

INTEGRATED AC TRACTION & HYDRAULIC SYSTEM CONTROLLER

MODEL 1298



CURTIS



DESCRIPTION

The Curtis Model 1298 Integrated AC traction & hydraulic system controller combines advanced AC traction motor control with solid state DC hydraulic pump and proportional valve control to provide a complete economical integrated package.

APPLICATION

The Curtis Model 1298 is designed primarily for Class III material handling vehicles requiring variable speed or soft start and soft stop control of the lift and lower functions. Fully-featured generic software is included for Walkie and Walkie-Stacker applications. Other applications can be easily supported with alternate VCL Programming.

FEATURES

Advanced Design

- High Frequency, silent operation.
- Powerful operating system allows parallel processing of vehicle control tasks, motor control tasks, and user configurable programmable logic.
- Curtis field-oriented vector control algorithm provides peak torque and optimal efficiency across the entire operating range.
- Full regenerative braking and precise zero speed control.
- In-vehicle motor characterization allows easy tuning of the controller to any AC motor.
- Half-bridge pump output allows superior regulation of pump motor speed and current demand.
- Built-in battery state-of-charge algorithms and hour meters.
- Field Programmable.

Unmatched Flexibility

- Special features and I/O for electromagnetic brake, DC Pump motor, and hydraulic valve control allow for economical control of the entire vehicle system.
- Software selectable options for variable speed lift and lower or single-speed lift and lower.
- The unique Curtis Vehicle Control Language (VCL) makes system design easier than ever. OEMs can draw on decades of Curtis experience in the industry by using Curtis provided VCL functions. Alternately, you can quickly and easily write your own proprietary functions and algorithms to differentiate your systems from your competition.
- CAN bus connection allows communication with other CAN bus enabled system components such as the Curtis TH-1 Tiller head. Protocol meets CANopen standards, or is customizable through VCL.
- Easily programmable through the 1311 handheld programmer or 1314 PC Programming Station.

Robust Safety and Reliability

- Insulated Metal Substrate (IMS) power base provides superior heat transfer for increased performance and reliability.
- Fail-Safe power component design.
- Redundant hardware and software watchdog timers.
- Reverse polarity protection on battery connections.
- Short circuit protection on all output drivers.

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FEATURES continued

- Thermal cutback with warning and automatic shutdown faults provides protection to the motor and controller.
- Rugged sealed housing and connectors meet IP65 environmental ratings for use in harsh environments.
- Full power operation over -40° C to 85° C Heatsink temperature range.
- Logic power supply design allows operation down to 10.5 volts to prevent brownouts under heavy loads.

Meets US and International Regulations

EMC: Designed to the requirements of EN12895

Safety: Designed to the requirements of EN1175

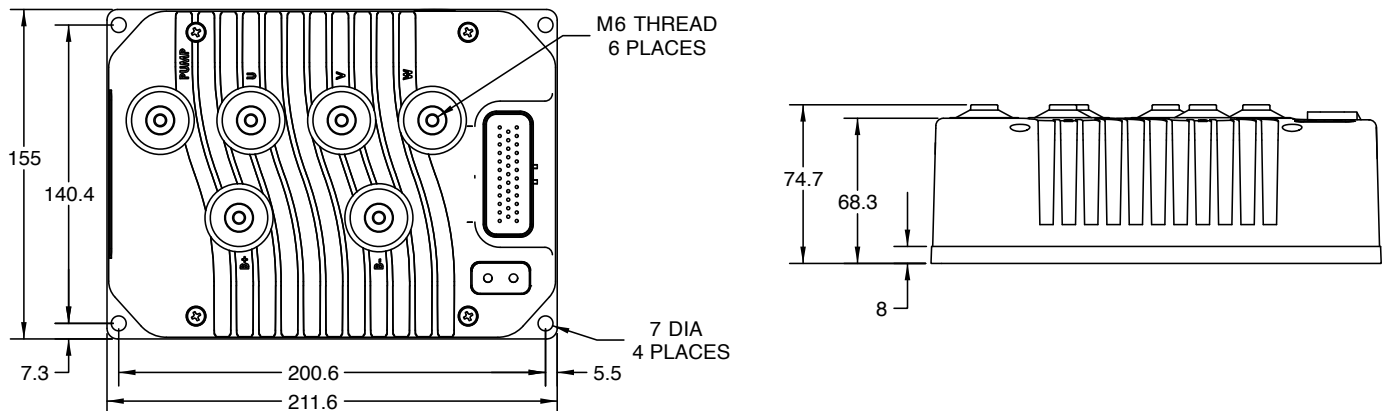
IP65 Rated per IEC 529

Regulatory compliance of the complete vehicle system with the controller installed is the responsibility of the vehicle OEM.

