

RACO

Position Controller

RACO UNIVERSAL POSITION CONTROLLER

Application

To position the stroke length of any RACO actuator, a universal and highly flexible position controller has been developed. In conjunction with the RACO actuator analog and digital position feed back devices and the customers setpoint signal, an accurate and efficient loop controlled system can be implemented. The controller output signals can be directly used to interface with the reversing motor starters or a variable frequency drive. Plausibility checks, analog input range supervision and / or default output conditions can be realized.

Functional Description

The customer's potential free, loop powered 4-20mA setpoint signal will be connected to the input port of the position controller and compared to the scalable 4-20mA or 0-10V actual position signal derived out of RACO's absolute actuator position encoder. RACO offers a voltage feed back signal generated out of a potentiometer, a 4-20mA loop feed back device (DMU2), and the new digital non-contact position encoder (EPS 06). The embedded application program (see Fig. 1) will generate binary demand signals to extend and / or retract the actuator. These signals are provided in the form of dry contacts at the position controller. These signals will control the reversing starter or variable frequency drive. For redundancy purposes, the end of stroke limit signals derived from the RACO mechanical limit switches or the digital absolute position encoder can be wired into the position controller as binary permissive input signals and processed in the embedded application program. The position controller is equipped with

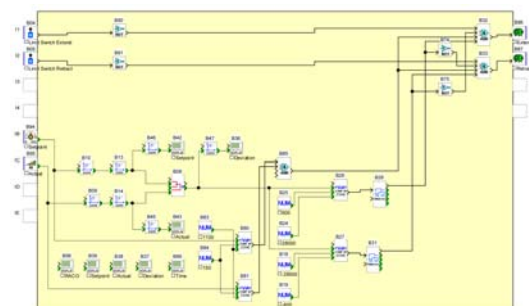


Fig. 1 Embedded Application Program

a four line display and function keys. Under normal operating conditions the current setpoint signal will be displayed as a percentage value (0 to 100%), as well as the actual position and the resulting deviation.

Option Automatic / Manual Control

By pressing the "Manual" function key the automatic position control function will be halted and the display will show the available keys and their operational meaning. By pressing the "extend" or "retract" function key the position controller will send an open or close demand signal to the reversing motor starter or frequency drive. During manual operation, the actual position will be transmitted to the customer's control system and the end of stroke limit switches will override the manual extend and retract function keys if end positions are reached.

There are four additional unused binary / analog input signals and two additional unused output signals available which could signal position has been reached or actuator has been placed into manual mode.

Technical Data

Supply Voltage	24V DC, 2.7W max.
Input Channels	24V DC, 0-10V DC, 4-20mA
Output Contact	8A /250V AC
Operating Temp.	-20°C to 55°C, -4°F to 158°F
Enclosure	IP 20

-Actuator Position Controller

-Input Signals
4 - 20mA, 0 -10V
Potentiometer

-Output Signals
Potential Free Contact
120V AC, 24V DC

-Manual / Auto Control via Push Buttons

-Four Row LCD Display

-Flexible Design

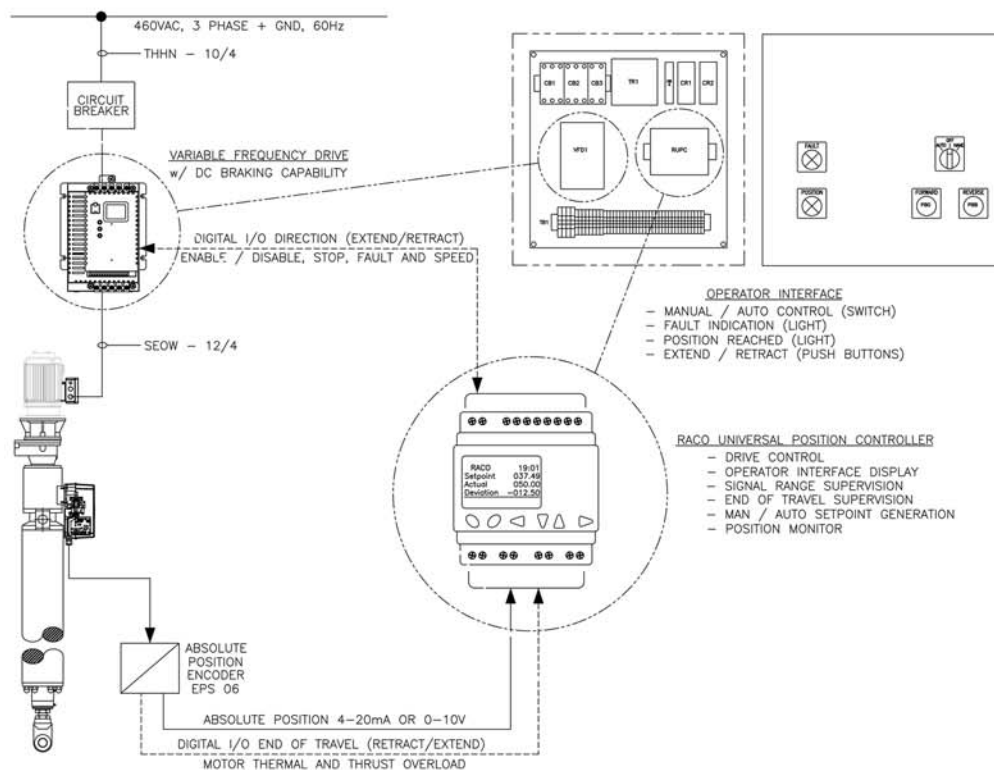
RACO

Position Controller

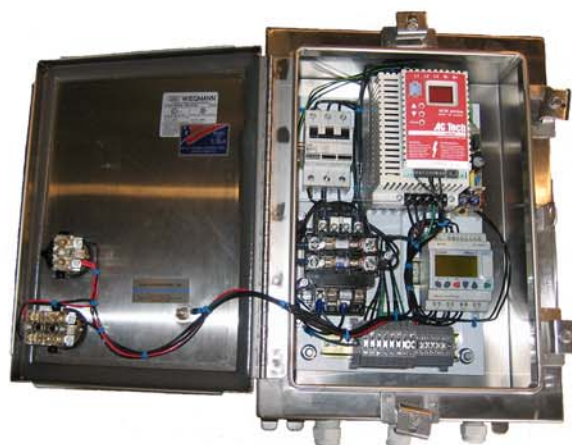
Functional Description



Stainless Steel Control Panel



RACO Type "C" Actuator with Brake & Disengage Hand Wheel



VFD Drive with Position Controller