

- **Cost-effective, AC traction controller**
- **200Arms and 250Arms power options**
- **Compatible with all AC induction motors**
- **Versatile throttle input – resistive & voltage**
- **Programmable Belly-Button function**
- **Switched or proportional hydraulic control**
- **Five coil outputs**
- **Software interlocking of drive & hydraulics**
- **Intelligent Hill-Hold function**
- **Low battery management**
- **CAN tiller compatible option**
- **Integrated service timers**
- **Sealed to IPx5**
- **Designed to meet UL583 requirements**

Although primarily intended as an advanced, cost-effective AC traction controller for Class 3, pallet truck type applications, the C3 range is equally suitable for other small, ride-on vehicles. Flexible, yet simple programming means the controller is compatible with all types of AC induction motor, while a dedicated thermistor input allows motor temperature and the power to the motor to be reduced if it is becoming too warm.

The C3 features up to eight dedicated digital inputs that can be individually switched to 0V, open-circuit, B+ or a combination of these options to provide the active state. The controller also accepts multiple throttle types, including 2- or 3-wire resistive and voltage. A CAN tiller compatible variant is available as well, offering vehicle OEMs maximum input flexibility.

Five, 2A outputs allow for control of line and lift contactors, lower and hold valves, plus an electro-magnetic brake. All outputs are protected against wiring errors and contain coil suppression circuits, meaning external diodes are not required.

To ensure maximum efficiency, the C3 employs an intelligent Hill-Hold function that only takes power from the battery if the vehicle starts to roll. As soon as it is detected that Hill-Hold is



not required, then no further power will be consumed. Traditionally, application of a brake switch has been needed to provide this function.

In addition to on-board LEDs that can communicate basic status and diagnostic information, the controller includes two service timers – one for keyswitch hours and one for operational 'active' hours. These can be set by an OEM or service agent, thereby ensuring an appropriate maintenance regime. After a service is complete, the timers can be set to the next service interval.

The innovative construction methods employed by the C3 ensure reliable and repeatable assembly of the electronic enclosure, which results in consistent protection of the electronic circuits from the environment and efficient transfer of heat to the baseplate. The design is compliant with all relevant international legislation and takes into account critical dimensions as defined by UL.

SPECIFICATIONS

ELECTRICAL

SUPPLY VOLTAGE	16-30Vdc
PEAK VOLTAGE	36Vdc
REVERSE BATTERY VOLTAGE	40Vdc
PWM FREQUENCY	10kHz or 20kHz
COIL OUTPUTS	5 x 2A, protected
TRACTION MOTOR OUTPUT – 2 MINS	200Arms (C3-200) 250Arms (C3-250)
TRACTION MOTOR OUTPUT – 1 HR	80Arms min. (C3-200) 100Arms min. (C3-250)

MECHANICAL

POWER CONNECTIONS	M6
CONTROL CONNECTIONS	Molex® Mini-Fit, Jr.
LENGTH	172mm / 6.77"
WIDTH	146mm / 5.75"
HEIGHT	63mm / 2.48"

ENVIRONMENTAL

MOISTURE RESISTANCE	IPx5
OPERATING TEMPERATURE	-30°C to 55°C
STORAGE TEMPERATURE	-40°C to 70°C
EMC	Tested to EN12895

PRODUCT CODES

CONTROLLERS

C3-200	200Arms traction drive, switched hydraulic control
C3-250	250Arms traction drive, switched hydraulic control
C3-200-CAN	200Arms traction drive, proportional hydraulic control, CAN tiller compatible
C3-250-CAN	250Arms traction drive, proportional hydraulic control, CAN tiller compatible

DISPLAYS

iGAUGE	52mm diameter, LCD gauge
TRUCHARGE	10 segment, LED gauge

PROGRAMMERS

DTT	Diagnostic Test Tool, hand-held programmer
C3 PCP SERVICE	PC Programmer, service access
C3 PCP OEM	PC Programmer, OEM and manufacturing access