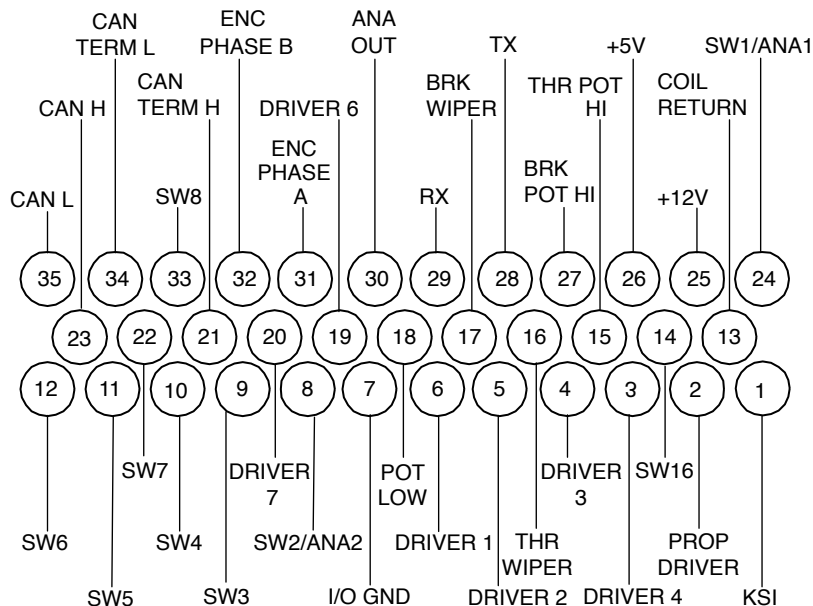
MODEL CHART

Model	Battery Voltage (V)	2 Min RMS Traction Current Rating (Arms)	2 Min RMS Traction Power Rating (kVA)	2 Min Pump Current Rating (A DC)
1298-22XX	24	200	5.7	300

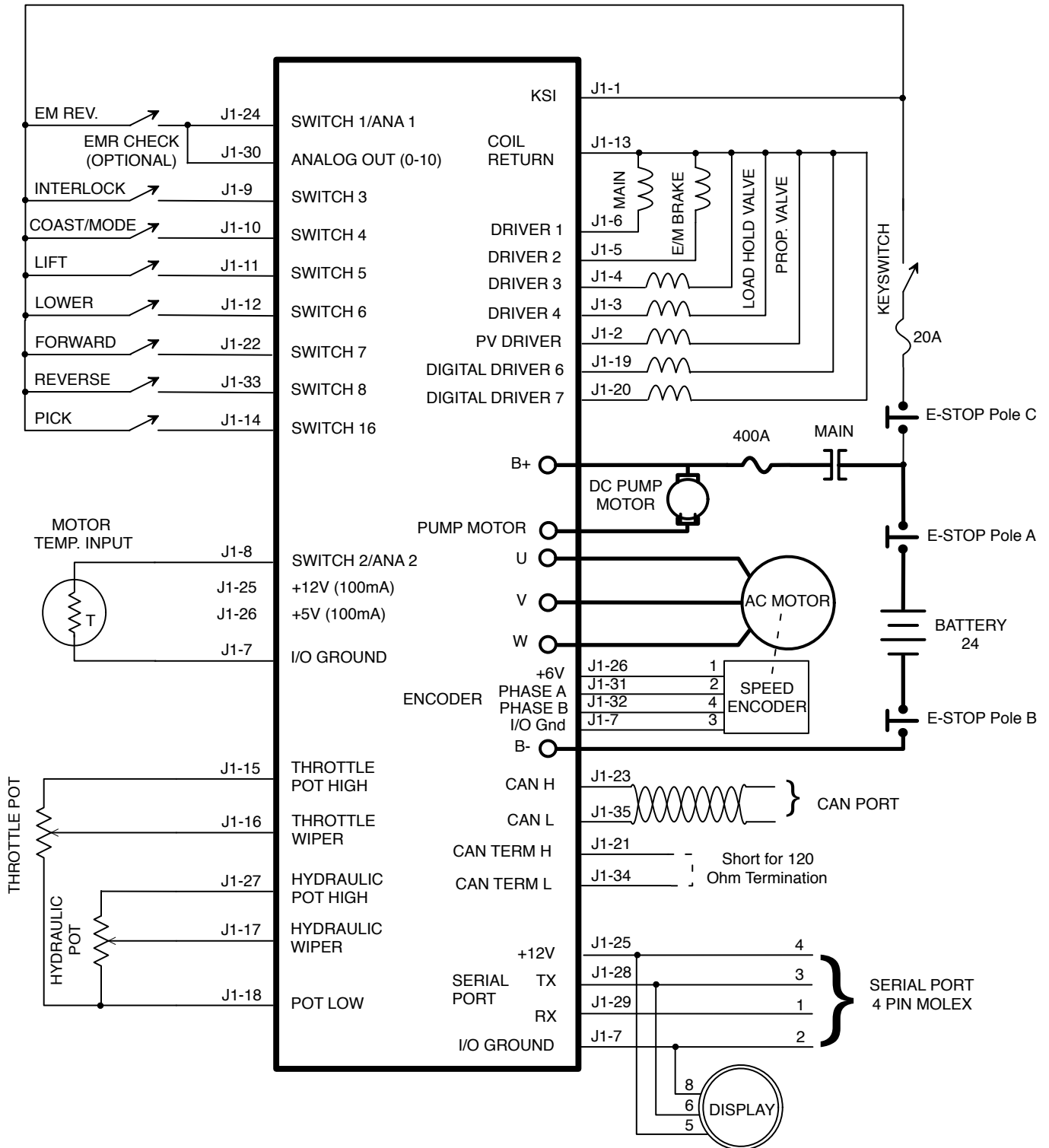
DIMENSIONS mm



CONNECTOR WIRING



TYPICAL WIRING DIAGRAM



WARRANTY Two year limited warranty from time of delivery.

