

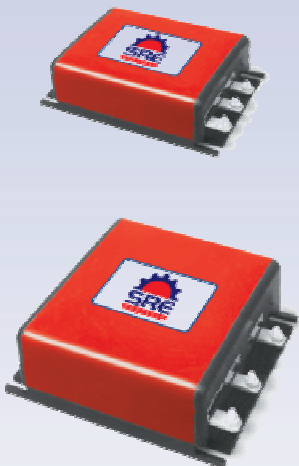


AC Induction

APPLICATIONS

The TAC controller family is used in the following applications;

- Forklifts
- Golf Cars
- Stackers
- Personnel Carriers
- Scrubber/Sweeper



DESCRIPTION

Traditionally, AC controllers use either slip frequency, field orientation or direct torque techniques to run the motor. With over a decade of AC engineering expertise, SRE Controls has developed a new technology known as "Optimal AC" (OAC). **patent pending.** OAC combines the best of all three approaches, delivers maximum torque and efficiency and eliminates the weaknesses of the other approaches.

In traditional AC systems operating characteristics like performance and efficiency degrade due to heat and wear. OAC Technology is not susceptible to these problems, is robust enough to adapt to any AC Motor and uses a simple setup process.

In addition to OAC Technology, SRE is using leading edge hardware designs. These include the most advanced power electronics components which offer exceptional power management and improved thermal capabilities. SRE also incorporates a unique thermal clad board technology that allows the controller to transfer heat away from the electronics quicker than other currently used methods.

	Speed Control	Torque at low speed	Flexibility Tuning	Operating Changes
Slip Frequency	Good	Not good	Good	Good
Field Orientation	Best	Best	Not good	Not Good
Direct Torque	Best	Best	Not good	Not Good
SRE's Optimal AC Technology	Better	Best	Best	Best

■ Power Ratings

Model #	Voltage	Peak Current RMS	Cont. Current RMS	Cont. Power	Cont.HP
TAC100-48	24-48	100	60	2kw	2.6
TAC250-48	24-48	250	150	5kw	6.6
TAC400-48	24-48	400	210	8kw	10
TAC550-48	24-48	550	330	12kw	16
TAC700-48	24-48	700	420	15kw	19

■ Environmental Specification

Common Specifications	Minimum	Maximum
Heat Sink Temperature	-40C	85C
Relative Humidity	-	95 RH, non condensing

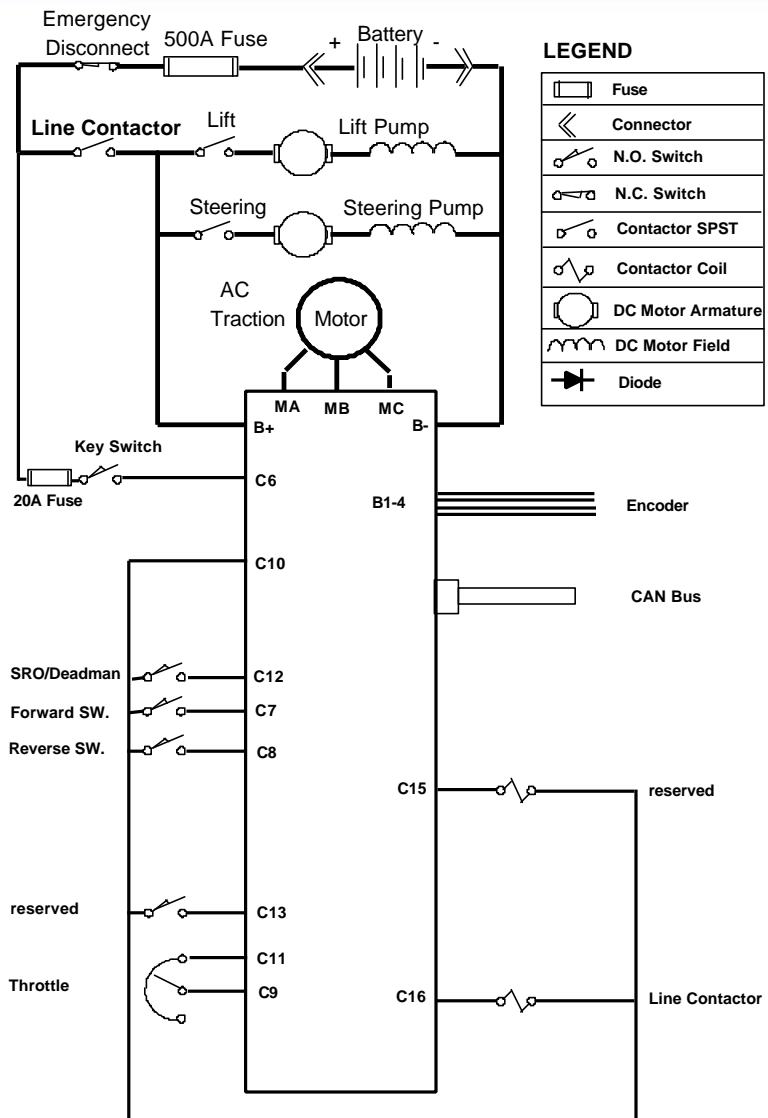
■ Input and Output

Input/Output	Number	Ratings Minimum	Ratings Typical	Ratings Maximum
Digital Input (Switch)	4	-1V	Battery voltage	100V
Analog Input	1	-30V	+/- 30V	100V
Encoder Lines	V	-1V	15V	100V
Coil Driver Output	2	-1V	Battery Voltage 3.3A	100V

■ Throttle Specification

Throttle Type	Specification	Options
2 wire pot	5K	Single or bi-directional
3 wire pot	2K to 2M	Single or bi-directional
V-source	5K high impedance	Single or bi-directional

System Schematic



Features and Benefits

“Optimal AC” Commutation - ensures optimal motor performance in any condition.

Aluminum Clad Technology - shortest heat dissipation technology available. The controller runs cooler thus extending the life of key components.

“Can Open” Interface - Used to set parameters & access data from the controllers.

PC/PDA Programmability – easy to use method of programming unit features.

Adjustable, Regenerative Braking – controls top speed forward/reverse and is fully programmable through the Can Interface.

MOSFET & Aluminum Clad Technology – provides quiet efficient operation.

Programmable forward & reverse - tune the controller for your specific application.

Static-return-to-off (dead man switch) - Prevents vehicle operation if the key-switch is turned on while in forward or reverse mode ensuring greater safety.

Multiple throttle controls - support numerous industry standard throttles.

Environmental protection - Protects controller from environmental elements improving reliability.

Thermal Protection - protects controller during abnormal operation.

SRE Controls Inc. of Waterloo, Ontario, Canada (“SRE”) designs, manufactures and markets high performance, microprocessor-based drive and hydraulic control systems and accessories for a wide variety of electric vehicles. SRE’s products and integrated systems are used in battery and alternative-powered vehicles across multiple applications. These include: industrial and commercial vehicles such as forklift trucks, aerial platforms, airport ground support equipment, golf cars, scooters and other special-purpose industrial electric vehicles. SRE produces patented controller products and software algorithms, as well as customized designs developed specifically for OEMs as well as a complete offering of electrical drive components.



440 Phillip Street Waterloo, ON
N2L 5R9 Canada
phone: 1-800-461-9338
fax: 1-519-725-1645
www.srecontrols.com