



**COMPUTER
CONVERSIONS
CORPORATION**

6 Dunton Court, East Northport, NY 11731 • (516) 261-3300

LVD
T
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S

LVT SERIES

Dual (2) and Quad (4) channel digital to LVDT/RVDT converters (simulators). 12 and 14 bit resolution. .1% accuracy and linearity. Internal Transformer Isolation available for reference inputs and signal outputs. Virtual Dynamic response. Industrial and Mil-grade units. Size: 2.6 x 3.1 x .62" H

MLVT SERIES

4 to 128 channel Multiplexed LVDT/RVDT to Digital converters. Up to 16:4 or 8 channel input converters may be used with one central converter. 12 and 14 bit resolution. Internal Transformer Isolation available for all reference inputs and signal outputs. Random accessible addressing with a 150 microsecond per channel response. Industrial and Mil-grade Units. Size: 2.6 x 3.1 x .43" H

VLVT SERIES

4 to 16 channel VME to LVDT converter. 12 and 14 bit resolution. .05% accuracy and linearity. Transformer isolation on all reference inputs and signal outputs. Double VME/Eurocard Form Factor.

D419A/119A

Miniature, phase sensitive demodulators for LVDT's. Field scaleable reference and signal input voltages. Outputs +/-5VDC and +/-10VDC proportionate to core position. .1% linearity and accuracy, active averaging and peak sampling models. Internal transformer Isolation on reference and signal inputs (option). Industrial and Mil-grade units. Size: 1.3 x 1.3 x .4"H

D419/Q419

Single, dual and quad(4) channel phase sensitive demodulators for LVDT's. .1% Linearity and accuracy. Outputs +/-5VDC and +/-10 VDC proportionate to core position. Active averaging and peak sampling models. Internal Transformer Isolation on reference and signal inputs (option). Industrial and Mil-grade Units. Size: 2.6 x 3.1 x .6"H



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LVDT
PRODUCTS

MOD513A

Miniature, phase sensitive modulators for LVDT ATE. Field scaleable reference and signal input voltages. Outputs 0 to 7VRMS, wide band frequencies 400HZ to 5KHZ. .1% linearity and accuracy. Industrial and Mil-grade Units. Size: 1.3 x 1.3 x .4"H

MOD513/DMOD

Single and Dual channel phase sensitive modulators for LVDT simulation and ATE. Internal Transformer isolation for reference inputs and signal outputs, outputs 0 to 7VRMS, wide band frequencies 400HZ to 5KHZ. .1% linearity and accuracy. Industrial and Mil-grade Units. Size: 2.6 x 3.1 x .62"H

**COMPUTER CONVERSIONS CORPORATION
INDUSTRIAL PRODUCTS GROUP (IPG):**

LHS SERIES

Super Heavy Duty Linear Position and Velocity Transducers. 12-48" long, repeatable to .0002", accurate and linear to .0003". 2.5" dia. bore JIC cylinder configuration, may be hydraulic powered to accurately position heavy loads for extreme environments. Outputs available are: 22 bit digital binary data, 4-20ma current loop, or Multispeed resolver.



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6 Dunton Ct., E Northport, NY 11751 (631)261-3300 Fax 261-3308

**VME BUS CARD
MODEL: VBR-A7468-X12WR
GENERAL SPECIFICATIONS**

A7468 REV-
SHEET 1 OF 1

COMPLIANCE: A24:D16 VME SLAVE 6UH SINGLE SLOT WIDTH
VME BUS COMPATIBLE ISOLATED I/O CARD
FUNCTION: 4 INDEPENDENT AND ISOLATED CHANNELS
OF 3 WIRE LVDT TO DIGITAL CONVERSIONS.
CHANNELS 0, 1, 2 & 3: CCC CONVERTER P/N: LVDC50-A7468

REFERENCE OUTPUT: 7.07V RMS, 3000Hz, $\pm 5\%$, 1.0VA DRIVE,
TRANSFORMER ISOLATED

SIGNAL INPUT: 3 WIRE LVDT. CONVERTERS PERFORM
FUNCTION VA-VB/VA+VB, NON SENSITIVE TO
PHASE SHIFT OR TEMPERATURE VARIATIONS
OF RVDT.
SEE DWG # A6032-21.

DIGITAL OUTPUT: 14 BIT RESOLUTION

ACCURACY: .15% OF FULL SCALE.

FAULT OUTPUT: (BITE): STATUS FAULT DETECT ON ALL CHANNELS
INDEPENDENTLY FOR LOSS OF REFERENCE/
SIGNAL AND OVERSPEED CONDITIONS.

TEMPERATURE RANGE: OPERATING: 0°C TO +70°C
STORAGE: -55°C TO +105°C

POWER SUPPLY INPUT: ALL REQUIRED SUPPLIES PROVIDED FROM BUS.
(+5V @ 645ma, +12V @ 25ma, -12V @ 125ma TYP)
NOTE: $\pm 12V$ CAN BE SUPPLIED FROM EXTERNAL
SOURCE VIA P3 & P4 CONNECTORS. J6 & J7
JUMPER PLUGS MUST BE REMOVED.

REFERENCE DRAWINGS:

CHANNEL IDENTIFICATION.....A5654-158
CONNECTOR PIN-OUT.....A5651-35
JUMPER CONFIGURATION.....A5655-167



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LVDC SERIES

LVDT/RVDT to Digital Converters
Model Selection Guide

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MODEL SELECTION CODES: Table T.2.		
External Reference Supplied		
Model Sel.		
Code	Signal Inputs	Reference In
V1	2V L-L @ 360-5000Hz.	2VRMS
V2	3V L-L @ 360-5000Hz.	3VRMS
V3	7V L-L @ 360-5000Hz.	7VRMS
V4	26V L-L @ 360-5000Hz.	26VRMS
V5	26V L-L @ 360-5000Hz.	11.8VRMS
V6	26V L-L @ 360-5000Hz.	11VRMS
VR	10VL-L @ 400 Hz.	26VRMS
CCC Reference Provided Internal		
	Signal Inputs	Reference Out
VM	3V L-L	3VRMS @ 2500Hz.
V7	3V L-L	7VRMS @ 2500HZ.
V8	7V L-L	7VRMS @ 2500Hz.
V9	7V L-L	7VRMS @ 400Hz.
VA	26V L-L	26VRMS @ 2500Hz.
VB	11.8V L-L	26VRMS @ 400Hz.
VF	4.36V L-L	7V VRMS @ 1800Hz. (3 WIRE)
VH	12.25V L-L	28VRMS @ 800Hz. (2 WIRE)
VN	5.5V L-L	7VRMS @ 1800Hz. (2 WIRE)
VP	.4476-1.1738VL-L	3VRMS @ 3KHz. (3 WIRE)
VS		3.9VRMS @ 2500Hz. (3 WIRE)
VT		7VRMS @ 3200Hz. (RVDT 3 WIRE)
NOTE: OTHER VOLTAGES & FREQUENCIES AVAILABLE.		

Model Selection Guide:	
Use Basic Model # LVDC50	3 & 4 Wire LVDT 14 Bit Resolution
LVDC40	3 & 4 Wire LVDT 12 Bit Resolution
LVDC20	2 Wire LVDT 12 Bit Resolution
Add:	
a) -V1 to -VZ for Model Code (see Table 2.2 above)	
b) -1 for Commercial Temp. 0-70C -2 for extended (Mil.) Temp. -55-+125C	
example: Model: LVDC-50-V6-1 is a 14-bit LVDT/RVDT to Digital Converter, having a 3 VRMS @ 2500 Hz. reference output to .4VA load to drive the LVDT with a 3V L-L 3 or 4 Wire input.	

