EMONA

Fiber Optics-Trainer 211

FOTFX™

DIGITAL

ANALOG

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COUPLER

A B C D

DIGITAL I/O

GND

D IN-3 D IN-2 D IN-1 D IN-0

D OUT-3 D OUT-2 D OUT-1 D OUT-0

FUNCTION GENERATOR

SYNC

VCO IN FUNC OUT

ANALOG I/O

ACH0 DAC0

ACH1 DAC1

VARIABLE DC

− +

SEQUENCE GENERATOR

CLK X SYNC

LINE CODE

00 NRZ-L
01 Bi-Ø
10 RZ-AMI
11 NRZ-M

0 1

SEQUENCE GENERATOR

CLK Y SYNC

LINE CODE

00 NRZ-L
01 Bi-Ø
10 RZ-AMI
11 NRZ-M

0 1

LOWPASS FILTERS

3kHz LPF

1kHz LPF

PCM BIT CLK REGENERATOR

PCM DATA

PCM CLK

(100kHz bit clock)

SPEECH

MASTER SIGNALS

100kHz DIGITAL
10kHz DIGITAL
2kHz DIGITAL
500Hz DIGITAL
2kHz SINE

TRANSMITTER RED

INPUT

DIGITAL ANALOG

TRANSMITTER RED

INPUT

DIGITAL ANALOG

TRANSMITTER GREEN

INPUT

DIGITAL ANALOG

RECEIVER

LO HI

OUTPUT

RECEIVER

LO HI

OUTPUT

AMPLIFIER

GAIN

GND IN

GND OUT

PCM ENCODER

PCM TDM

CLK PCM DATA FS

INPUT 1 INPUT 2

PCM DECODER

CLK PCM DATA

OUTPUT OUTPUT2

COUPLER

A B C D

WDM FILTER RED

WDM FILTER GREEN

FUNCTION GENERATOR

AMPLITUDE

MIN MAX

FREQUENCY

MANUAL MODE

VARIABLE POWER SUPPLIES

MANUAL MODE

0V −12V

MANUAL MODE

0V +12V VOLTAGE

VOLTAGE

PROTOTYPING BOARD POWER

POWER READY ACTIVE

USB

NATIONAL INSTRUMENTS

SCOPE
30Vpk MAX
100 MS/s

CH 0
CH 1

TRIG
5V TTL

FGEN
10V MAX

DMM
VΩ
COM
60VDC
20Vrms MAX

2A MAX

FUSE
0.315A H 250V
5-20 mm

+15V −15V +5V

1MΩ
21pF