

Tricon by MCE Data Form

Motion Control Engineering
Phone (916) 463-9200 Fax: (916) 463-9201

Car controller specification

Foreword

Document revision date: 3/15/05

Please fill all ten pages completely. *It is very important to include ALL information to assure an accurate price quote and controller configuration.* The standard indicator voltages are 24VDC or 110VDC, high side outputs.

Note: If a section is NOT filled out the default value shown in BOLD italic is assumed

Note: The CE Micro Com driver supplied by MCE for Tricon controls will operate a maximum of four displays. If five or more displays are used Heavy Duty CE provisions required at additional charge. If you are providing a digital display driver, the inputs will be +24VDC, binary starting with one at the bottom floor.

General data

Date: _____/_____/_____

Customer

Company Name _____
Contact / Survey by _____
Phone _____ Fax _____
Approval Signature _____ Date _____

Job

Job name _____
Job address _____
Car name _____
Delivery date _____

Shipping Address

Controller to be picked up at MCE Yes No
Shipping address same as your office Yes No
Company Name _____
Ship Address _____
Phone / Contact _____

Specification

Not provided
 Yes, Num. Of pages _____
Consultant Company Name _____
Phone _____ Fax _____

Elevator type

Passenger Simplex Simplex W/ Emg Power
 Service Freight Car Switch
 Group car w/Sep dispatcher box
Car speed _____ Fpm Load Capacity _____ Lbs
Note: All multi car groups and simplex cars with EMG power, Sabbath or Hosp Code Blue require a separate dispatcher box.

Note: Cars having different speed, capacity, motor data or openings require separate data sheets.

Elevator Safety Code

ASME A17.1-1993 ASME A17.1-1996
 ASME A17.1- 2000
 ASME A17.1 _____
 Additional State and City Code requirements _____

Power line

Note: The following voltages are 60 HZ 3 phase
 208 VAC 220 VAC 440 VAC
 460 VAC 480 VAC 575 VAC
 220 VAC 60 Hz single phase 600 VAC
 Other, describe _____ 240 VAC

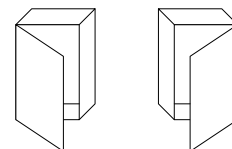
Control type

VV-MG (Fill page 7)
 VVVF open loop (Fill page 9)
 VVVF/VFD closed loop (Fill page 9)
 VV-SCR control (Fill page 8)
 Hydraulic (Fill page 10)

Control options

Cabinet door hinge mounting (circle one):

Car # _____ Car # _____



LEFT SIDE RIGHT SIDE

Pre-wired car station (serial link) No Yes
Remote car top box (serial link) No **Yes**
Cabinet legs 18" (HPV600, Hydro only) No Yes
Cabinet **Stands** 4" (HPV900, SCR, MG) No Yes
Air Cond. No Yes Non-Condensing No Yes
Hand held units No Yes How many _____

Note: A Tricon pre wired car station w/ I/O boards installed requires the remote car top box option. The car station must be shipped to MCE for wiring. Remote car top box only is acceptable

Riser description (NO SHORT FLOORS ALLOWED)

| Floor | Floor height | Floor marking | OPENINGS | | SIMPLEX HALL CALLS / IR | | | | GROUP HALL CALLS | | | | LOCKOUTS | |
|-------|--------------|---------------|----------|------|-------------------------|------|---------|-----------|------------------|------|---------|-----------|----------|------|
| | | | Front | Rear | Up | Down | Rear Up | Rear down | Up | Down | Rear up | Rear down | Front | Rear |
| OVERH | | | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | |
| PIT | | | | | | | | | | | | | | |

- Floor marking:** The floor identification in the building
- Front opening:** The car has a front door at the floor.
- Local hall up:** The car is simplex and has a hall up call or has a hall independent riser up call at the floor.
- Local hall down:** The car is simplex and has a hall down call or has a hall independent riser down call at the floor.
- Rear opening:** The car has a rear door at the floor.
- Local rear hall up:** The car is simplex and has a rear door hall up call or has a hall independent riser rear up call at the floor.
- Local rear hall down:** The car is simplex and has a rear door hall down call or has a hall independent riser rear down call at the floor.

Shaft data

Total shaft height Car #1 _____ feet Car #2 _____ feet
 Selector tape length Car #1 _____ feet Car #2 _____ feet
 Selector tape length should be the total shaft height, from the pit floor to the motor room floor.