SPECIFICATIONS:

ALL MODELS : @25°C

Resolution.....	14 Bits, +2 over/under range MSB's
Accuracy.....	±.15% of full scale ±1LSB
Repeatability.....	+1LSB
Data Format.....	Offset Binary, See table T.1
Over/Under Range.....	2 MSB's, 01 = Positive/over-range. 11 = Negative/under-range.
Frequency.....	360-5000Hz.
Reference-in.....	(see options) 2-50VRMS ±10% available units, 2, 3, 7 or 26VRMS ±10% standard options into 100K ohms.
Reference-Out.....	(optional) 2-30VRMS ±10%, up to .4VA, 2, 3, 7 and 26VRMS ±10% standard options.
Signal Inputs.....	3 or 4 wire RVDT/LVDT format, specified voltage input ±10% at 360 to 5000Hz.
Input impedance.....	70K ohms typical at 3 VRMS
Transient Protect.....	100VDC max. w/o damage
Acceleration.....	(For a 1 LSB lag.) 124°/sec ² typ., = 34.4% of full scale/sec ² typ.
Power Supplies.....	+5VDC @ .8 Amp. typ. +125 ma./channel +15VDC @ 25 ma./ channel, -15 @ 35 ma./channel or, +12VDC @ 32 ma./channel, -12VDC @ 5 ma./channel
Temperature Range.....	0 degrees C to +70 degrees C on -1 units, -55 degrees C to +105 degrees C -2 units
Storage.....	-55 degrees C to +125 degrees C

Notes:

- 1) Accuracy applies over operating temperature range, ±10% amplitude and frequency variations, & ±5% power supply variations.
- 2) Different input voltages and frequencies available.
- 3) Reference supply variations greater than 10% will cause a .1% additional error.
- 4) Faster settling times and higher rates available.
- 5) 883 Level B available on all units.



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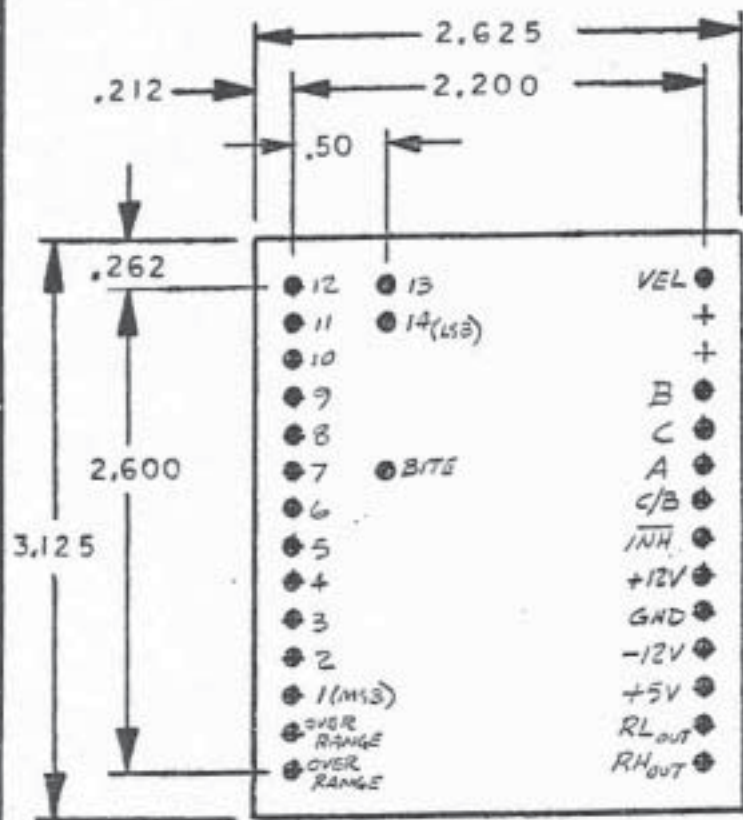
LVDT/RVDT TO DIGITAL
SPECIFICATIONS

A6034 REV-A
Sheet 2 of 2

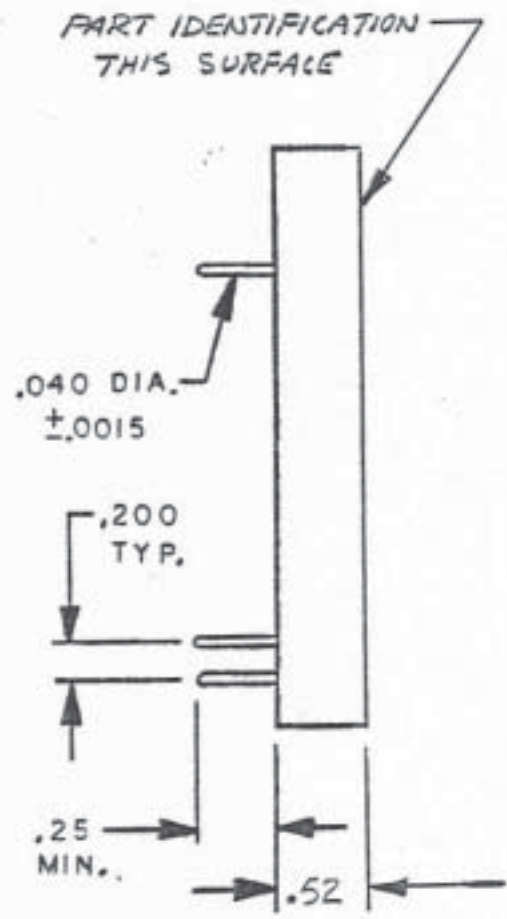
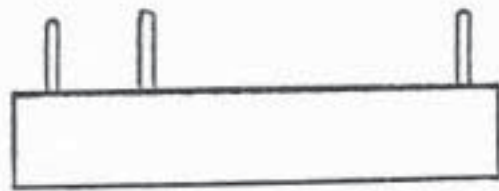
TABLE T1

LVDT OUTPUT	BIT PATTERN				
	(MSB) D15				(LSB) D0
+OVER TRAVEL	01	XXXX	XXXX	XXXX	XX
+FULL TRAVEL -1 LSB	00	1111	1111	1111	11
+HALF TRAVEL	00	1100	0000	0000	00
+1 LSB	00	1000	0000	0000	01
NULL	00	1000	0000	0000	00
-1 LSB	00	0111	1111	1111	11
-HALF TRAVEL	00	0100	0000	0000	00
-FULL TRAVEL +1 LSB	00	0000	0000	0000	01
-FULL TRAVEL	00	0000	0000	0000	00
-OVER TRAVEL	11	XXXX	XXXX	XXXX	XX

NOTE: 14 BIT RESOLUTION SHOWN. AT 12 BIT RESOLUTION,
BITS D0 AND D1 ARE ALWAYS 0.



BOTTOM VIEW
(PIN SIDE)

