High Temperature Hazardous Location Control

Exlar's EXP-24 Positioner has been designed for use specifically with Exlar's EL100 Actuator and also can be used to drive most three phase linear actuators and rotary motors.

The EXP-24 positioner offers a fully capable 24VDC motion controller and brushless servo motor amplifier that conforms to CSA and the EU ATEX Directive 94/9/EC for explosion-proof applications.

Able to power most resolver feedback brushless motors, the EXP-24 is one of the only servo drive solutions on the market capable of use in a hazardous environment.

Ideal for process control applications, the EXP-24 provides functionality to position a valve or damper by following an analog input signal.

Four additional motion modes are also available to accommodate an endless variety of motion applications.

Standard Features

- CSA Class I Division 1
- ATEX (LCIE 09 ATEX 3057 X)
- User friendly configuration software
- Convenient conduit entry ports
- Easily accessible internal terminal strips

Applications

- Valve control
- Damper control
- Engine test stands
- Fuel skids
- Oil platforms
- Paint booths
- Shipboard fuel management

Exlar EXP-24 Positioner

CE 0081

II 2 G
LCIE 09 ATEX 3057 X
Ex d II B T5
IP66

163694
Class I Division 1
Group B, C, D, T5

EXP-24 Specifications	
Input Voltage	18 to 32 VDC
Input Current, DC	30 A Peak, 25 A Continuous
Output Current, 3Ø	30 A (21 ARMS) Peak, 25 A (18 ARMS) Continuous
Digital Inputs	2 - Isolated, 18 to 32 VDC
Digital Outputs	2 - Isolated, 18 to 32 VDC, 250mA Continuous
Analog Input	1 - Non-isolated, 4 to 20maA, 500 Ω Input Impedance
Analog Output	2 - Isolated, 4 to 20mA, 200 Ω to 500 Ω Driving Capability
Serial Interface	Isolated RS-485, Modbus Protocol, Max. Baud Rate 38.4k
Commutation	Sinusoidal, Space Vector PWM, 10 kHz
Position Feedback	Resolver
Environmental	-29 to 82 °C Operating Temperature Range
Enclosure	IP66, NEMA Type 4
N.A. Certifications	CSA Class I Division 1 Groups B, C, D, T5
E.U. Compliance	94/9/EC Potentially Explosive Atmospheres (ATEX) Ex d II B, T5
EMC	Immunity: EN 61000-6-2: 2005, Emission: EN 61000-6-4: 2007
Approx. Weight	33 lbs (15 kg)

EXP-24 Ordering Guide
AAA-BB-CC-D-EEE-FFFFF
AAA = Controller Type
EXP = Explosion Proof Positioner for use in Hazardous Locations
BB = Nominal Input Voltage
24 = 24 VDC
CC =Nominal Output Current
20 = 20 ARMS
D = Vent and Drain Selection
N = None
D = Drain Only
V = Vent Only
B = Both (Drain and Vent)
EEE = Customer Code
XXX = 3 Digit Customer Identifier
FFFFF = Part Number - 5 Digit Part Number Unique to Model Configuration

Set-up and Control Software

This Windows™ based software provides you with a simple way to select all aspects of configuration and control required to set up and operate the EXP-24 Positioner. Easy to use tabbed pages provide access to input all of the parameters necessary for the configuration of either your valve control or general motion application.

The software uses a hierarchical arrangement of Application Files and Drive Files. The Application Files determine what is displayed and how it is displayed on the screen. The Drive Files contain the information about the parameters that are displayed, such as name, min and max value, default value and most importantly the actual value as saved or uploaded.