Lobby signals and devices

Lobby Position Indicator:

- None
- Lamps
 - 110 VDC **24 VDC**
- Dir. Arrows Yes No
- CE MicroCom® driver (provided by MCE)
- CE MicroCom® driver (provided by customer)

Hall signals and devices

Hall Indicators:

Position Indicators, (Other than lobby)

- None
- CE Display (Max. 4 displays)
- CE Display **Heavy Duty** (5 or more displays) Add.chg.
- Analog lamps (Max. 3 lamps)
- Analog lamps **Heavy Duty** (4 or more lamps) Add.chg.
 - 110 VDC **24 VDC**
- Dir. Arrows: Yes No
- CE MicroCom® driver (provided by MCE)
- CE MicroCom® driver (provided by customer)

- Other, specify: _____

In-use light

- No Yes
- If Yes voltage 110 VDC **24 VDC**

Hall Direction Arrows (Other than Pos. Ind.)

- No Yes
- If Yes voltage 110 VDC **24 VDC**

Hall Lanterns:

- None Yes
- If Yes voltage 110 VDC **24 VDC**

Hall Call Pushbuttons

- Car switch operation with hall calls and in car annunciation
 - Switch type, no Ack. light
 - Switch type, Ack. Lights**
- 110 VDC **24 VDC**

Car station signals and devices

Car call pushbuttons:

- Switch type, no Ace. lights
- Switch type, Ace. Lights**
- 110 VDC **24 VDC**

Car station position indicator

- None**
- Lamps
 - 110 VDC **24 VDC**
 - Dir. Arrows: Yes No
- CE MicroCom® driver (provided by MCE)
- CE MicroCom® driver (provided by customer)
- Other, specify _____

Attendant in Car Annunciators:

- No** **Yes**
- Audible signal (Buzzer only) 110 VDC **24 VDC**
- Visual signal (Panel in car or hall to indicate hall calls)
NOTE: Provided only with car switch operation.
- If Yes voltage 110 VDC **24 VDC**

Buzzers:

Fire buzzer

- None**
- 110 VDC **24 VDC**

Nudging buzzer

- None** Use fire buzzer
- 110 VDC **24 VDC**

Passing chime

- None** Use fire buzzer
- 110 VDC **24 VDC**

Other switches:

- Car insp. sw. (required for access) Yes **No**
- Attendant up-down buttons Yes **No**
- Attendant direction arrows Yes **No**
- Attendant bypass button Yes **No**
- "S" Handicap Chime Enable Button Yes **No**
- Car Call Lockouts Yes **No**
Which Floors _____
- Car Call Lockout Type
 - Key switch Cardreader
- Car Call Lockout Location
 - Car Station Remote _____

NOTE: All lockout key switches located in car station sent to MCE for pre-wiring will be wired in car station to car buttons unless otherwise stated. Remote locks will be wired to input card on controller.

Car signals and devices, other than car station

Car position indicator (In transom)

- None**
- Lamps
 - 110 VDC **24 VDC**
 - Dir. Arrows: Yes No
- CE MicroCom® driver (provided by MCE)
- CE MicroCom® driver (provided by customer)
- Other, specify** _____

Car arrival lanterns and gong

- None**
- Lamps
- 110 VDC **24 VDC**

Front Door

Car door type

Manual door **Master door** Freight

Manufacturer _____
Model _____

Door operator

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> New | <input type="checkbox"/> Existing |
| <input type="checkbox"/> SmarTraq Complete DO | <input type="checkbox"/> SmarTraq Upgrade Kit | |
| <input type="checkbox"/> GAL MODCT | <input type="checkbox"/> GAL MOMCT | |
| <input type="checkbox"/> GAL MOD (230V shunt) | <input type="checkbox"/> GAL MODP(swing) | |
| <input type="checkbox"/> GAL MODPM | <input type="checkbox"/> GAL MOMSVL | |
| <input type="checkbox"/> GAL MOVFR | <input type="checkbox"/> GAL MOM / MOH | |
| <input type="checkbox"/> MAC / ECI (Electronic) | <input type="checkbox"/> Moline (Resistor) | |
| <input type="checkbox"/> Schindler QKS-14or15 | <input type="checkbox"/> Courion | |
| <input type="checkbox"/> Peelle (Auto open) | <input type="checkbox"/> Peelle (Auto O and C) | |
| <input type="checkbox"/> Other | <input type="checkbox"/> EMS | |

Manufacturer _____
Model _____

Include door operator prints

Note: Supply prints for all freight operators.