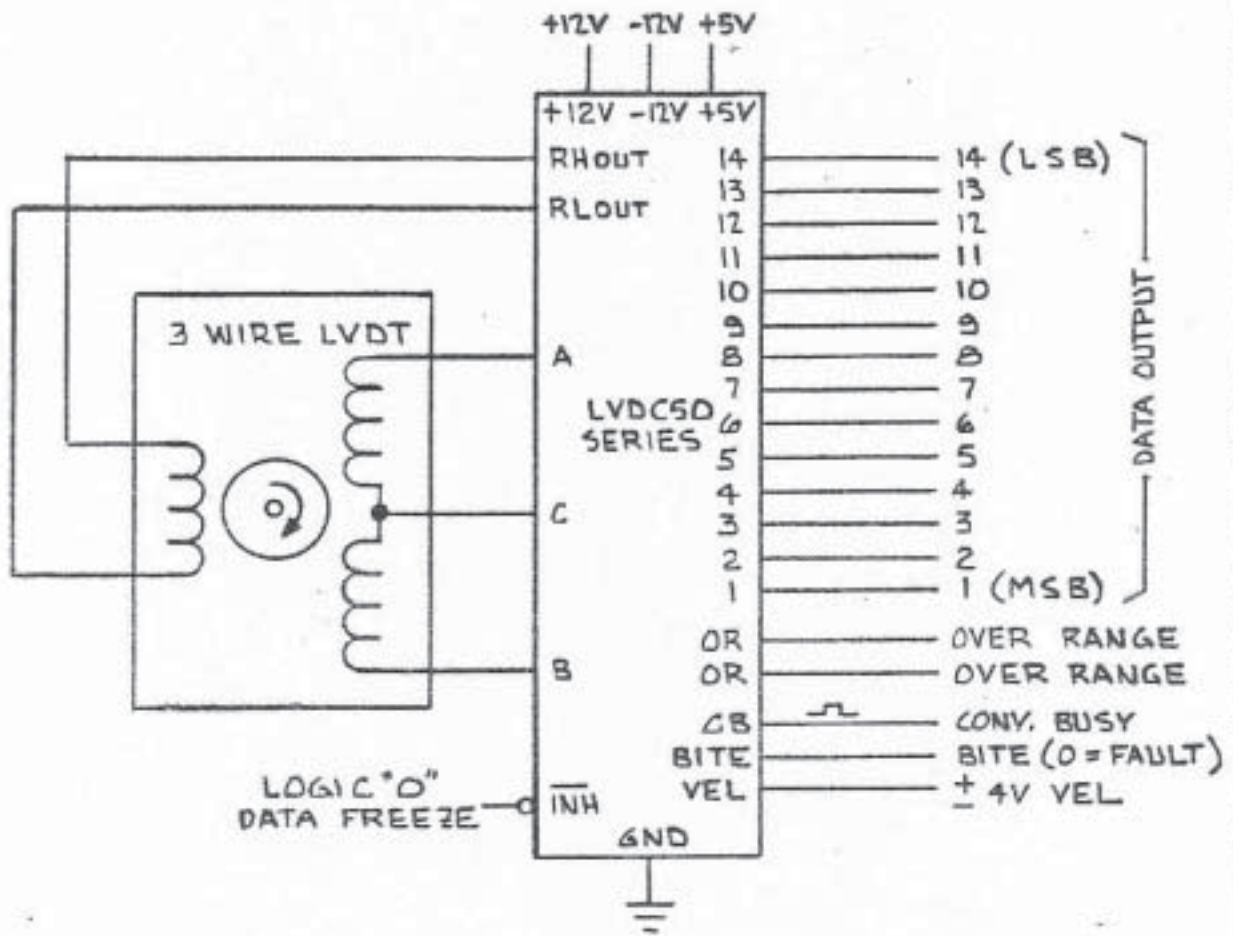


NOTE:

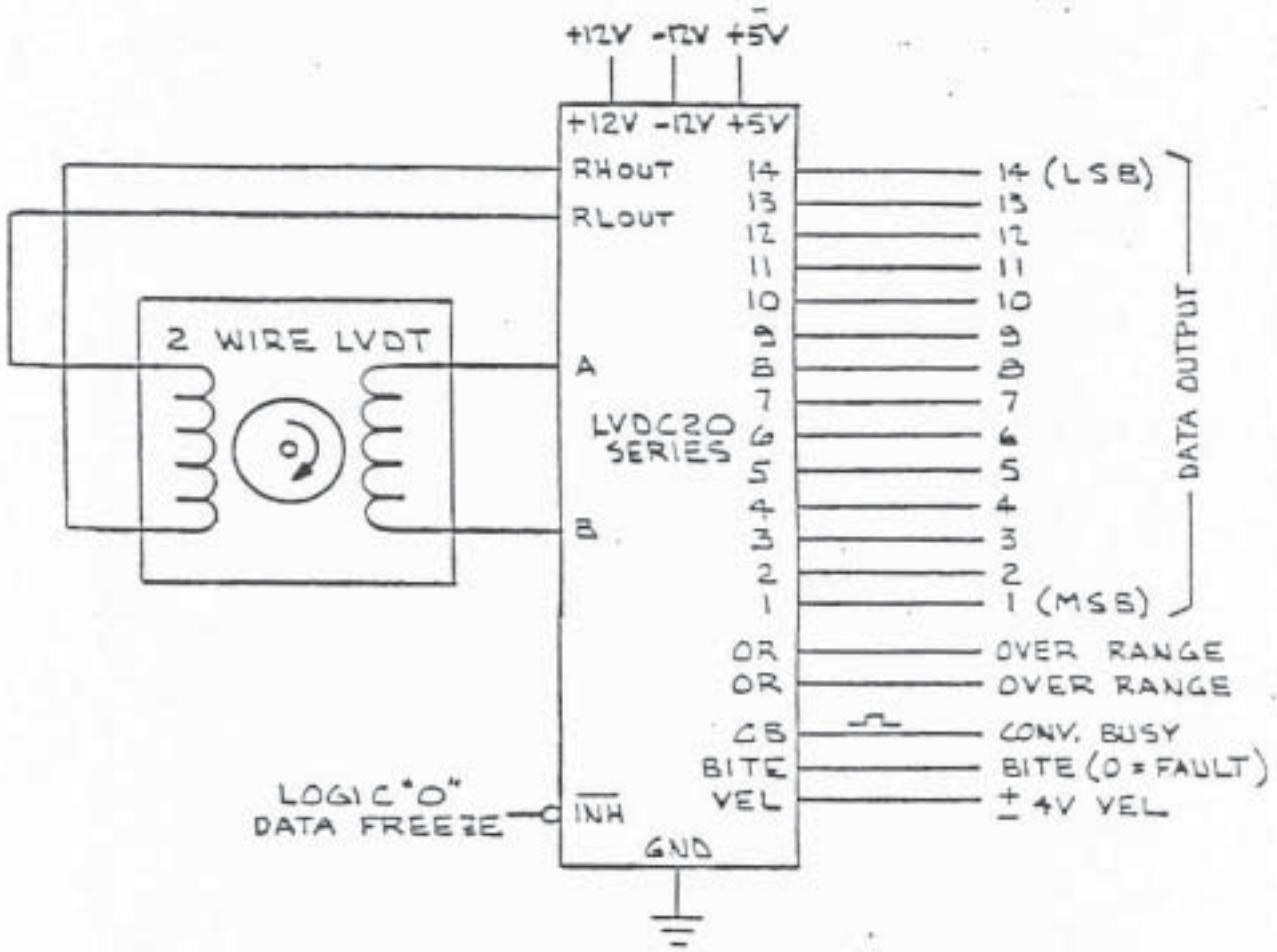
CASE: DIALLYL PHTHALATE, BLACK FLAME RESISTANT, CONFORMING TO MIL-M-14, TYPE SDG-F.
 PINS: BRASS, QQ-B-626, ALLOY 360, 1/2 HARD, TIN PLATED PER MIL-T-10727, TYPE 1.

TOL: ±.010

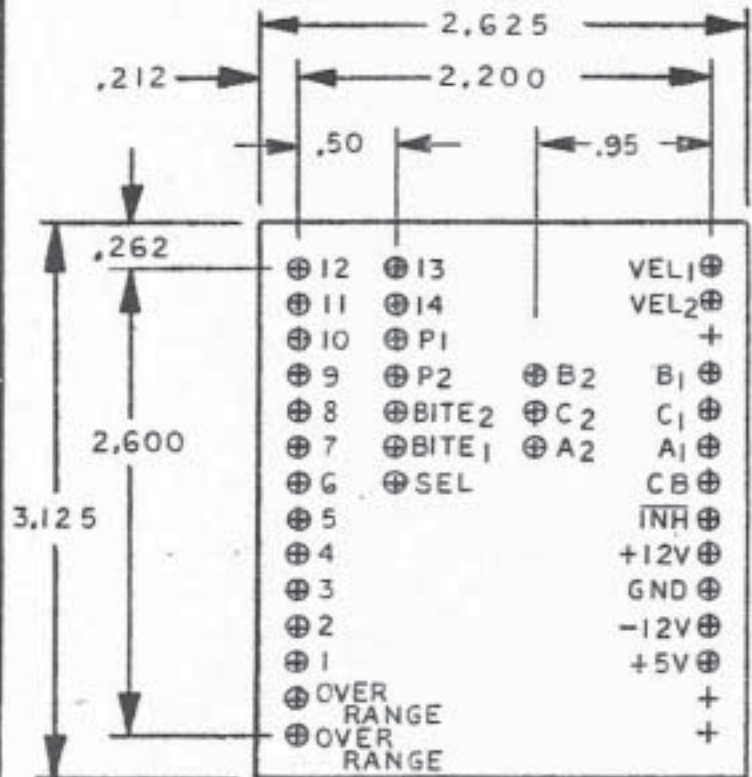
COMPUTER CONVERSIONS CORP		
6 DUNTON COURT - EAST NORTHPORT, N.Y. 11731 - 516 261-3300		
SCALE FULL	APPROVED BY:	DRAWN BY: <i>P. VARRONE</i>
DATE 2-10-94		REVISED
3 WIRE LVDT TO DIGITAL CONVERTER "LVDC 50" SERIES		
MECHANICAL OUTLINE		DRAWING NUMBER A6033



