

# MERRITT REVOXL

## MASTER SWITCH CONTROLLER

The REVOXL delivers unmatched versatility and rugged performance, offering both step and stepless control for AC and DC drives. Engineered with a durable steel construction and protected by a leather boot, it is built to withstand the harsh environments found in steel mills, mining, and forestry applications.



HEAVY DUTY  
& RUGGED



AC & DC  
COMPATIBLE



LONG  
LIFESPAN

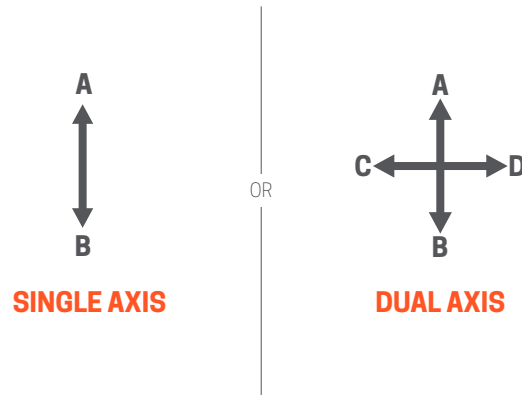
### FEATURES

- REVOXL is compatible with VNS2 joysticks
- Up to 7-0-7 detent configuration
- Proportional control with custom first point and high speed detents
- AC/DC capabilities
- 8" shaft length

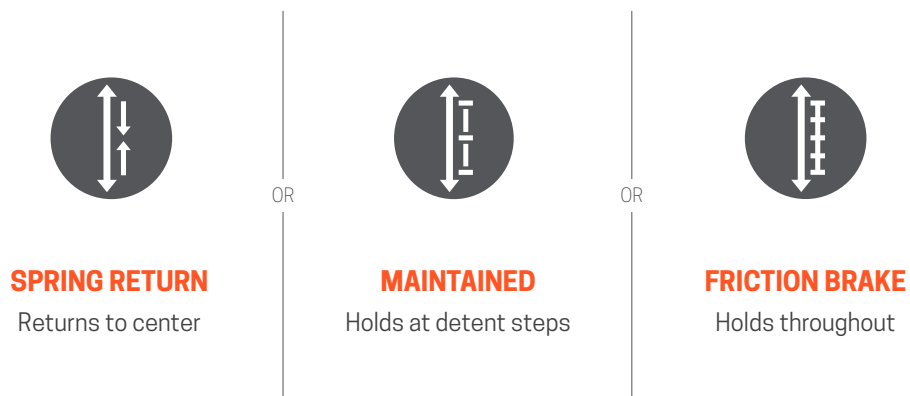


**J.R. MERRITT**  
CONTROLS 

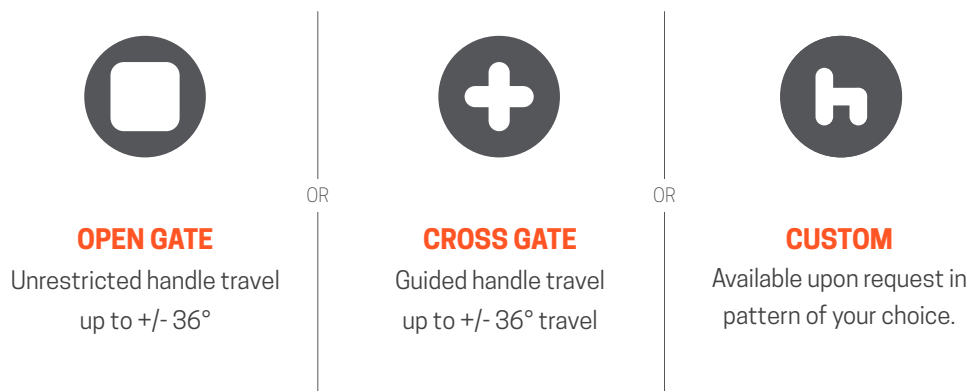
## AXIS OPTIONS



## JOYSTICK ACTION



## HANDLE TRAVEL OPTIONS



## CONTACT TYPE

### STANDARD SPECIFICATIONS

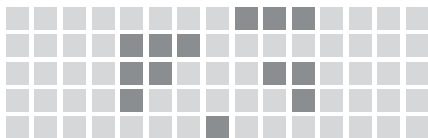
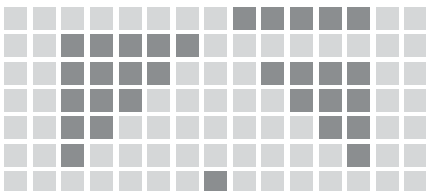