Note: Tricon standard for GAL MOCT types operators is 208VAC supply and 110 VDC relays

Door Detector interface

- Standard (detectors which close dry contact)**
 Other, describe _____

Hall doors type

- Manual
 Driven by car door (automatic)
 Swing door with 2 circuit locks
 Freight door
Manufacturer _____
Model _____

Door retiring cam

- None** New Existing
 Mechanical
 Electrical
Two circuit door locks No **Yes**
 GAL 220 VAC
 Other, _____ volts
 Motor Coil
Pick volts _____ Resistance _____ ohms

Rear Door

Car door type

Manual door **Master door** Freight

Manufacturer _____
Model _____

Door operator

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> None | <input type="checkbox"/> New | <input type="checkbox"/> Existing |
| <input type="checkbox"/> SmarTraq Complete DO | <input type="checkbox"/> SmarTraq Upgrade Kit | |
| <input type="checkbox"/> GAL MODCT | <input type="checkbox"/> GAL MOMCT | |
| <input type="checkbox"/> GAL MOD (230V shunt) | <input type="checkbox"/> GAL MODP(swing) | |
| <input type="checkbox"/> GAL MODPM | <input type="checkbox"/> GAL MOMSVL | |
| <input type="checkbox"/> GAL MOVFR | <input type="checkbox"/> GAL MOM / MOH | |
| <input type="checkbox"/> MAC / ECI (Electronic) | <input type="checkbox"/> Moline (Resistor) | |
| <input type="checkbox"/> Schindler QKS-14or15 | <input type="checkbox"/> Courion | |
| <input type="checkbox"/> Peelle (Auto open) | <input type="checkbox"/> Peelle (Auto O and C) | |
| <input type="checkbox"/> Other | <input type="checkbox"/> EMS | |

Manufacturer _____
Model _____

Include door operator prints

Note: Supply prints for all freight operators.

Note: Tricon standard for GAL MOCT types operators is 208VAC supply and 110 VDC relays

Door Detector interface

- Standard (detectors which close dry contact)**
 Other, describe _____

Hall doors type

- Manual
 Driven by car door (automatic)
 Swing door with 2 circuit locks
 Freight door
Manufacturer _____
Model _____

Door retiring cam

- None** New Existing
 Mechanical
 Electrical
Two circuit door locks No **Yes**
 GAL 220 VAC
 Other, _____ volts
 Motor Coil
Pick volts _____ Resistance _____ ohms

Car special operations

Fireman's operation

- No Yes
- ANSI 17.1 Version - _____
- NYC operation
- Other (Please describe)

Fire recall floor _____ Rear door

Smoke detectors

- No Yes
- Alternate recall floor _____ Rear door
- Smoke bypass switch Yes No

Hoistway Access switch

- Top floor**
- Yes None
- Bottom floor**
- Yes None
- Other floor**
- _____ None

Note: An inspection switch in the car is required, as well as hoistway limit switches

Special services

- Attendant No Yes
- Independent service No Yes
- Inconspicuous Riser(IR) Car# _____ No Yes
- Split Riser No Yes
- Cross Cancel No Yes
- Lobby recall No Yes
- Floor _____ Rear door
- Load Weigh unit (K- Tech) No Yes
- Emg Power (Disp required) No Yes
- Color Lobby Display No Yes
- Master Control Key Sw. for schools No Yes
- Sabbath Feature (Disp. required) No Yes
- Hospital Code Blue (Disp. required) No Yes
- Rope Gripper (GAL) No Yes

Monitoring Systems

- Monitoring System in Motor Room No Yes
- Monitoring w/local short distance modem No Yes
- Remote Monitoring w/ phone line modem No Yes

VV-MG control

Machine

| | | |
|-----------------------------------|--|-----------------------------------|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing | Location |
| <input type="checkbox"/> Geared | | <input type="checkbox"/> Overhead |
| <input type="checkbox"/> Gearless | | <input type="checkbox"/> Basement |
| <input type="checkbox"/> Drum | | |
| <input type="checkbox"/> Other | | |
| Manufacturer _____ | | |
| Model _____ | | |

Brake

| | |
|------------------------------|--|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing |
| Manufacturer _____ | |
| Model _____ | |
| <input type="checkbox"/> Ac | <input type="checkbox"/> Dc |

