ACTION PAK® AP6050

MODEL

LVDT-Input Signal Conditioner

Provides a DC Output in Proportion to an LVDT (Linear Variable Differential Transformer) Input

DESCRIPTION

The AP6050 LVDT Conditioning Module provides synchronous demodulation and conditioning for Linear Variable Differential Transformer (LVDT) transducers used in the control, display, and recording of motion.

The AP6050 LVDT Transmitter provides the AC sine wave excitation (adjustable from 6-10V p-p nominally 4kHz) for LVDT operation. The module transmits a DC voltage or current output proportional to the motion applied to the input transducer.

ZERO AND SPAN ADJUSTMENTS

Zero and span are factory set, but may be field adjusted (the LVDT is assumed to be previously calibrated). Zero is adjusted for a zero output with the LVDT at its mechanical null, or zero displacement position. Span is adjusted for a full scale output with the LVDT at its appropriate mechanical extreme, or full displacement position. Zero and span are each screwdriver adjustable and accessible through the top cover of the module.

EXCITATION ADJUSTMENT

If zero and span adjustments cannot calibrate the output span appropriate to the LVDT travel input signal, roughly center zero and span adjustments and set EXC as needed to boost or decrease the LVDT's full travel signal for zero and span calibration.

OPTION

U Urethane coating of internal circuitry for protection from corrosive atmospheres

FACTORY ASSISTANCE

For additional information on calibration, operation and installation please contact Action's Technical Services Group. Call:

703-669-1318

Benefits

- Displacement and Position-Sensing Applications
- Provides LVDT Excitation Adjustable from 6-10V p-p
- Easy Plug-In Installation/ Low Mean-Time-to Repair
- AC Line Powered
- Three Year Warranty

ACTION INSTRUMENTS

Protecting the Integrity of Industrial Process Signals

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SPECIFICATIONS

Input (AC p-p)	20mV/V to 1V/V
Input Impedance=	>100KΩ
Excitation	Adjustable 6-10V p-p (4KHz)
	Drives 250Ω @8V p-p
Output Ripple	<0.2% of span p-p
Output Impedance	Voltage: <10Ω
	Current: >100KΩ
Output Drive	Voltage Output: 10mA, max (1KΩ, max)
	Voltage Output (bipolar): 2mA, max
	Current Output: 12V compliance @ 20mA (600Ω, max)
Adjustments (Zero, Span)	Factory-set at zero and full scale, to within 0.5% of span, typical (adjustment range to 10 % of span to either side of factory-setting, typical).
Linearity	
(Best Straight Line)	0.25% of span, typical
Reponse Time	150mSec, typical
Stability	Within 0.05% of span/°C
Common Mode Rejection	60Hz: >80dB
	DC: >100dB
Common Mode Voltage	500V DC or peak AC, max
Temperature Range	Operating: 0 to 60°C (32 to 140°F)
	Storage: -20 to 85°C (-4 to 185°F)
Power	Consumption: 3W typical, 5W max
	Standard: 120 VAC (±10%, 50 - 400Hz)
	Available: 240 VAC (±10%, 50 - 400Hz)
Weight	0.60lbs

Table 1: Standard Inputs

0-20mV/V	0-100mV/V	±420mV/V	±800mV/V
0-50mV/V	±400mV/V	±500 mV/V	

Table 2: Input Limits

Minimum Span	Maximum Input
20mV/V	1V/V

Table 3: Standard Outputs

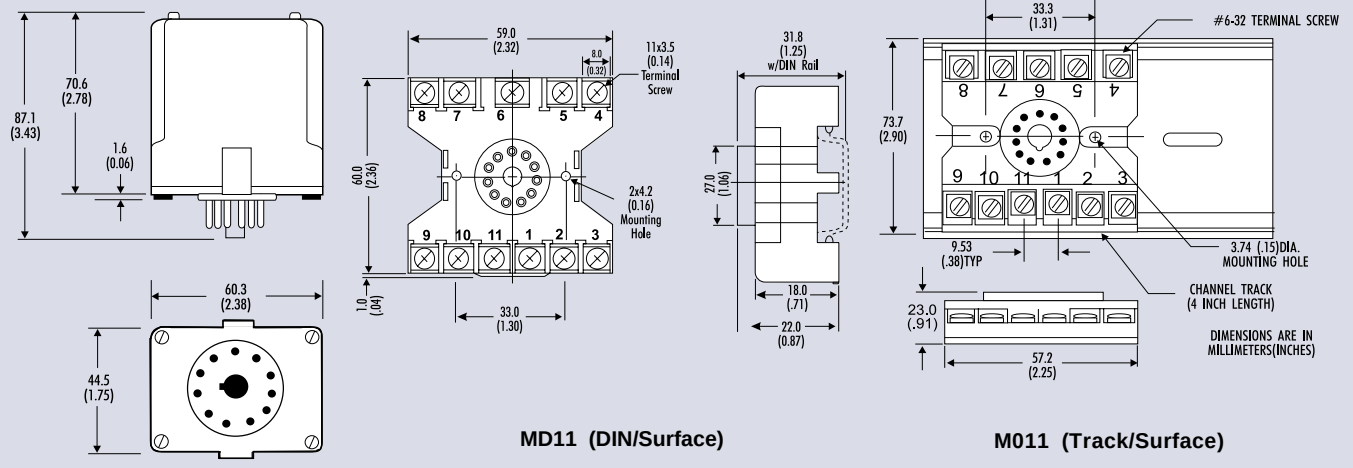
0 to 1V 0 to 5V 1 to 5V 0 to 10V ±5V	4 to 20 mA

Table 4: Output Limits

	Minimum Span	Maximum Output
Voltage	100mV	10V
Current	1mA	50mA

DIMENSIONS

Dimensions are in mm (inches)



MD11 (DIN/Surface) **M011 (Track/Surface)**

MODELS & ACCESSORIES

Mounting

All Action Paks feature plug-in installation. Model AP6050 uses an 11-pin base using either molded socket M011 or DIN rail MD11, mounting sockets.

Ordering Information

1. Model: **AP6050**
2. Input Range (see Table 1, 2)
3. Output Range (see Table 3, 4)
4. Option: U (see text)
5. Line Power (see specs)

(All power supplies are transformer-isolated from the internal circuitry.)

Pin Connections

1. AC Power (Hot)
2. Shield (Gnd)
3. AC Power (Neu)
4. Input (+)
5. Input (-)
6. Not used
7. Excitation (+)
8. Excitation (-)
9. Output (+)
10. Output (-)
11. Not used

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