**# OF CONTACTS:**  
Up to 7 double pole

### MAX. SWITCHING CAPACITY

Making - 160 amps  
Breaking - (0.7PF) 160 amps 240V

<p><b>AC RATING</b></p> <p><b>PART #: 06.042</b></p> <p>Resistive 20 amps @ 240V</p> <p>Inductive 14 amps @ 240V</p>	OR	<p><b>DC RATING WITH MAGNETIC BLOWOUT</b></p> <p><b>PART #: 06.043</b></p> <p>Resistive 5 amps @ 250V</p> <p>Inductive 2 amps @ 250V</p>
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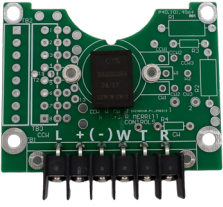
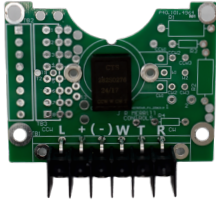


## CONTACT SEQUENCES

<p><b>STEPPED</b></p> <p><b>DETENT OPTIONS</b></p> <p>1-0-1</p> <p>2-0-2</p> <p>3-0-3</p> <p>4-0-4</p> <p>5-0-5</p> <p>6-0-6</p> <p>7-0-7</p>	<p><b>COMMON STEPPED SEQUENCES</b></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>3 2 1 0 1 2 3</p>  <p>30</p> </div> <div style="text-align: center;"> <p>5 4 3 2 1 0 1 2 3 4 5</p>  <p>50</p> </div> </div>
OR	<p><b>COMMON STEPLESS SEQUENCES</b></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>8P1</p> </div> <div style="text-align: center;">  <p>9P1</p> </div> </div>

# of Double Contacts	1	2	3	4	5	6	7	8	9	10
Dimension L1	2.28 [58]	3.15 [80]	4.00 [102]	4.88 [124]	5.75 [146]	6.61 [168]	7.48 [190]	8.35 [212]	9.21 [234]	10.07 [256]

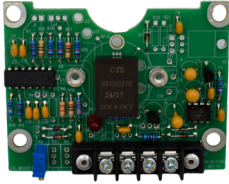
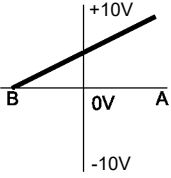
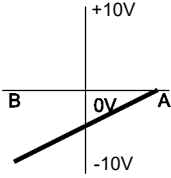
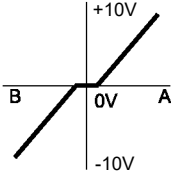
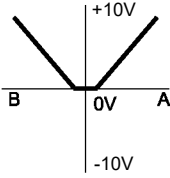
## POTENTIOMETERS

Other potentiometers available upon request

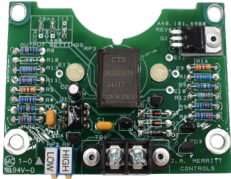
 <p><b>3-WIRE 5K</b> PART # (W/ BOARD): 04.836</p>	<p><b>TYPE</b> CTS <b>STYLE</b> Conductive Plastic <b>RATING</b> 0.5 Watt</p>	OR	 <p><b>4-WIRE 10K</b> PART # (W/ BOARD): 04.821</p>	<p><b>REVOLUTIONS</b> 2 - 5 Million <b>WIPER CURRENT</b> 0mA to 10mA</p>
 <p><b>4-WIRE 5K</b> PART # (W/ BOARD): 03.287</p>	<p><b>TYPE</b> PW55 <b>STYLE</b> Conductive Plastic <b>RATING</b> 3 Watt</p>	OR	 <p><b>4-WIRE 10K</b> PART # (W/ BOARD): 04.015</p>	<p><b>REVOLUTIONS</b> 2 - 5 Million <b>WIPER CURRENT</b> 0mA to 10mA</p>

\*Lifespan is dependent on the application and environmental conditions

## ESS10010 ANALOG AMPLIFIER

	<p>Generates a linear output voltage proportional to the joystick's handle position. Available with 3 or 4-wire pot in the configurations shown below. See <b>ESS10010 literature</b> for more details.</p>	<p><b>SUPPLY VOLTAGE</b> 18 - 30 VDC <b>STANDARD OUTPUT</b> +/- 10V <b>OUTPUT CURRENT MAX</b> 10 mA</p>	<p><b>OUTPUT ADJ. RANGE</b> 3.5 - 11VDC <b>OFFSET ADJ. RANGE</b> 0 - +/- 0.1V <b>POTENTIOMETER LIFE</b> 2 - 5 million revolutions</p>
 <p><b>0V to +V</b></p>	<p style="text-align: center;">OR</p>  <p><b>-V to 0V</b></p>	<p style="text-align: center;">OR</p>  <p><b>-V to +V with Center Deadband</b></p>	<p style="text-align: center;">OR</p>  <p><b>+V with Center Deadband (requires directional contacts)</b></p>

## 4-20 mA TRANSMITTER (2-WIRE CIRCUIT)



Acts as a self powered control card with 4-20 mA output. Transmits a current signal which is proportional to the handle position. See **ESS420 literature** for more details.

