



ADTECH

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RATIO AND BIAS MODULE MODEL NO. RBM 98

THE ADTECH MODEL RBM 98 RATIO AND BIAS MODULE OFFERS AN ACCURATE AND ECONOMICAL MEANS OF ADDING OR SUBTRACTING A DESIRED AMOUNT OF BIAS TO THE INPUT SIGNAL AND/OR CHANGING THE RATIO (GAIN) RELATIONSHIP OF THE OUTPUT TO THE INPUT SPAN.

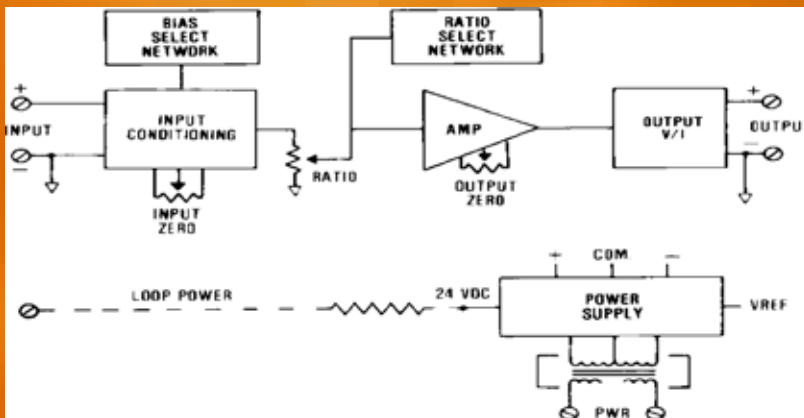
THE INPUT BIAS HAS A RANGE OF 0 TO $\pm 100\%$ OF FULL SCALE INPUT, AND THE RATIO HAS A RANGE OF 0.1-10. AN OUTPUT BIAS OF UP TO 50% OF THE OUTPUT SPAN IS A STANDARD FEATURE.

THE RBM 98 PROVIDES STANDARD PROCESS CURRENT OR VOLTAGE SIGNALS ON THE OUTPUT WITH A MAXIMUM OF 10 mV P/P OUTPUT RIPPLE. IT OFFERS A CONVENIENT WAY OF INTERFACING RATIO SIGNALS TO A COMPUTER SYSTEM OR OTHER PROCESS INSTRUMENTATION.

RECALIBRATION TO OTHER DESIRED RANGES IS ACCOMPLISHED EASILY. TEMPERATURE-STABLE, LOW-NOISE COMPONENTS PROVIDE EXCELLENT STABILITY AND NOISE IMMUNITY. THE RBM 98 EMPLOYS THE LATEST DESIGN AND COMPONENTS UTILIZING PROVEN TECHNIQUES FOR SUPERIOR RELIABILITY, ACCURACY, AND SERVICEABILITY.

TYPICAL APPLICATIONS

- SIGNAL SCALING TO MATCH INSTRUMENT INPUT TO PROCESS RANGE
- ABSOLUTE TEMPERATURE AND PRESSURE COMPUTATION
- RATIO CONTROL

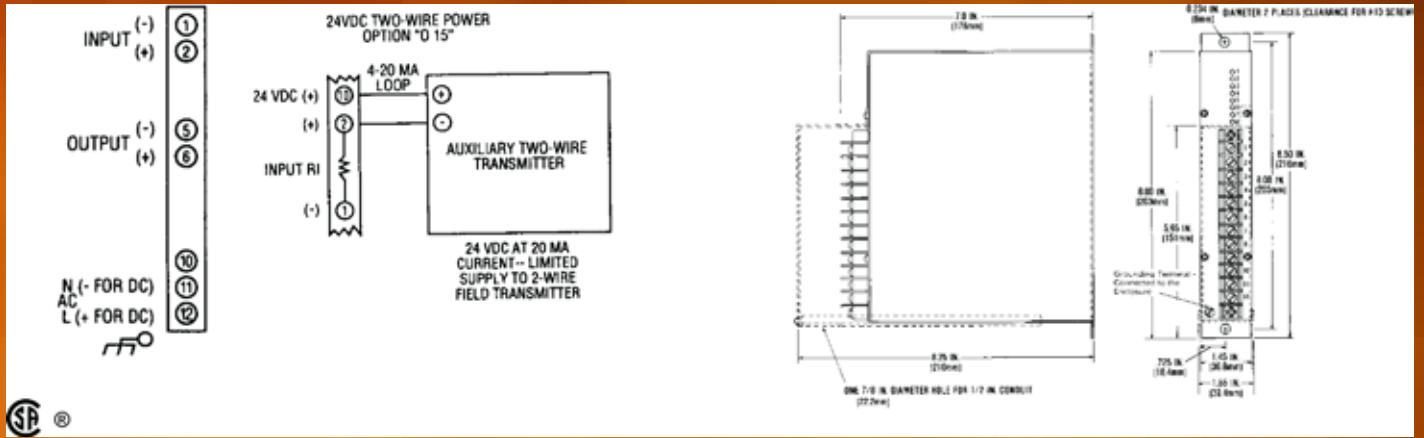


FEATURES

- RATIO RANGE (OUTPUT SPAN DIVIDED BY INPUT SPAN): $K = 0.1$ TO 10.0
- INPUT BIAS CAPABILITY: 0 TO $\pm 100\%$
- OUTPUT BIAS CAPABILITY: 0-50% OF SPAN
- DC CURRENT INPUTS: 4-20 mA, ETC.
- DC VOLTAGE INPUTS: 1-5 VDC, ETC.
- HIGH INPUT IMEPANCE: 10 MEGOHMS MINIMUM
- ZERO-BASED INPUTS: CURRENT AND VOLTAGE
- DC PROCESS SINGAL OUTPUTS: CURRENT AND VOLTAGE
- REPEATABILITY: 0.02% OF SPAN
- HIGH ACCURACY: $\pm 0.1\%$ OF SPAN