Specify either voltage or current; no need to specify both.

| | | |
|------------|-------------|------------|
| Lift | _____ volts | _____ amps |
| Hold | _____ volts | _____ amps |
| Relevel | _____ volts | _____ amps |
| Resistance | _____ ohms | |

DC Hoist Motor

| | |
|------------------------------|--|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing |
| Manufacturer _____ | |
| Model _____ | |
| Frame _____ | |
| Type _____ | |
| Amps: | _____ |
| Nom. Volts | _____ |
| H.P. | _____ |
| RPM | _____ |

Hoist motor shunt field

Specify either voltage or current; no need to specify both.

| | | |
|------------|-------------|------------|
| Standing | _____ volts | _____ amps |
| Full field | _____ volts | _____ amps |
| Running | _____ volts | _____ amps |
| Resistance | _____ ohms | |

Note: All complete motor & brake info must be provided to avoid delays in processing.

DC Motor Generator

| | |
|------------------------------|--|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing |
| Manufacturer _____ | |

Generator Driving Motor

| | |
|--------------|---|
| Manufacturer | _____ |
| Model | _____ |
| Frame | _____ |
| Type | _____ |
| Amps: | _____ |
| Nom. Volts | _____ <input type="checkbox"/> Ac <input type="checkbox"/> Dc |
| H.P. | _____ |
| RPM | _____ |

Starter

| | |
|--|------------------------------------|
| <input type="checkbox"/> Across the line | <input type="checkbox"/> Wye-delta |
| <input type="checkbox"/> Other, describe | _____ |

Generator Data

| | |
|--------------|-------------|
| Manufacturer | _____ |
| Model | _____ |
| Frame | _____ |
| Type | _____ |
| K.W. | _____ |
| Voltage | _____ volts |
| Current | _____ amps |

Generator Shunt Field

| | | |
|--------------|-------------|------------|
| Running data | _____ volts | _____ amps |
| Resistance | _____ ohms | |

DC Tachometer

| |
|---|
| <input type="checkbox"/> Provided by MCE, DC Tachometer, and coupling |
| <input type="checkbox"/> Base mount <input type="checkbox"/> Flange mount |

Select a coupling below if MCE is providing the tach

| | | |
|--------------------------------------|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> 5/16 X 1/4 | <input type="checkbox"/> 5/16 X 5/16 | <input type="checkbox"/> 5/16 X 3/8 |
| <input type="checkbox"/> 5/16 X 7/16 | <input type="checkbox"/> 5/16 X 1/2 | |

(Default diameter = 1/4")

Provided by motor manf., when installing a new motor

Note: The tach provided by the motor manufacturer should be 100VDC per 1000RPM. The motor manufacturer should provide the mounting and couplings. The tach provided by MCE includes tach, coupling.

Note: All complete motor & brake info must be provided to avoid delays in processing.

SCR control

Machine

New Re-use existing

Geared Gear-less Drum Other

Manufacturer _____
Model _____

Location
 Overhead Basement

Brake

New Re-use existing

Manufacturer _____
Model _____

Ac Dc

Specify either voltage or current; no need to specify both.

Lift _____ volts _____ amps
Hold _____ volts _____ amps
Relevel _____ volts _____ amps
Resistance _____ ohms
Model _____

DC Hoist Motor

New Re-use existing

Manufacturer _____
Model _____
Frame _____
Type _____
Amps: _____
Nom. Volts _____
H.P. _____
RPM _____

Hoist motor shunt field

Specify either voltage or current, no need to specify both.

Standing _____ volts _____ amps
Full field _____ volts _____ amps
Running _____ volts _____ amps
Resistance _____ ohms

Drive

Provide choke Yes No

Encoder Tachometer

Provided by MCE, encoder, coupling and cable
Select a coupling below if MCE is providing the encoder

3/8 X 1/4 3/8 X 3/8 3/8 X 7/16
 3/8 X 1/2

(Default diameter = 1/4")

Provided by motor manf., when installing a new motor

Note: The encoder provided by the motor manufacturer should be 5VDC differential 150MA, 2 channel quadrature, (A, A not, B, B not). The motor manufacturer should provide the mounting, couplings, and cable. The encoder provided by MCE includes encoder, coupling and cable.

Note: All complete motor & brake info must be provided to avoid delays in processing.

