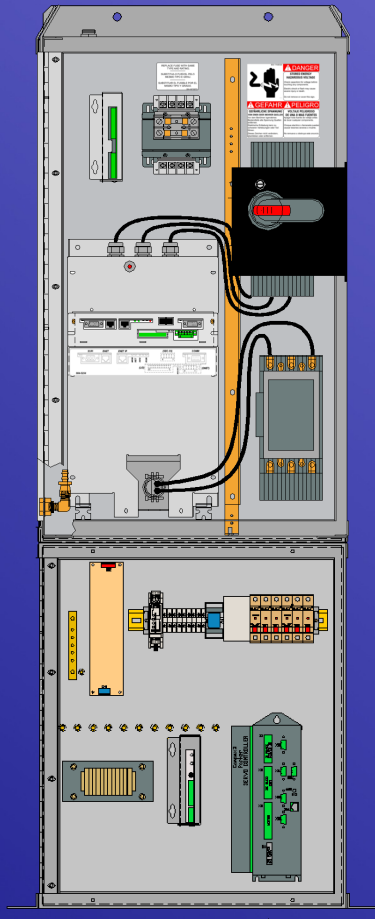# WT6000 Servo Resistance Weld Control

WT6000

## Servo Controls & Actuators

Servo Controls Features

- Simplicity of servo setup (<15 min)
- Fully integrated weld control and motion control
- Optimized squeeze time
- Simple user interface for initial set up and maintenance of the servo actuator system
  - Manual jogging of the servo actuator
  - Auto calibration of Home and servo stroke
  - Automatic Gun Ratio Detection
  - Simple 5 point manual calibration
- Check thickness before the weld is executed
- Check the amount of set down or collapse after the weld is executed
- Send the current position of the servo actuator to an external system through the I/O Field bus interface
- Control servo actuator position dynamically through the I/O Field bus interface
- A soft touch is embedded into the closing of the servo valve on the part (Gun MTBF improved & longer tip life)
- Change force due to part fit up issues

Ethernet interface with high speed protocol

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WT6000 Servo Resistance Weld Control
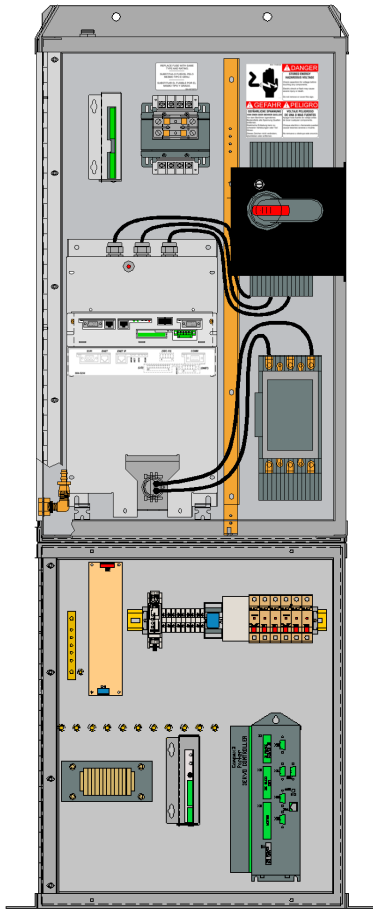
Base System

Standard system
- Line = 480 VAC
- Resolver Position Feedback.

Optional
- Line =230 VAC operation.
- Encoder Position Feedback.
- Safety Interlock Circuits.
- Auxiliary box under Welding Control Cabinet.
- Servo powered from weld control circuit breaker.

Safety Interlock: (Type 4 – Dual Redundant)

Control stop input
- Externally supplied 24 VDC.
- Provides control stop to weld control.
- Provides control of Servo Safety relay.
- Provides enable to Servo Drive.

Servo Safety Relay
- When Control Stop input is low, this relay removes servo valve (Actuator) power from servo drive.

Drive Enable.
- When Control Stop input is low, this input causes the DC bus to be isolated from the Servo Drive IGBT's.

Procedure

- Set initial setup parameters.
- Auto Home. (Home & Max stroke positions)
- Auto Gun Ratio. (Ratio of Actuator move to tip)
- Manual Calibration. (Motor Current to Force)
- Auto Calibration. (Deflection to force)

Setup Parameters

Maximum force

- Maximum force range the gun will be used in. This value is used to set up the motor current to force table and the force to deflection tables.

Minimum force

- Minimum force range the gun will be used in. This value is used to set the motor current to force table and the force to deflection table.

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