CONNECTIONS / DIMENSIONS



INPUT/OUTPUT

INPUT SIGNALS
 4-20 mA DC (Z IN 250 OHMS)
 10-50 mA DC (Z IN 100 OHMS)
 0-1 mA DC (Z IN 5K OHMS)
 0-10 mA DC (Z IN 500 OHMS)
 1-5 VDC (Z IN 10 MEGOHMS)
 0-5 VDC (Z IN 10 MEGOHMS)
 0-10 VDC (Z IN 1 MEGOHM)
 OTHER ZERO-BASED CURRENT AND VOLTAGES ARE AVAILABLE.

OUT PUT SIGNALS / OUTPUT DRIVE (RL)

SIGNAL	AC POWER (RL)	DC POWER (RL)
4-20 mA DC	0-1,000 OHMS MAX.	0-900 OHMS MAX.
10-50 mA DC	0-400 OHMS MAX.	0-350 OHMS MAX.
0-1 mA DC	0-20,000 OHMS MAX	0-18,000 OHMS MAX
1-5 VDC	100K OHMS MIN	100K OHMS MIN.
0-10 VDC	200K OHMS MIN	200K OHMS MIN.

PERFORMANCE

CALIBRATED ACCURACY: $\pm 0.1\%$
 LINEARITY: $\pm 0.1\%$ MAX., $\pm 0.04\%$
 REPEATABILITY: $\pm 0.05\%$ MAXIMUM
 TEMPERATURE STABILITY: $\pm 0.01\%/^{\circ}\text{F}$,
 $\pm 0.004\%/^{\circ}\text{C}$ TYPICAL
 LOAD EFFECT: $\pm 0.01\%$ ZERO TO FULL LOAD
 OUTPUT RIPPLE: 10 mV P/P MAXIMUM
 RESPONSE TIME: 150 MILLISECONDS
 NOTE: ALL ACCURACIES ARE GIVEN AS A PERCENTAGE OF SPAN

TEMPERATURE RANGE: 0° TO 140°F (-18° TO 60°C)
 OPERATING; -40° TO 185°F (-40° TO 85°C) STORAGE
 POWER SUPPLY EFFECT: $\pm 0.05\%$ FOR A
 $\pm 10\%$ POWER VARIATION
 RATIO RANGE: K=0.1 TO 10.0
 INPUT BIAS: 0 TO $\pm 100\%$
 OUTPUT BIAS: 0-50% OF SPAN

POWER

115 VAC: 50/60 HZ, 0.7 PF (STANDARD)	48 VDC: ISOLATED	(OPTION P3)
12 VDC: ISOLATED (OPTION P8)	125 VDC: ISOLATED (105-140 VDC)	(OPTION P4)
24 VDC: NON-ISOLATED (OPTION P1)	230 VAC: 50/60 HZ, 0.7 PF	(OPTION P5)
24 VDC: ISOLATED (OPTION P2)		

NOTE: ALL UNITS 3 WATTS MAXIMUM, AND A $\pm 10\%$ POWER VARIATION UNLESS NOTED.

MECHANICAL

ELECTRICAL CLASSIFICATION: GENERAL PURPOSE
 CONNECTION: BARRIER TERMINAL STRIP (3/8" SPACING, NO. 6 SCREWS)
 CONTROLS: MULTITURN INPUT ZERO, OUTPUT ZERO, AND RATIO CONTROLS
 MOUNTING: SURFACE MOUNTING STANDARD. SEE HOUSINGS SECTION FOR OPTIONS.
 WEIGHT: NET UNIT: 2.6 POUNDS (1.18 KILOGRAMS); SHIPPING: 3.0 POUNDS (1.6 KILOGRAMS)

OPTIONS

OPTION NUMBER	DESCRIPTION
I 14	VOLTAGE INPUTS TO 200 VDC, 1 MEGOHM MIN IMPEDANCE; CURRENT INPUTS OF 100 MA MAX.
O 10	BIPOLAR CURRENT (LARGER THAN ± 1 MA)
O 11	BIPOLAR VOLTAGE TO ± 10 VDC: AT 1 MA, BIPOLAR CURRENT ± 1 MA
O 12	REVERSE CALIBRATION
O 15	TWO-WIRE TRANSMITTER EXCITATION
H 10	THIN-LINE CONDUIT MOUNTING PLATE AND TERMINAL COVER
H 13B, H 14B, H 15B	NEMA 4.7, AND 12 ENCLOSURES
H 16	PFA 12 HIGH-DENSITY, PLUG-IN ENCLOSURES

Ordering Information

- Model number
- Input signal--bias
- Output signal
- Prime power with option no.
- Input/output options
- Housing and miscellaneous options

Please refer to the Housing and/or Option Section for more specific and detailed information.