry and software to detect faults in the throttle circuit and MOSFET drive circuits help prevent unsafe operation.

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## FEATURES continued

- Emergency reverse feature causes quick vehicle reversal upon activation. The emergency reverse input wire can also be checked for continuity.
- Programmable HPD and SRO interlock options ensure proper startup sequence.
- Complies with the CE standards for electromagnetic compatibility in emissions and susceptibility.
- Active power on self test and continuous diagnostics during operation. Internal and external watchdog circuits ensure proper software operation.

- All inputs and outputs are fully protected.

### Meets or complies with relevant US and International Regulations

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

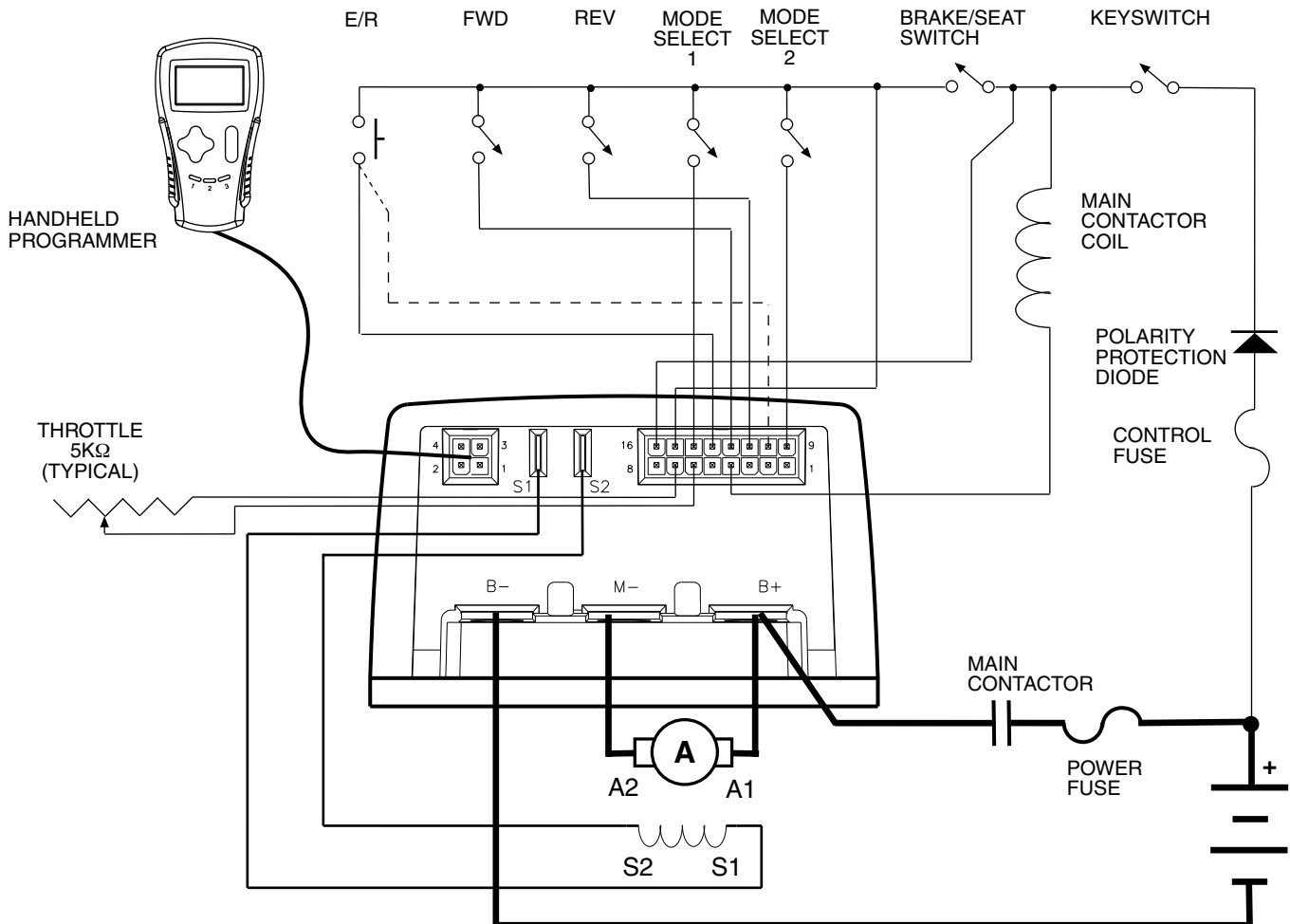
## MODEL CHART

CURTIS PMC MODEL	VOLTAGE (volts)	ARMATURE RATING*		FIELD RATING	
		2 minutes (amps)	1hr	2 minutes (amps)	1hr
1243-24XX	24	350	100	35	15
1243-42XX	24-36	200	80	25	15
1243-43XX	24-36	300	100	35	15

