Jordan
CONTROLS

IM-0538 Rev. B
Date: October 2, 1997
By: Engineering Dept

INSTRUCTION MANUAL EC-10656 - LOSS OF SIGNAL

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I. Description

The EC-10656, loss of signal monitor, checks an input signal, and compares it with an adjustable trip point. The output of the EC-10656 is a relay with SPDT contacts (low voltage).

The EC-10656 is used to monitor an input, and if a low or complete loss of signal exists, the output contacts switch. The popular application of this board is for regaining some control over a critical process when a faulty input signal exists. The relay output can be used to switch in a "pseudo" signal. A current loop shunt resistor can be installed directly to the board to monitor a 4 to 20mA loop. An LED indicates the presence of the command signal.

II. Specifications

Maximum input signal range (terminals 1 & 2 with respect +15 Vdc to terminal 3):

Threshold adjustment range: + 14Vdc
Hysteresis: 100mV
Input impedance: 100K (terminals 1 or 2 to 3)
Power requirements: +15 Vdc & common, @20mA max (+5%)
Output type: Dry contacts, SPDT
Contact rating (max): 28 Vdc, 3 watts (resistive)
Temperature range: 0 to 55° C (32 to 155° F)
Size (inches): 3.25 x 3.25 x .75 (ht.)
Mounting Dimension (inches): 2.75 x 2.75
(supplied w/ .75 inch spacers & #8-32 screws)

III. Loss of Signal Adjustment

With the power applied to terminals 4 (+15), 5 (-15) and 3 (common); and power applied to input terminal 1(pos) and 2 (neg), adjust the input signal to just under the minimum. Adjust the trim potentiometer on the EC-10656 so that the relay trips at this point (indicated by the LED). The LED will be on when a command signal is present, and will be off when the command signal is below the trim pot set point.

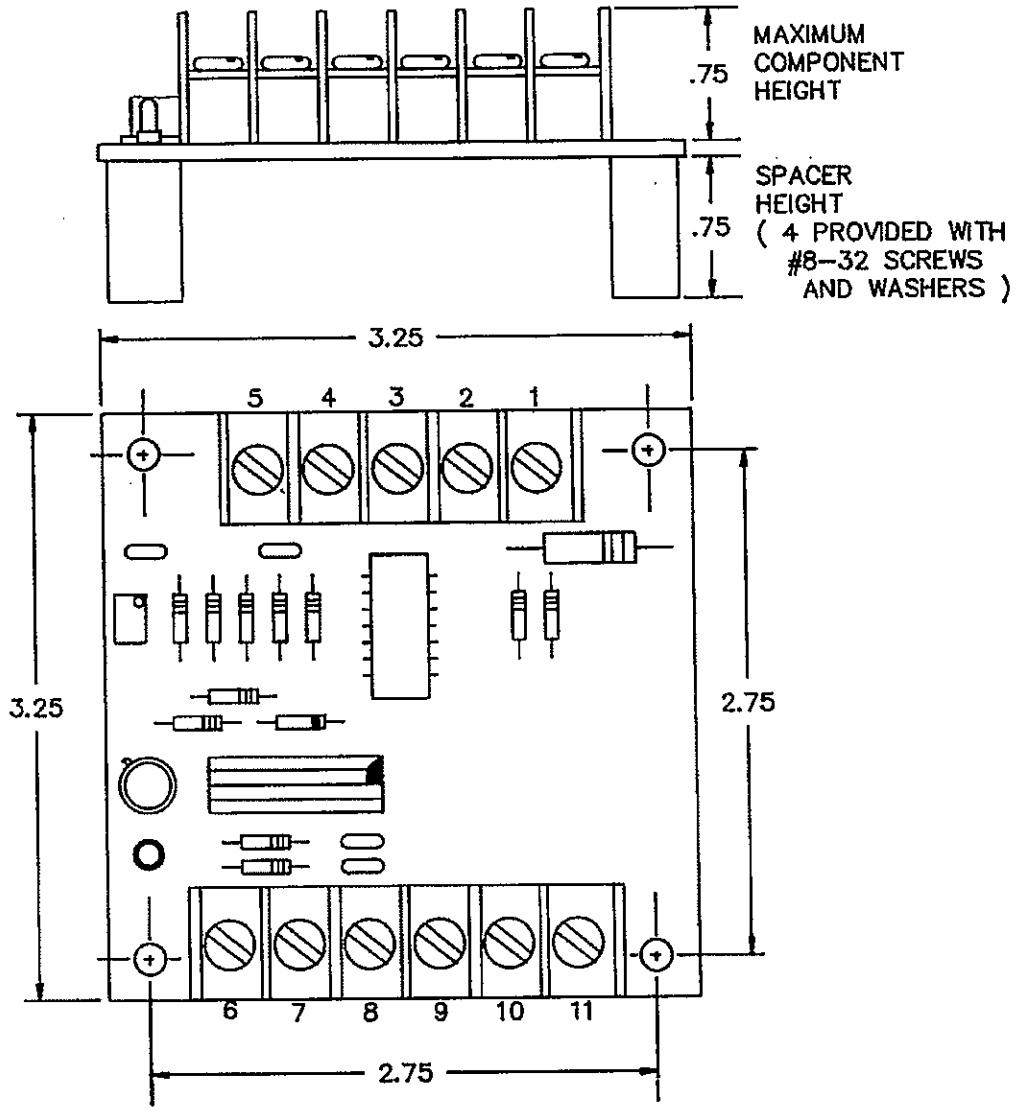
Example: For a 4 to 20mA input signal and a 680 ohm shunt resistor, set input signal to approximately 3.9mA. The led should turn off at 3.9mA and turn on at 4mA.