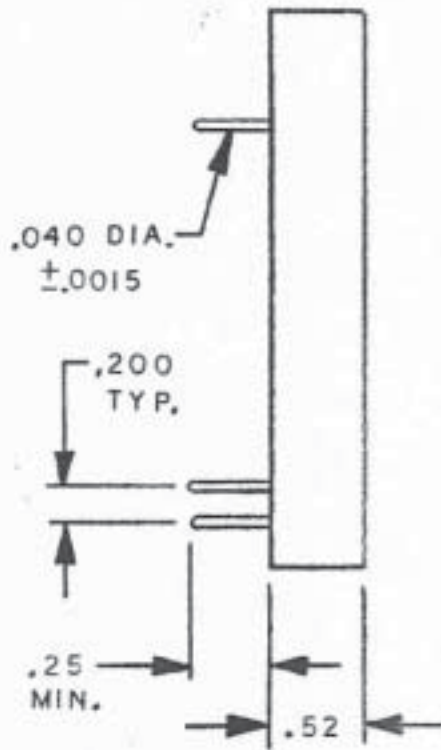
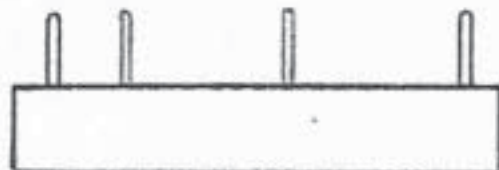
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8 DUNTON COURT · EAST NORTHPORT, N.Y. 11731 · 516 281-3300		
SCALE: <i>NY</i>		DRAWN BY: <i>R. F. ...</i>
DATE: 2-19-54		REVISED:
3 WIRE LVDT TO DIGITAL CONVERTER "LVDC50" SERIES		
INTERCONNECTION		DRAWING NUMBER A6039



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SCALE: <i>NY</i>		DRAWN BY: <i>R.F.</i>
DATE: <i>2-19-54</i>		REVISED: <i>U</i>
2 WIRE LVDT TO DIGITAL CONVERTER "LVDC20" SERIES		
INTERCONNECTION		DRAWING NUMBER A6039-1
SHEET 1 OF 1		



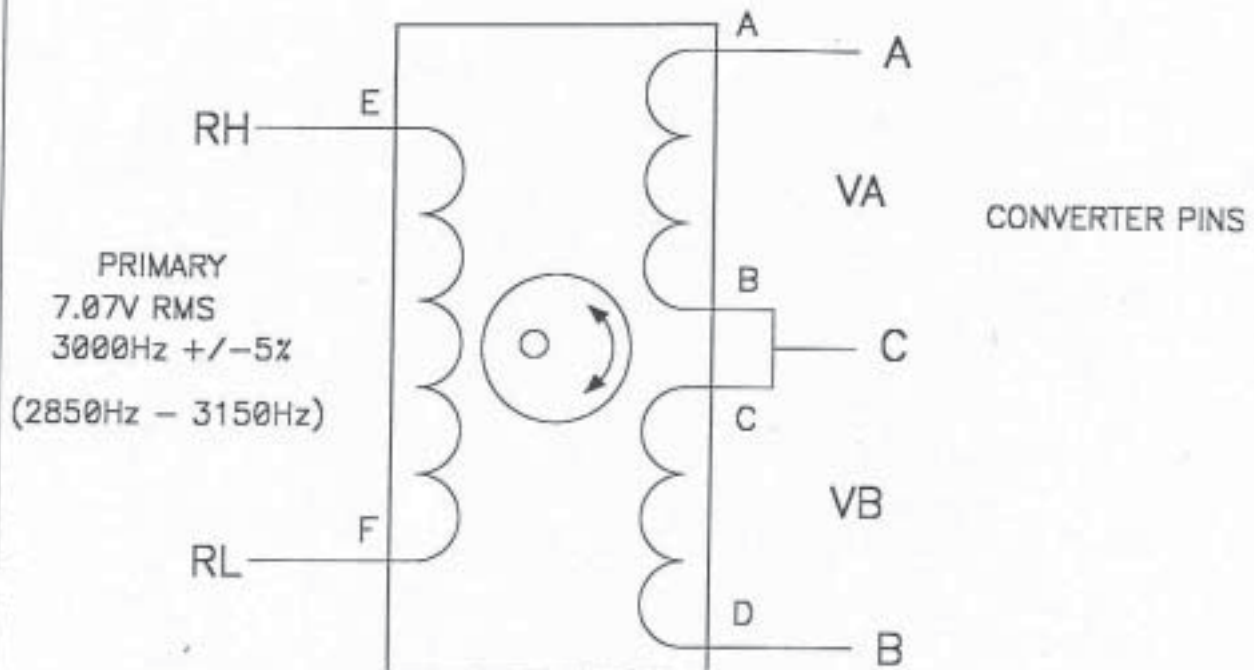
BOTTOM VIEW
(PIN SIDE)



NOTE:
CASE: DIALLYL PHTHALATE, BLACK FLAME RESISTANT, CONFORMING TO MIL-M-14, TYPE SDG-F.
PINS: BRASS, QQ-B-626, ALLOY 360, 1/2 HARD, TIN PLATED PER MIL-T-10727, TYPE 1.

TOL: ±.010

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SCALE FULL	APPROVED BY:	DRAWN <i>D. VARRONE</i>
DATE 7-20-95		REVISED
DUAL 3 WIRE LVDT TO DIGITAL CONVERTER "DLVDC50- -1BV" SERIES		
MECHANICAL OUTLINE		DRAWING NUMBER A6322-1



	- F.S.	-1/2 F.S.	0	+1/2 F.S.	+ F.S.
A - B	1.373		2.218		3.063
D - C	3.063		2.218		1.373
A - D	-1.69		0		1.69

NOTES:

- FOR TESTING *VBR-A7468-X12WR*
- RATIO BOX SETTINGS.....GAIN = .23904
COMMON MODE = .31372
- INTERNAL CONVERTER NOTE
 R8 , R9 , R33 = 10K (MATCHED)
 R10 = 11.8K
 R11 = 4.53K



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PHONE (516) 261-3300 FAX (516) 261-3308

