



USER'S MANUAL

EU-10098A

Revision A

REFERENCE ISOLATOR

Inventory Number

EUA-7-100980001

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This EUA-7-100980001 (EU-10098A, Rev. A) Feedback Isolator is a fit, form, and function replacement for Dynapower Feedback Isolator EUA-7-100980000.

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1. SPECIFICATIONS

Input Power 115 Vac, 50/60 Hz
Input Signals 4 - 20 ma each channel
Input Resistance 50 ohm
Isolation..... 750 Volts dc
Size 4.5" x 7"

2. GENERAL DESCRIPTION

The DYNAPOWER EU-10098A, Rev.A Dual Signal Isolator has been designed to isolate two 4-20 ma current loop signal sources from DYNAPOWER electronic control circuits.

The output circuits of the isolator are specifically intended to provide reference signals to Dynapower drive circuits. The drive circuits require a zero input for zero output, therefore provision has been in the isolators to remove the effect of the 4 ma "zero" current.

Dynapower drive circuits normally operate with reference voltages of approximately 2.5 volts. The output of the isolator is adjustable to match the drive circuit reference voltage.

The isolator output may be clamped at zero by a CLAMP signal of 12 volts dc. Both channels are clamped by this signal. Removal of the CLAMP signal causes the output of the isolator to ramp to its output level in approximately two seconds. Each channel has two outputs, output A is controlled by the CLAMP, output B is not.

Each channel can be operated with different inputs and adjustments to accommodate input-output requirements. If input currents are larger than 20 ma, provision must be made so that the input voltage at the input terminals does not exceed 1 volt. This can be done by connecting a resistor across the input terminal to shunt the internal 50 ohm input resistor.

If only voltage signals are available, the isolator may still be used. A dropping resistor in series with one of the input leads can be used to form a voltage divider with the 50 ohm input resistor. The resistor value should be chosen to limit the voltage across the input terminals to 1 volt.

3. CIRCUIT ADJUSTMENTS

TRIMPOT	FUNCTION
P1	Adjusts OFFSET level of channel 1
P2	Adjusts OUTPUT level of channel 1
P3	Adjusts OUTPUT level of channel 2
P4	Adjusts OFFSET level of channel 2

TERMINAL	TERMINAL LABEL	TERMINAL FUNCTION
1	115 Vac	115 Vac power input
2	115 Vac	115 Vac power input
3	Com	Output common
4	15 Vdc	+15 Volt output
5	Clamp In	CLAMP input command
6	Cha 2 A out	Channel 2 A output
7	Cha 2 B out	Channel 2 B output
8	Cha 1 A out	Channel 1 A output
9	Cha 1 B out	Channel 1 B output
10		
11	Cha 1 + In	Channel 1 pos input
12	Cha 1 - In	Channel 1 neg input
13		
14	Cha 2 + In	Channel 2 pos input
15	Cha 2 - In	Channel 2 neg input
16		

4. BENCH TEST

NOTE

- A. All measurements are referenced to terminal 3
- B. All voltages are dc.

1. Apply 115 Vac to terminals 1 and 2.

Measure at terminal 4, should be +15 volts, ± 5

Measure output of negative supply, should be -15 volts, ± 5

Channel 1 Adjustments

2. Connect 4-20 ma source to terminal 11(+) and terminal 12(-)

Set P2 max cw (highest gain)

Set current source to 4.00 ma.

Measure voltage at terminal 8, should be 0 volts, ± 5 mv

Adjust with P1

3. Set current to 20.00 ma

Measure voltage at terminal 8, should be 2.5 volts, ± 5 mv

Adjust with P2

Measure voltage on terminal 9, should be 2.5 volts

4. Re-check output with 4.00 ma input

Make necessary adjustments to obtain specified output at 4.00 ma and 20.00 ma input.

5. Jumper terminal 4 to 5.

Voltage on terminal 8 should go to zero.

Voltage on terminal 9 should stay at 2.5.

6. Remove jumper.

Voltage on terminal 8 should go to 2.5 volts in ≈ 2 seconds

Channel 2 Adjustments

2. Connect 4-20 ma source to terminal 14(+) and terminal 15(-)

Set P# max cw (highest gain)

Set current source to 4.00 ma.

Measure voltage at terminal 6, should be 0 volts, ± 5 mv

Adjust with P4

3. Set current to 20.00 ma.

Measure voltage at terminal 6, should be 2.5 volts, ± 5 mv

Adjust with P1

Measure voltage on terminal 7, should be 2.5 volts.

4. Re-check output with 4.00 ma input

Make necessary adjustments to obtain specified output at 4.00 ma and 20.00 ma input.

5. Jumper terminal 4 to 5.

Voltage on terminal 6 should go to zero.

Voltage on terminal 7 should stay at 2.5.

6. Remove jumper.

Voltage on terminal 6 should go to 2.5 volts in ≈ 2 seconds.