### ESS420

**MODEL #:**  
05.317

**SUPPLY VOLTAGE:**  
12 - 40 VDC

### OUTPUT CURRENT

22 mA (max)

### ADJUSTMENT RANGE

2-22 mA

## SIGNAL CONVERTER

### DGO-1 (115/50V)

**PART #:** 04.024

OR

### DGO-2 (220/50V)

**PART #:** 04.025

OR

### DGO-3 (115/30V/30V) WITH ESS030 AC/DC CONVERTER

**DGO-3 PART #:** 04.030 & 05.638



High life contactless rotary transformers that are ideal for high duty applications where an AC signal is a requirement. See **DGO literature** for more details and specifications.

**ROTATION**  
+/- 105 degrees

**MAX LOAD**  
3VA

**WEIGHT**  
1.43 LB

Converts AC signal to a DC reference signal that commands a variable drive. See **ESS030 literature** for more details.



## ENCODER

Other output types available upon request

### 8-BIT GRAY ENCODER



Produces a gray code digital output in a completely contactless system with high noise immunity. See **8-bit Gray Encoder literature** for more details.

**SUPPLY CURRENT**  
Typical 100 mA

**OUTPUT CURRENT**  
Max. 20 mA

**MAX SWITCHING FREQ**  
50 kHz

**RESOLUTION**  
255 discrete counts  
in each direction

OR

### 8-BIT BINARY ENCODER

Produces a digital output in a completely contactless system with high noise immunity. See **Encoder literature** for more details.

<b>SHAFT LENGTH</b>	<b>SHAFT DIAMETER</b>
8 IN. [104 MM]	12 MM (STANDARD)

<b>MECHANICAL INTERLOCK (MI)</b>		<b>EXTENDED PUSH BUTTON*</b>		<b>FLUSH PUSH BUTTON*</b>	
<b>BALL HANDLE</b> <ul style="list-style-type: none"> <li>2" (50 mm) round ball handle for single-axis controllers.</li> </ul>  <p><b>HEIGHT:</b> 10" [228.6]</p>		<b>MG27 Options:</b> <p>Extended or Recessed Push Button</p>  <p><b>HEIGHT:</b> 5.3" [135]</p>			
<b>FG-3</b> <b>Fighter grip handle with optional:</b> <ul style="list-style-type: none"> <li>Rocker Switches</li> <li>Thumbwheels</li> <li>Push Buttons</li> <li>Trigger</li> </ul>  <p><b>HEIGHT:</b> 7.5" [191]</p>		<b>FG-8</b> <b>Fighter grip handle with optional:</b> <ul style="list-style-type: none"> <li>Rocker Switches</li> <li>Thumbwheels</li> <li>Push Buttons</li> <li>Trigger</li> </ul>  <p><b>HEIGHT:</b> 8" [204]</p>			
<b>RH</b> <b>Rocker handle with optional:</b> <ul style="list-style-type: none"> <li>(Top) Rocker Switch</li> <li>(Top) Momentary Push Button</li> <li>(Top) Maintained Push Button</li> <li>(Side) Momentary Push Button</li> </ul>  <p><b>HEIGHT:</b> 7.3" [186]</p>		<b>BH</b> <b>Lever handle with optional:</b> <ul style="list-style-type: none"> <li>(Top) Rocker Switch</li> <li>(Top) Momentary Push Button</li> <li>(Side) Lever Actuated Momentary Push Button</li> </ul>  <p><b>HEIGHT:</b> 6.8" [173]</p>			
<b>MG1</b> <b>T Handle with optional:</b> Side Push Button  <p><b>HEIGHT:</b> 4.9" [125]</p>		<b>MG2</b> <b>T Handle with optional:</b> Side Push Buttons  <p><b>HEIGHT:</b> 6.9" [175]</p>		<b>MG13</b> <b>Twist handle with optional:</b> Side Push Button or Hall-Effect Twist Handle  <p><b>HEIGHT:</b> 4.5" [115]</p>	

## MECHANICAL DETAILS

### Gear Ratio

3:1

### Detented Positions

Up to 7-0-7

### Handle Travel

Up to  $\pm 40^\circ$  max.

### Mechanical Life

20 million cycles

## ENVIRONMENTAL DETAILS

### Operating Temperature

$-13^\circ$  to  $+158^\circ$  F [ $-25^\circ$  to  $+70^\circ$  C]

### Storage Temperature

$-40^\circ$  to  $+140^\circ$  F [ $-40^\circ$  to  $+60^\circ$  C]

### NEMA Rating

1, 3R, 12 and 13

### IP RATING

IP54 (Above Panel)