DEMODULATORS
(Phase Sensitive AC to DC Converters)
MODEL SELECTION GUIDE

DEMODULATORS (Phase sensitive AC TO DC Converters)
MODEL SELECTIONS

MODEL	TYPE	SIZE	ISOLATION	NOTES
D419A-ST	Active Averaging	1.3" x 1.3" x .40"H	NONE	2
D419A-XT	Active Averaging	1.3" x 1.3" x .40"H	Signal Inputs	2
D409A	Active Averaging	2.6 x 3.1 x .60"H	Reference Inputs Signal Inputs	2
DD409AX	Active Averaging	3.125 x 2.625 x .60"H	Reference Input (1) Signal In. (2 sets)	2
D407ST	Peak Sampling	1.75 x 1.75 x .60"H	NONE	1,4
D407XT	Peak Sampling	1.75 x 1.75 x .60"H	Signal Inputs	1,4
D101	Peak Sampling	3.0 x 3.0 x .625"H	Reference Inputs Signal Inputs	1
RD101	Peak Sampling	3.0 x 3.0 x .625"H	Reference Input (1) Signal In. (2 sets)	1
D119A-ST	Peak Sampling	1.3 x 1.3 x .40"H	NONE	1
D419I	INVARIANT Active Averaging	2.0 x 2.0 x .6"H	NONE	2,3

~~~~~NOTES:~~~~~

1) Phase Sensitive Peak Sampling Type Units: Output is sampled at the carrier frequency, (i.e. 400 Hz. units sampled every 2.5 msec., 60 Hz. units sampled every 16.67 msec. = max. lag of input verses output). These feature a much faster response than active averaging type units and are thereby more transient sensitive.

2) Phase Sensitive Active Averaging Units are optimized to provide a very smooth, stable, filtered response. With an input rate (inputs sweeping full range) @ 10 Hz.; active averaging units will provide 70% of the maximum full scale output (this is the 3 db. point, and it is proportionate to the change of input frequency), (i.e. if output is rated for +/- 10VDC (Static) expect +/- 7VDC on the output with full range sweeps of the input at 10 Hz.).

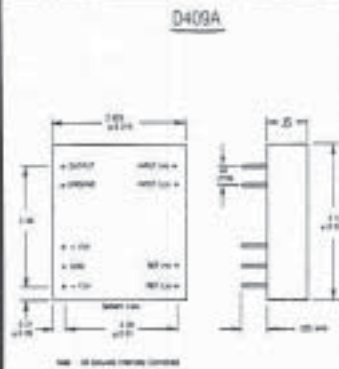
3) Invariant units are phase sensitive demodulators that are insensitive to phase shift variations between the reference and the signal inputs, making these models ideal for AC components like LVDT and RVDT's that normally exhibit large and varying phase shifts.

4) This particular "D407" series of phase sensitive demodulators are not suitable for applications with input rates (sweeping full range) above 10Hz.



### DEMOMULATORS FEATURES

- High Accuracy.
- Low Cost.
- Phase Sensitive.
- Low Null & Ripple.
- PC Card Mounting.
- Hi Input Impedance.
- Easily interfaces with standard Analog to Digital Converters.
- Output short circuit protected.
- Transformer isolated input.
- Low Output Impedance.



### DESCRIPTION

The MOD 500 and D400 series of solid state modulators and demodulators are hi-accuracy, low cost, miniature, phase sensitive converters designed for military and industrial control applications. The modulators convert DC input signals to linearly proportional AC output signals. The polarity of the input signal determines the phasing of the output signal. The Demodulators convert an AC input signal to a linearly proportional DC output signal whose polarity is determined by the input AC reference phase. The entire series feature low nulls, linearity of up to  $\pm .1\%$  of full scale, and isolated inputs or outputs if required. Special scale factors can easily be provided upon request making these units the most flexible and smallest available in their price range.

### MODULATORS FEATURES

- High Accuracy
- Insensitive to reference voltage changes ( $\pm 10\%$ ).
- Gain & Zero Adjust.
- Phase Sensitive.
- Low null & Distortion.
- Low output Impedance.
- Low Cost.
- Highly Reliable.
- PC Card Mounting.
- Output Short Circuit Protected.



### DEMOMULATORS - SPECIFICATIONS (at 25°C)

| MODEL                                             | D407<br>(Peak Sampling)                                                  | DD408P<br>(Passive Averaging)     | D409A<br>(Active Averaging)            |
|---------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------|----------------------------------------|
| AC INPUT (1):                                     | 0 to 5V RMS,<br>10V RMS, 25 V RMS,<br>or 100V RMS<br>(specify)           | +                                 | +                                      |
| INPUT IMPEDANCE (2):                              | 10K ohms min.                                                            | +                                 | +                                      |
| FREQUENCY (3):                                    | 400 Hz $\pm 10\%$ ,<br>80 Hz, 800 Hz,<br>100 Hz, or 5000 Hz<br>(specify) | +                                 | +                                      |