Valve Control

Set Up
- Stroke
- Stroke Speed
- Valve Seat Cut-off
- Current Limit
- Homing

I/O
- Analog I/O
- Discrete I/O

Diagnostics
- Real Time Monitoring
- Oscilloscope

General Motion Control

Tuning/Control & Set Up
- Stroke
- Stroke Speed
- Current Limit
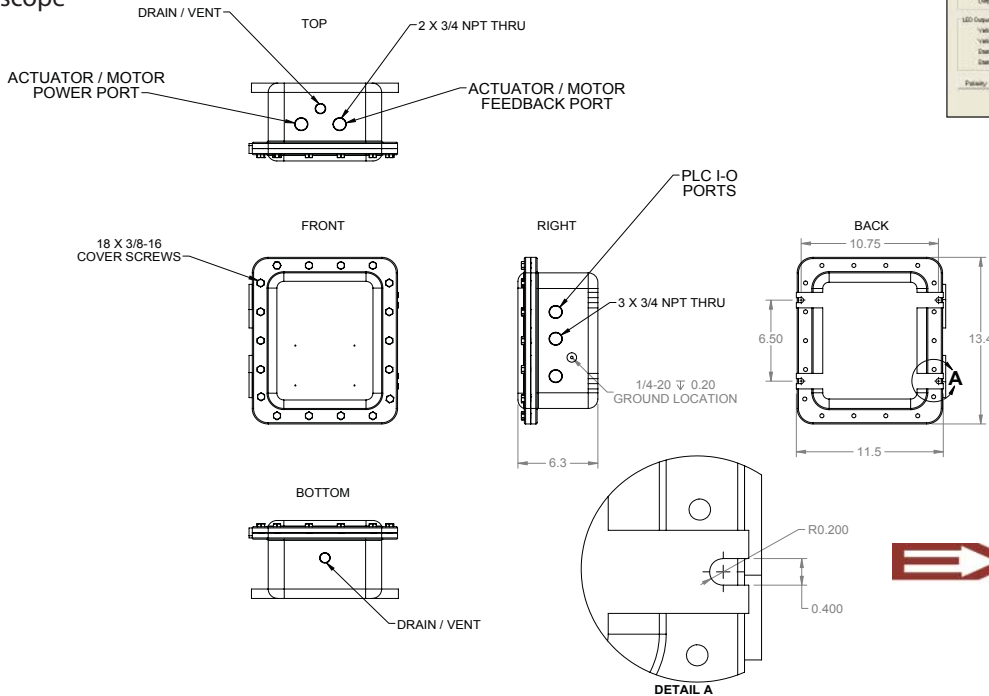- Acceleration
- Power on Delay
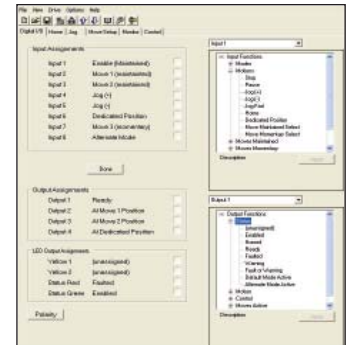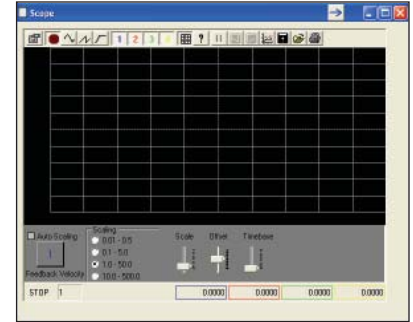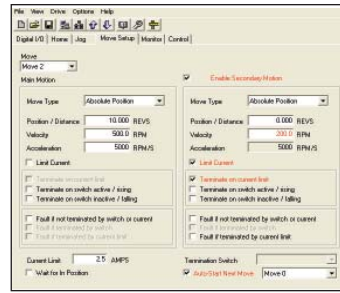- Tuning Parameters

I/O
- Digital I/O Configuration
- Analog Signal Configuration
- Input and Output Function Control
- Analog Calibration

Motion Setup
- Move Distance
- Jogging
- Homing
- Operator Control Panel

Diagnostics
- Real time monitoring
- Following error
- Position error
- Input and output status
- Communication diagnostics
- Multi-channel oscilloscope
- Loss of signal monitoring

DRAIN / VENT
TOP
2 X 3/4 NPT THRU
ACTUATOR / MOTOR POWER PORT
ACTUATOR / MOTOR FEEDBACK PORT

18 X 3/8-16 COVER SCREWS
FRONT
RIGHT
PLC I-O PORTS
3 X 3/4 NPT THRU
1/4-20 ▽ 0.20 GROUND LOCATION
6.3
BACK
10.75
6.50
13.4
11.5
A

BOTTOM
DRAIN / VENT

R0.200
0.400
DETAIL A

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