AC Servo System Wiring

Standard wiring examples

**THIS WIRING DIAGRAM SHOWS BASIC WIRING ONLY, AND ADDITIONAL WIRING CONFIGURATIONS ARE POSSIBLE FOR SOME I/O. REFER TO THE "INSTALLATION AND WIRING" CHAPTER OF THE USER MANUAL FOR MORE DETAILED WIRING INFORMATION.**

Position (Pr & Pt) Control Modes

```
MCCB
MC
230 VAC
Single-phase
or Three-phase
50/60 HZ

SIGN
/SIGN
/PULSE
VCC
T-REF
PULL HI

R
S
T
L1
L2
N(3kW only)

Pulse
Generator

10V
20kΩ

+10V
Analog Signal
(12VDC for analog signals; optional)

Connect 35 to 17 only with open collector pulse

† Remove jumper if external 24 VDC is used

†† Optional user Supplied 24 VDC

Servo Drive

Regenerative
Resistor†

SVC-Pxx-0x0
Power Cable Set

Servo Motor

Encoder

±8V
1mA max

Servo Enable
Com.Trig. (Pr mode)/Clear Com. (Pt mode)
PCS0 (Pr mode) / TCS0 (Pt mode)
PCS1 (Pr mode) / TCS1 (Pt mode)
Alarm Reset
Reverse Inhibit Overtravel
Forward Inhibit Overtravel
Fault Stop

CN1*

VDD
COM+
COM–
DI 1
DI 2
DI 3
DI 4
DI 5
DI 6
DI 7
DI 8

CN1*

Internally
Supplied
24 VDC

Servo Ready
At Zero Speed
Homing Complete
At Position
Alarm

User Supplier 24 VDC

DO 1+
DO 1–
DO 2+
DO 2–
DO 3+
DO 3–
DO 4+
DO 4–
DO 5+
DO 5–

CN3***

GA
FB
FC

A phase pulse
B phase pulse
Z phase pulse

RS422 TXD–
RS422 TXD+
RS422 RXD– & RS232 RX
RS422 RXD+
RS232 TX
GND

Modbus communication to PC, PLC, etc

±10V
Analog Signal

†† Remove Jumper at D if using External Resistor

†† Optional user Supplied 24 VDC

User Supplier 24 VDC

Default Settings

Default Settings

1-800-633-0405
Motion Control

For the latest prices, please check AutomationDirect.com.
**AC Servo System Wiring**

**Standard wiring examples (continued)**

This wiring diagram shows basic wiring only, and additional wiring configurations are possible for some I/O. Refer to the "Installation and Wiring" chapter of the User Manual for more detailed wiring information.

**Velocity and Torque Control Modes**

Velocit y and Torque Control Modes

- **12VDC**: optional for 0–10V analog signals.
- **Connect 35 to 17 only with open collector pulse**.
- **Remove jumper if external 24VDC is used**.
- **Optional user Supplied 24 VDC**.
- **Servo Enable**
- **TrqLimEn(Vmode)/SpdLimEn(Tmode)**
- **VCS0(Vmode) / TCS0(Tmode)**
- **VCS1(Vmode) / TCS1(Tmode)**
- **Alarm Reset**
- **Reverse Inhibit Overtravel**
- **Forward Inhibit Overtravel**
- **Fault Stop**

**Default Settings**

- **Servo Ready**
- **At Zero Speed**
- **At Speed**
- **Brake Control**
- **Alarm**
- **User Supplier 24 VDC**

**Modbus communications to PC, PLC, etc.**

- **Line Driver Encoder Signal Output** (scalable pulse output)
  - **40 mA max**
  - **±8V**
  - **1mA max**

**User Supplier 24 VDC**

- **Modbus communications to PC, PLC, etc.**

* Use connection kit part #s ZL-RTB50 & ZL-SVC-CBL-50(-x) for CN1 terminal connections.
** Use cable part # SVC-Exx-0x0 for CN2 terminal connections.
*** Use cable part # SVC-MDCOM-CBL for CN3 terminal Modbus network connections.