| DC OUTPUT:                                        | 0 to $\pm 5V$ (A) or<br>0 to $\pm 10V$ (B)                               | +                                 | +                                      |
| OUTPUT IMPEDANCE:                                 | 1 ohm (10K ohm<br>min. load)                                             | 3000 ohms<br>(typ)                | 1 ohm (2K ohm<br>min. load)            |
| REFERENCE INPUT (4)<br>(TRANSFORMER<br>ISOLATED): | 0 to 5 VRMS                                                              | +                                 | +                                      |
| LINEARITY (4):                                    | $\pm .2\%$                                                               | $\pm .5\%$                        | $\pm .3\%$                             |
| NULL:                                             | $\pm .1\%$ F.S.                                                          | +                                 | +                                      |
| POWER REQUIRED:                                   | $\pm 15V$ @ 25 ma.<br>each                                               | NONE                              | +                                      |
| TEMPERATURE<br>RANGE:                             |                                                                          |                                   |                                        |
| OPERATING:                                        | 0°C to +70°C (1-1)<br>-55°C to +85°C (1-2)<br>-55°C to +125°C            | +                                 | +                                      |
| STORAGE:                                          |                                                                          |                                   |                                        |
| SIZE (5):                                         | 1.75" x 1.75" x<br>.625" H (400 Hz<br>module)                            | Module: 2.75"<br>x 1.4" x .75" H. | Module: 2.6" x 3.1"<br>x .6" H module. |

\* Same as D407 Model

#### DEMOMULATORS - NOTES:

- (1) Any input voltage is available.
- (2) Higher input impedance available.
- (3) Any frequency and wideband units (400 to 5000 Hz) Available.
- (4) Linearity of from  $\pm .1\%$  to  $\pm 1\%$  available on all units.
- (5) Hermetically sealed units in metal case available.

#### ORDERING GUIDE:

- (1) Choose basic unit.
- (2) Choose AC input.
- (3) Choose DC output.
- (4) Choose reference frequency.
- (5) Choose reference voltage.
- (6) Choose operating temperature range.
- (7) To order a 400 Hz, 0 to 5V RMS input, to  $\pm 10V$  DC output demodulator with a 25V reference to operate from 0 to 70°C use P.L. No. D407-S-B-4-25-1.

### MODULATORS - SPECIFICATIONS (at 25°C)

| MODEL                    | MOD500-10                                                  | MOD500-100         |
|--------------------------|------------------------------------------------------------|--------------------|
| DC INPUT (1):            | 0 to $\pm 10$ VDC                                          | 0 to $\pm 100$ VDC |
| INPUT IMPEDANCE:         | 100K ohms (min.)                                           | +                  |
| AC OUTPUT (2):           | 0 to 7 VRMS                                                | +                  |
| REFERENCE INPUT (4):     | 25V, 400 Hz                                                | +                  |
| LINEARITY (3):           | $\pm .2\%$ F.S.                                            | +                  |
| OUTPUT<br>IMPEDANCE (5): | 1 ohm (max.)<br>(2 Kohms min. load)                        | +                  |
| NULL:                    | $\pm .1\%$ of F.S.                                         | +                  |
| OUTPUT DISTORTION:       | 2% Max.                                                    | +                  |
| GAIN ADJUST:             | Potentiometer (5% range)                                   | +                  |
| ZERO ADJUST:             | Potentiometer (5% range)                                   | +                  |
| POWER REQUIRED:          | $\pm 15V$ DC @ 50 ma. each                                 | +                  |
| TEMPERATURE<br>RANGE:    |                                                            |                    |