IV. Troubleshooting

Before trying to troubleshoot the EC-10656, verify that the wiring is correct and that all inputs are within specifications.

Problem	Procedure
1. Relay does not switch when led turns on (off)	1. RL1 bad; Q 1 bad
2. Relay and led do not change states	2. VR1 bad; check voltage at U1-1.
3. Relay chatters	3. Load to high; check snubber network C3, R14; C4, R15)
4. EC-10656 loads down	4. Check U1, VR1 power source

V. Reference Drawing



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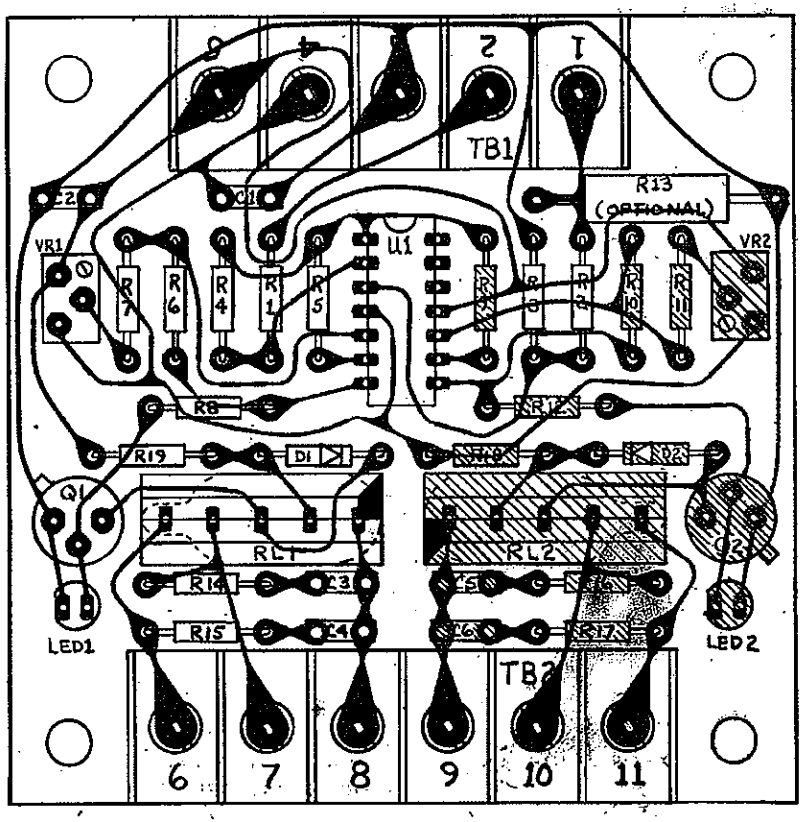

ASSEMBLY NOTES:

PARTS SHADED IN (RL2, Q2, LED 2, C5, C6, VR2 R9, R10, R11, R12, R16, R17, R18 & D2) ARE USED ON EC-10655, SIGNAL MONITORING BOARD (B/M 70-B-020144-001); BUT ARE OMITTED FOR EC-10656, LOSS OF SIGNAL BOARD (B/M 70-B-020144-002).

R13 (CURRENT SHUNT) IS OPTIONAL, DESIGNATED AS PER EDIT SHEET.

DOTTED OUTLINE FOR RL1 & RL2 REPRESENTS OLD STYLE PACKAGE.

REV.	DESCRIPTION	DATE
D	ECR 8523	6/27/85
C	ECR-8017 REDRAWN ADDED D1, D2, C3-C6 & R14-R19	5-31-84

TOLERANCES UNLESS OTHERWISE SPECIFIED .XX ± .02 .XXX ± .005 ANGULAR ± 1°

SCALE — ~2X

DRAWN G. FRIGGE DATE 5-31-84

APPROVED C KORN DATE 6/1/84

Jordan Controls, Inc.

DO NOT SCALE

TITLE — P.C. BOARD ASSEMBLY

FOR — EC-10655/EC-10656

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