Isolation Transformers & Chokes shipped to customer directly from manufacturer:

Yes No

Isolation Transformers & Chokes:

Stackable Non-Stackable

VVVF / VFD Control

Machine

| | | |
|------------------------------------|--|-----------------------------------|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing | Location |
| <input type="checkbox"/> Geared | | <input type="checkbox"/> Overhead |
| <input type="checkbox"/> Gear-less | | <input type="checkbox"/> Basement |
| <input type="checkbox"/> Drum | | |
| <input type="checkbox"/> Other | | |
| Manufacturer _____ | | |
| Model _____ | | |

Brake

| | |
|------------------------------|--|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing |
| Manufacturer _____ | |
| Model _____ | |
| <input type="checkbox"/> Ac | <input type="checkbox"/> Dc |

Specify either voltage or current; no need to specify both.

| | | |
|------------|-------------|------------|
| Lift | _____ volts | _____ amps |
| Hold | _____ volts | _____ amps |
| Resistance | _____ ohms | |

Hoist motor

| | |
|------------------------------|--|
| <input type="checkbox"/> New | <input type="checkbox"/> Re-use existing |
| Manufacturer _____ | |
| Model _____ | |
| Amps: | _____ |
| Nom. Volts | _____ |
| H.P. | _____ |
| RPM | _____ |

NOTE:

Only when using HPV600 drive at 100FPM with remote car top box and floors in line Tricon can provide slowdown magnets on the leveling unit (IP9600) to eliminate the need to mount mechanical switches in the hatch.

| | |
|---|----------------------------------|
| <input type="checkbox"/> IP9600 w/slowdowns | <input type="checkbox"/> SET9000 |
|---|----------------------------------|

Drive

| |
|---|
| <input type="checkbox"/> Open loop configuration (no encoder) |
| <input type="checkbox"/> Closed loop configuration |

(cable, encoder and coupling may be provided , see the encoder selection box below)

Encoder Tachometer

| | | |
|---|------------------------------------|-------------------------------------|
| <input type="checkbox"/> Provided by MCE, encoder, coupling and cable | | |
| Select a coupling below if ??? is providing the encoder | | |
| <input type="checkbox"/> 3/8 X 5/16 | <input type="checkbox"/> 3/8 X 3/8 | <input type="checkbox"/> 3/8 X 7/16 |
| <input type="checkbox"/> 3/8 X 1/2 | <input type="checkbox"/> 3/8 X 1/4 | |

(Default diameter = 1/4")

| |
|---|
| <input type="checkbox"/> Provided by motor manf., when installing a new motor |
|---|

Note: The encoder provided by the motor manufacturer should be 5VDC differential 150MA, 2 channel quadrature, (A, A not, B, B not). The motor manufacturer should provide the mounting, couplings, and cable. The encoder provided by MCE includes encoder, coupling and cable.

Note: All complete motor & brake info must be provided to avoid delays in processing.

Hydraulic control

Pump Motor

New Re-use existing
Manufacturer _____
Model _____
Frame _____
Type _____
Amps: _____
Nom. Volts _____
H.P. _____
RPM _____

Tandem pumps

No Yes
If Yes, how many _____

Tandem Valves

No Yes
If yes, provide a description of the desired pump starting and valve sequence.

Valve

New Re-use existing
Manufacturer _____
Model _____
Coils voltage _____ volts Ac Dc
Number of coils _____
Sequence:
Up fast _____
Up slow _____
Down fast _____
Down slow _____

Note: Tricon provides a standard valve sequence. Both valves, fast and slow are energized in high speed. When the car slows down, high speed is dropped, and the slow speed valve remains energized, until the car levels to the floor.

Starter

Starters provided by Tricon (select one below)
 ATL Wye-Delta (see **Note 2** below)
 Soft Starter (see **Note 1** below)
 3 Wire Motor 6 Wire Motor

Note 1: Separate Enclosure provided for all Soft Starters. Contact MCE Engineering for details.

Note 2: Separate starter enclosures are required for larger starter sizes. Contact MCE engineering for details

If re-using existing indicate which:

ATL Wye-delta
 Soft-starter Manufacturer _____
Note: If re-using existing, may require rewiring to Tricon standard interface.

(Provide prints for existing starter or Soft-starter)

Other

Rescuvator interface type:
 GAL Reynolds & Reynolds
 Low pressure switch
 High temperature switch