| OPERATING:               | 0 to 70°C (1-1)<br>-55°C to +85°C (1-2)<br>-55°C to +125°C | +                  |
| STORAGE:                 |                                                            |                    |
| SIZE (5):                | 2.6" x 3.1" x .625" H Module                               | +                  |

\* - Same as MOD500-10

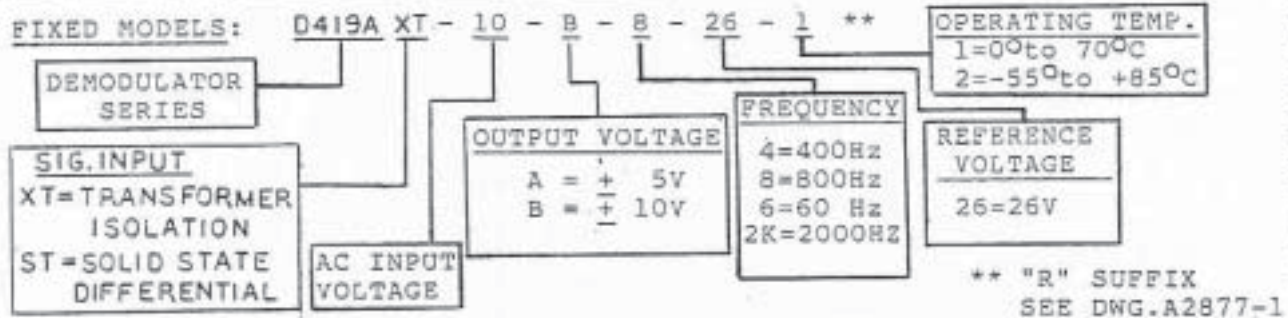
#### NOTES:

- (1) Any DC input voltage available.
- (2) Any AC output voltage available via internal or external output transformer.
- (3) Linearity of  $\pm .1\%$  to  $\pm 1\%$  available.
- (4) 50 Hz units available.
- (5) Hermetically sealed units in metal cans available.
- (6) Higher power output stages available.

#### ORDERING GUIDE:

- (1) Specify Basic Model.
- (2) Choose AC output.
- (3) Choose reference frequency.
- (4) Choose Reference Voltage.
- (5) Choose Operating temperature range.
- (6) To order a modulator with  $\pm 10$  VDC input, 25V 400 Hz reference with @ 7V RMS output to operate from 0°C to 70°C use P.L. No. MOD500-10-7-4-25-1.

AC INPUT..... MODEL SELECT 1V TO 115VAC  
 INPUT IMPEDANCE..... 4.1K/Volt (HIGHER IMPEDANCES AVAILABLE A/R)  
 FREQUENCY..... 400Hz, 800Hz (other frequencies available)  
 D.C. OUTPUT.....  $\pm 5V(-A)$  or  $\pm 10V(-B)$   
 OUTPUT IMPEDANCE..... 1 ohm (10K ohm min. load)  
 REFERENCE INPUT..... MODEL SELECT 10V TO 115VAC  
 LINEARITY.....  $\pm .3\%$  (WHT Dot units = Graded for .1%)  
 NULL.....  $\pm .1\%$  F.S.  
 POWER REQUIRED.....  $\pm 15v$  @ 10ma. each  
 OPERATING TEMPERATURE..... (-1)  $0^{\circ}C$  to  $+70^{\circ}C$   
 (-2)  $-55^{\circ}C$  to  $+85^{\circ}C$   
 STORAGE TEMPERATURE.....  $-55^{\circ}C$  to  $+125^{\circ}C$   
 MECHANICAL..... (See DWG A2872) 1.30 x 1.30 x .40



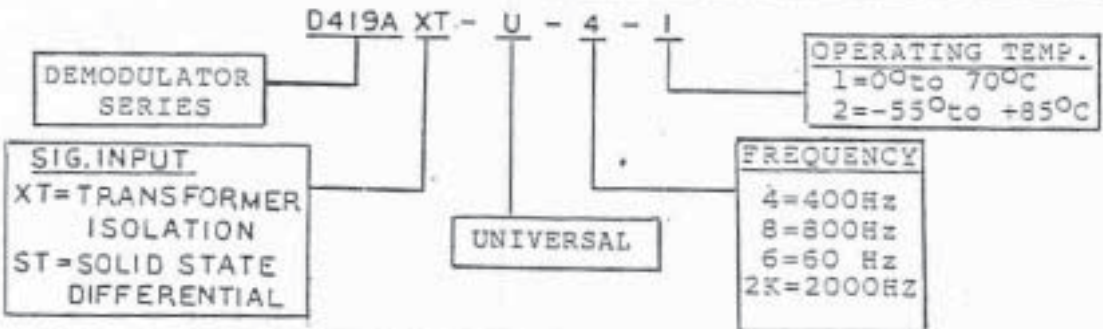
FEATURES

- \* HIGH ACCURACY
- \* MINIATURE SIZE
- \* PHASE SENSITIVE
- \* LOW NULL & RIPPLE
- \* LOW DISTORTION
- \* LOW OUTPUT IMPEDANCE
- \* HIGH INPUT IMPEDANCE
- \* LOW COST
- \* HIGHLY RELIABLE
- \* PC CARD MOUNTING
- \* OUTPUT SHORT CIRCUIT PROTECTED
- \* EASY INTERFACE WITH STD. ANALOG TO DIGITAL CONVERTERS

\*\* OTHER OPTIONS:  
 HA = HIGH ACCURACY  
 Z = HIGH INPUT IMPEDANCE A/R PER CUSTOMER

|                                                                                     |              |                             |
|-------------------------------------------------------------------------------------|--------------|-----------------------------|
| <b>COMPUTER CONVERSIONS CORP</b>                                                    |              |                             |
| 6 DUNTON COURT - EAST NORTHPORT, N.Y. 11731 - 516 261-3300                          |              |                             |
| SCALE: <i>H</i>                                                                     | APPROVED BY: | DRAWN BY: <i>D. VARRONE</i> |
| DATE: 1-5-87                                                                        |              | REVISED:                    |
| PHASE SENSITIVE DEMODULATOR (A.C. TO D.C. CONVERTER)<br>"D419A SERIES" FIXED MODELS |              |                             |
| SPECIFICATIONS                                                                      |              | DRAWING NUMBER<br>A2877     |

AC INPUT..... ANY INPUT 1V TO 115VAC (SCALEABLE-SEE DWG  
 INPUT IMPEDANCE..... 4.1K/Volt (A2878)  
 FREQUENCY..... 400Hz, 800Hz (other frequencies available)  
 D.C. OUTPUT..... +10VDC (SCALEABLE-SEE DWG A2878)  
 OUTPUT IMPEDANCE..... 1 ohm (10K ohm min. load)  
 REFERENCE INPUT..... 10V TO 115VAC (WIDE RANGE)  
 LINEARITY..... +.3% (WHT Dot units = Graded for .1%)  
 NULL..... +.1% F.S.  
 POWER REQUIRED..... +15v @ 10ma. each  
 OPERATING TEMPERATURE..... (-1) 0°C to +70°C  
 (-2) -55°C to +85°C  
 STORAGE TEMPERATURE..... -55°C to +125°C  
 MECHANICAL..... (See DWG A2872) 1.30 x 1.30 x .40



FEATURES

- \* HIGH ACCURACY
- \* MINIATURE SIZE
- \* PHASE SENSITIVE
- \* LOW NULL & RIPPLE
- \* LOW DISTORTION
- \* LOW OUTPUT IMPEDANCE
- \* HIGH INPUT IMPEDANCE
- \* LOW COST
- \* HIGHLY RELIABLE
- \* PC CARD MOUNTING
- \* OUTPUT SHORT CIRCUIT PROTECTED
- \* EASY INTERFACE WITH STD. ANALOG TO DIGITAL CONVERTERS

NOTE: UNIVERSAL MODELS FEATURE USER SCALEABLE INPUT AND OUTPUT FULL SCALE VOLTAGES.

\*\* OTHER OPTIONS:  
 HA = HIGH ACCURACY

