

# RIM Signal Switcher

- Accepts A, B, and Z inputs from two separate encoders
- Eliminates the need for two input devices
- Status indicators for normal operation and encoder selection
- Thermal, under voltage, reverse polarity, and overload protection
- Input voltage range from 4 to 26 VDC
- Provides redundancy and backup



## APPLICATION/INDUSTRY

The Signal Switcher enables the use of one drive with two separate encoders, switching between encoder inputs as needed.

## DESCRIPTION

The Signal Switcher enables the use of one drive with two separate encoders, switching between encoder inputs as needed. Its optically isolated inputs accept signals from two different voltage levels, including signals from differential line drivers, open collector, and even proximity probes. It has a wide input voltage range of 4-26 VDC and high power differential adaptive line driver outputs. It can switch seamlessly from one encoder to another in just microseconds and can also convert signals between high and low voltage levels.

The Switcher can also perform signal level conversions from low to high or high to low voltages. It has thermal, under voltage, reverse polarity, and overload protection and a fail-safe mode which directly connects input terminals through dry contacts during power losses and faults. Its front panel has a status indicator showing normal operation and encoder selection. The Signal Switcher is approximately three by five inches in size and mounts with DIN 32 or 35 mounting hooks.

## FEATURES AND BENEFITS

- Eliminating need for two PLCs or input devices
- May switch two encoders of different resolutions coarse and fine position control
- Can select spare encoder that acts as backup of first

## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

Input Signal: 2 or 3 channel quadrature signal, sine or square wave, open collector, differential, or single ended line driver

### ELECTRICAL

Input Signal Voltage: 4 - 26 VDC  
 Input Signal Current: 2.2 mA minimum, 3.5 mA typical  
 Input Signal Impedance: Optically isolated, 1 k Ohm at 4V, 6.8 k Ohms at 24V typical. Current limited.  
 Operating Frequency Range: 0 - 100 kHz  
 Output Signal: Differential driven square wave, signal level approximately equivalent to input supply voltage.  
 Error Output Signal: Sinking normally open, closes on error. 5V, 20 mA maximum load  
 Supply Voltage: 5 - 26 VDC  
 Current Consumption: Less than 150 mA at 100 kHz and 26 VDC typical with no output driver load  
 Output Current: 150 mA (maximum)  
 Power Up Time: Less than 10 ms  
 Encoder Switching Time: Less than 8 μs  
 Connector Wire Gauge: 26 - 16 AWG  
 Electrical Protection: Reverse polarity protected  
 Output Protection: Under voltage, short circuit, and thermally protected  
 Fail Safe Feature: Fail safe mode connects device's ENCODER 1 INPUT directly to device's OUTPUT terminals

### MECHANICAL

Enclosure Material: PVC  
 Side Element Material: Polyamide PA non-reinforced  
 Mounting Options: DIN 35 or 32

### ENVIRONMENTAL

Operating Temperature: 0°C to 50°C  
 Storage Temperature: -20°C to 70°C  
 Operational Humidity: 98% non-condensing

\*Specifications subject to change without notice

## ORDERING INFORMATION

Part Number: RIMSSW

## DIMENSIONS

inches [mm]