\*Armature rating is for both drive and regen current

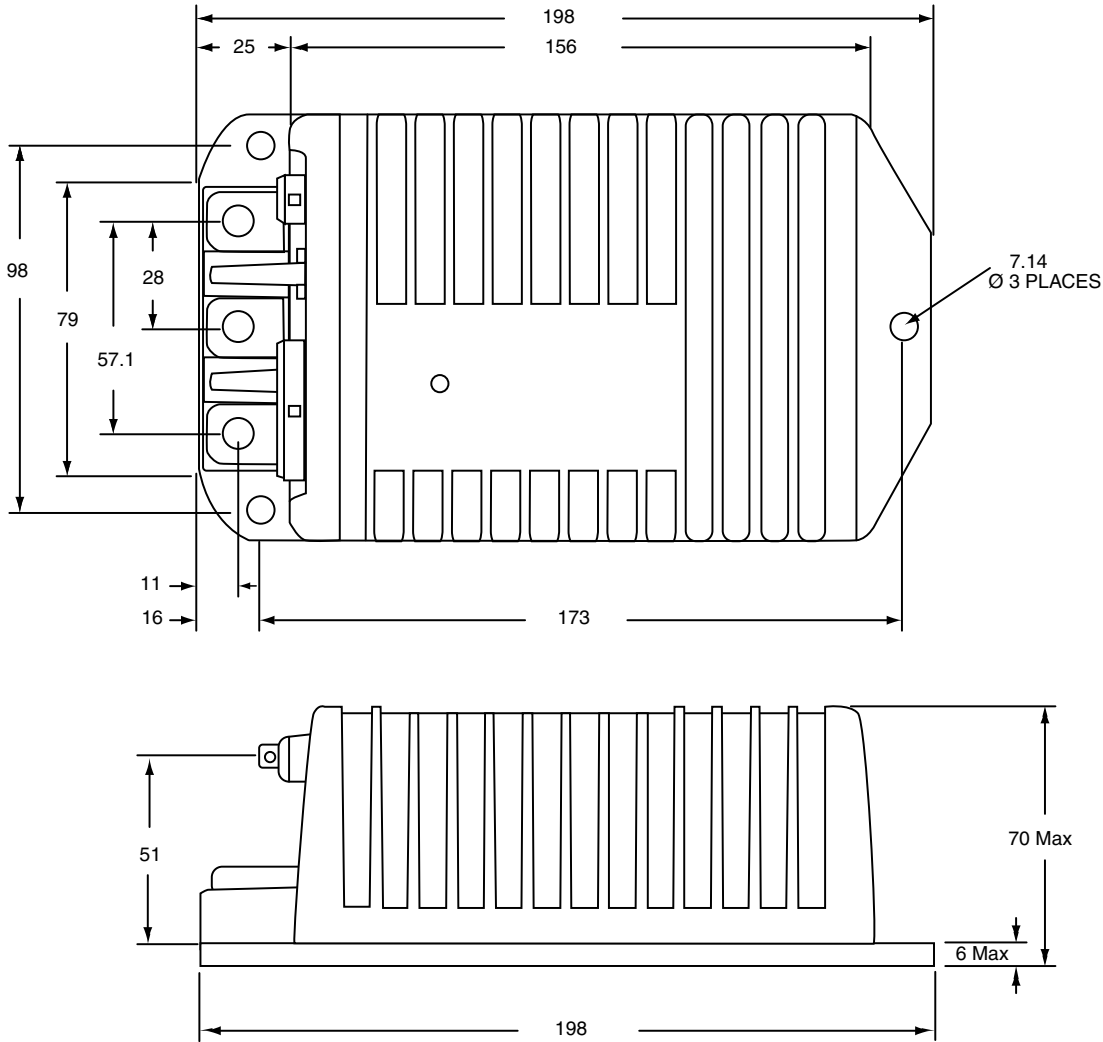
Please consult Curtis PMC for availability of other models with different ratings.

## TYPICAL WIRING DIAGRAM



# MODEL 1243 SepEx®

## DIMENSIONS mm



## OPTIONS

- Curtis Model 840 "Spyglass" LCD Multifunction Display contains 8 large, readable characters to provide display of battery discharge (BDI), hour meter and error messages. Backlit display is also available.



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