|                                                                                         |              |                            |
|-----------------------------------------------------------------------------------------|--------------|----------------------------|
| <b>COMPUTER CONVERSIONS CORP</b>                                                        |              |                            |
| 6 DUNTON COURT - EAST NORTHPORT, N.Y. 11731 - 516 261-3300                              |              |                            |
| SCALE: <i>HA</i>                                                                        | APPROVED BY: | DRAWN BY <i>D. VARRONE</i> |
| DATE: 1-5-87                                                                            |              | REVISED                    |
| PHASE SENSITIVE DEMODULATOR (A.C. TO D.C. CONVERTER)<br>"D419A SERIES" UNIVERSAL MODELS |              |                            |
| SPECIFICATIONS                                                                          |              | DRAWING NUMBER<br>A2877-2  |

1. SIGNAL INPUT VOLTAGES:

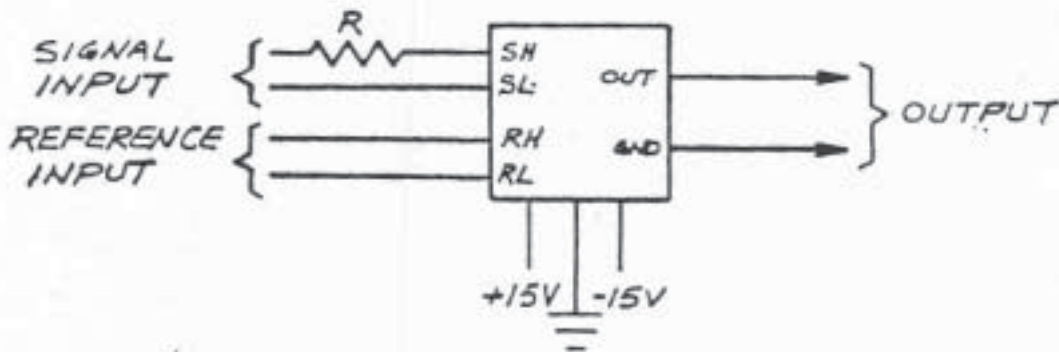
The Demodulator module will accept input voltages from IV L-L to 115V L-L 400Hz by externally connecting a resistor in series with the signal input line (SH). No resistor is required for IV RMS input.

The input resistor is determined by adding approx. 4.1K per volt in excess of IV or  $R=(E-1) \times 4.1K$ .

EXAMPLE: For 12V input  $R=(12-1) \times 4.1K = 45.1K$

The input resistor can also be used to scale the output voltage.

EXAMPLE: For +5V output-double the value of the calculated input resistor.



2. REFERENCE INPUT VOLTAGES:

The modules solid state differential input will accept reference voltages from 10V to 115V 400Hz with no external resistors.

3. ZERO TRIM:

Not required. Factory Trimed.

**COMPUTER CONVERSIONS CORP**

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SCALE *AK*

APPROVED BY

DRAWN BY *PAVARONE*

DATE *4-7-83*

REVISED

*UNIVERSAL DEMODULATOR*

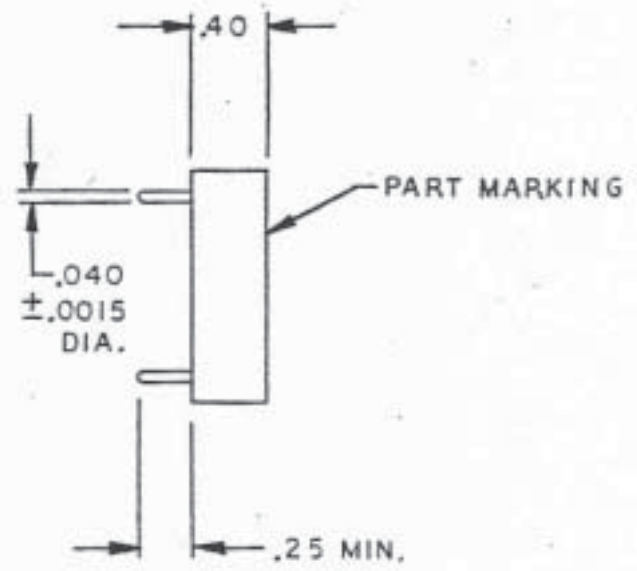
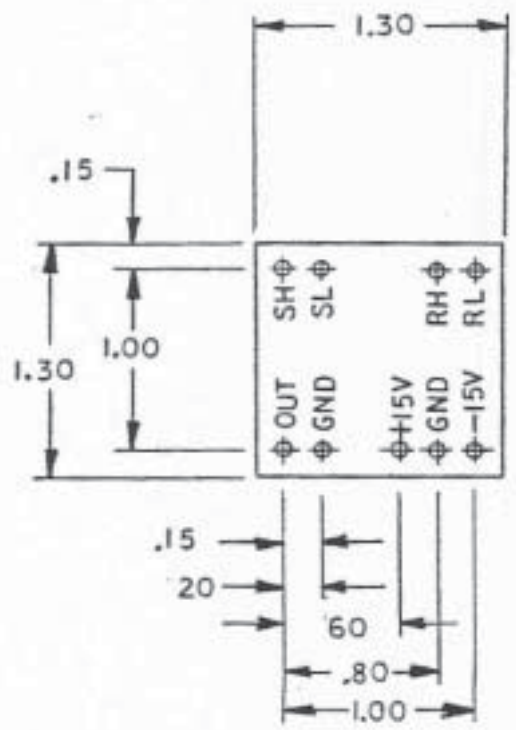
*OPERATING INSTRUCTIONS*

DRAWING NUMBER

*A2878*

*SHEET 1 OF 1*





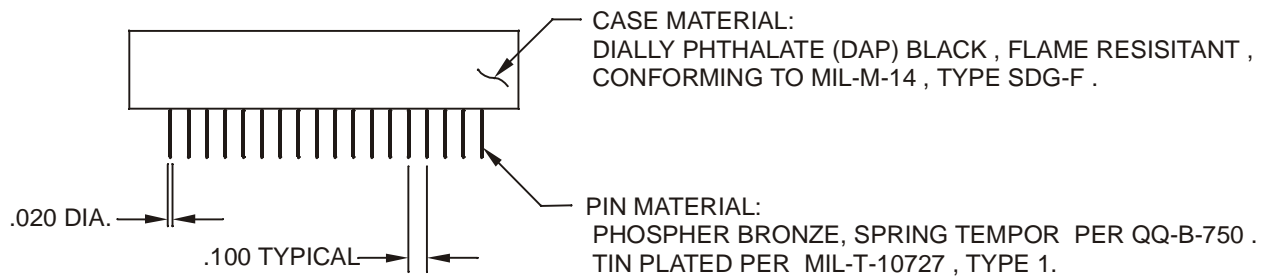
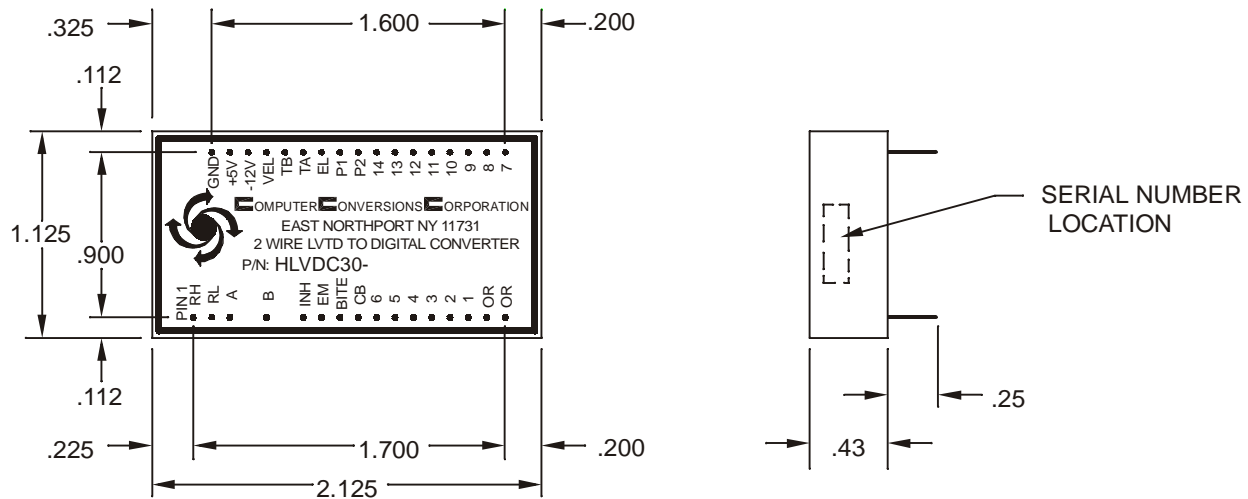
NOTE:  
CASE: DIALLYI PHTHALATE, BLACK FLAME  
RESISTANT, CONFORMING TO MIL-M-14,  
TYPE SDG-F.  
PINS: BRASS, QQ-B-626, ALLOY 360, 1/2 HARD,  
TIN PLATED PER MIL-T-10727, TYPE 1.

TOL: ±.010

|                                                            |             |                                |
|------------------------------------------------------------|-------------|--------------------------------|
| <b>COMPUTER CONVERSIONS CORP</b>                           |             |                                |
| 6 DUNTON COURT - EAST NORTHPORT, N.Y. 11731 - 516 261-3300 |             |                                |
| SCALE: FULL                                                | FSCM: 51086 | DRAWN BY: <i>D. VARRONE</i>    |
| DATE: 10-4-93                                              |             | REVISED                        |
| PHASE SENSITIVE DEMODULATOR<br>"D419A" SERIES              |             |                                |
| MECHANICAL OUTLINE                                         |             | DRAWING NUMBER<br><b>A2872</b> |

**TRANSFORMER ISOLATED  
2 WIRE LVDT TO 14 BIT CONVERTER  
"HLVDC30" SERIES**

DWG # A7474 REV-  
SHEET 1 of 1

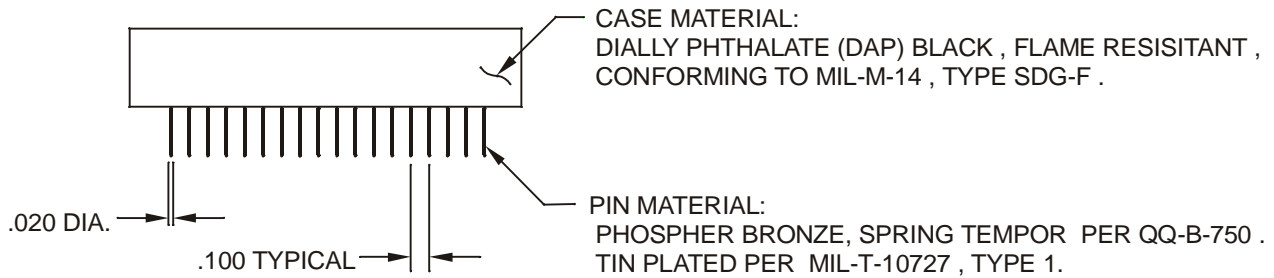
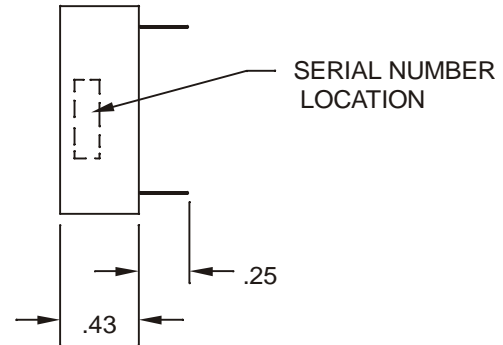
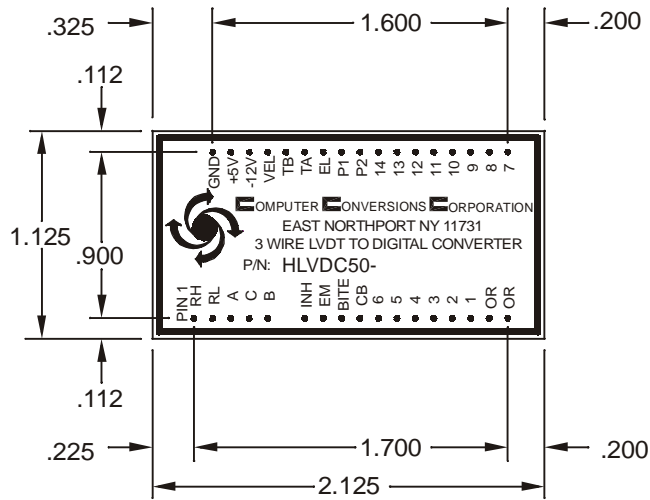


NOTES :

1. PINS P1 AND P2 USED ON EXTERNAL RESOLUTION SELECT UNITS ONLY .
2. PART NUMBER SHOWN FOR REFERENCE ONLY .
3. SEE SEPARATE ELECTRICAL SPECIFICATIONS DRAWING A7475 .

**TRANSFORMER ISOLATED  
3 WIRE LVDT TO 14 BIT CONVERTER  
"HLVDC50" SERIES**

DWG # A7474 REV-  
 SHEET 1 of 1

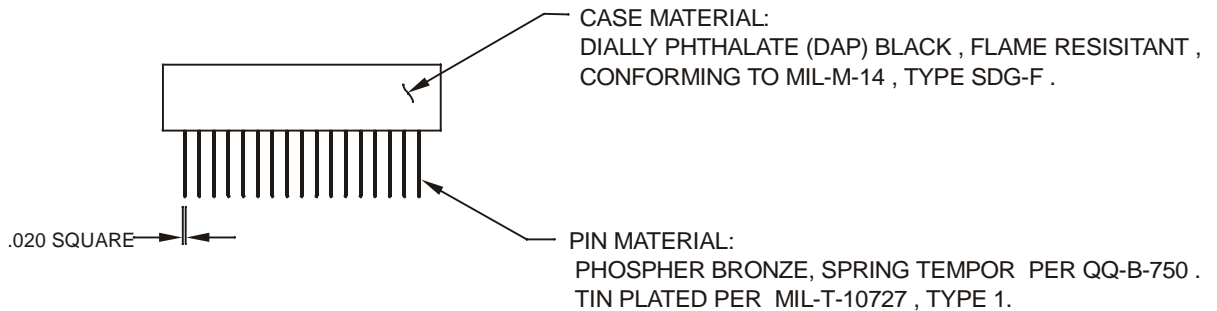
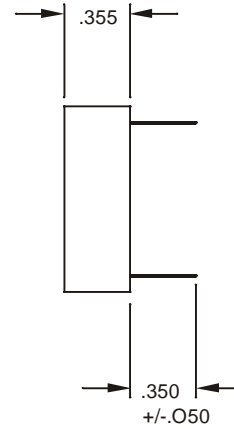
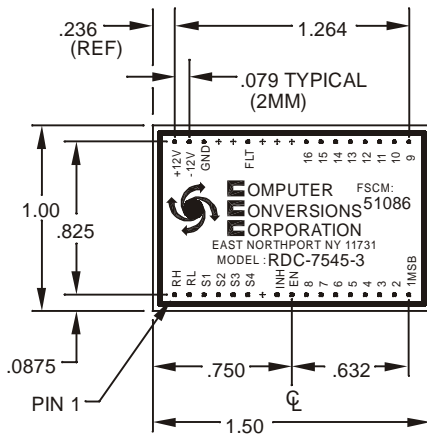


NOTES :

1. PINS P1 AND P2 USED ON EXTERNAL RESOLUTION SELECT UNITS ONLY .
2. PART NUMBER SHOWN FOR REFERENCE ONLY .
3. SEE SEPARATE ELECTRICAL SPECIFICATIONS DRAWING A7475 .

RESOLVER TO DIGITAL CONVERTER  
 WITH INTERNAL REFERENCE GENERATOR  
**"RDC7545-3"**

DWG # A7545 REV-  
SHEET 1 of 1



NOTES :

1. PART NUMBER SHOWN FOR REFERENCE ONLY .
2. SEE SEPARATE ELECTRICAL SPECIFICATIONS DRAWING A7546 .