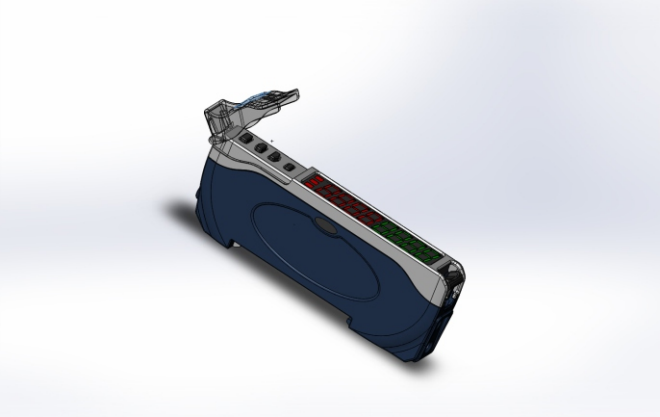
KF CONTROLS

KINGFISHER CONTROLS

Making Better Sense For You

Fiber Optic Amplifier

2016



ACCESSORIES
INDUCTIVE
METAL FACE
HIGH/LOW TEMPERATURE
PHOTOELECTRIC
ULTRASONIC
ADAPTIVE
CAPACITIVE
QUICK CONNECT CABLES
CUSTOMIZATION

WWW.KFCONTROL.COM

Fiber Optic Amplifier

Fiber Optic Amp.

Specification	FO Amplifier
Electrical	
Supply Voltage	8–30 VDC
Burden Current	<50mA exclusive of load
Output Type	NPN/PNP programmable
Output Mode	Normally Open/Closed programmable
Output Current	<200mA
Saturation Voltage (typical)	25mA<1.2V, 100mA<2V
Leakage Current	<100 uA
Short Circuit Protection	Auto-reset
Power Up Delay	<50 msec
Reverse Polarity Protection	Yes
Power False Pulse Protection	Yes
Response Time	50 µs (Low Resolution), 250 µs (Noise Level 1) 500 µs (Noise Level 2), 4msec (High Resolution)
Mechanical	
Package Material	Lexan or equivalent Black
Dimensions (LxW)	80x36x10.5mm
Mounting	DIN rail
Connection	Cable 3-wire Brown,Black,Blue
Environmetal	
Sealing	IP50, IP61
Vibration Sweep	10 to 55 Hz, double amplitude: 1.5 mm 0.06", 2 hours each in the X, Y and Z axis
Shock	10G
Humidity	35 to 85% RH (No condensation)
Temperature	-10 – 60C
Certifications	CE
Optical	
Type	Receiver Photodiode, Modulated Frequency
Spectrum	Red 680nm
Indicators	Output, 8 digit display
Sunlight Immunity	10,000 ft-candles
MTBF	>10 yrs

Calibration Functions

Two-point Calibration

1. Press SET briefly with no workpiece
2. Press SET briefly with workpiece
3. Press PROGRAM to save values

Or
Press SELECT and hold at least 3 seconds to cancel

Manual adjustment

1. Press SET briefly
2. Press SCROLL up or down to adjust
3. Press PROGRAM to save values

Or

Press SELECT and hold at least 3 seconds to cancel

Cancel Settings

To cancel operation at any time
press and hold SELECT button
for more than 3 seconds

Adjusting Settings

Press PROGRAM button, then
use SCROLL to find parameter.
Press SELECT to make selection.
When done, hold PROGRAM for
minimum 3 seconds to save

Calibration Outline

SET button

- Briefly
  - Two Point Calibration, Positioning Calibration
    1. No workpiece threshold saved to RAM
    2. Place workpiece
    3. Briefly press SET
    4. 50% threshold saved to RAM
    5. Press PROGRAM for more than 3 second to store to EEPROM
       Or
    6. Press SELECT for more than 3 second to cancel
  - Manual Adjustment
    1. Press SCROLL up or down to adjust setting
    2. Press PROGRAM for more than 3 second to store to EEPROM
       Or
    3. Press SELECT for more than 3 second to cancel
- Hold Longer than 3 seconds
  - Maximum Sensitivity Adjustment
    1. Threshold is set just above current threshold
    2. Hysteresis is auto adjusted
    3. Press PROGRAM for more than 3 second to store to EEPROM
       Or
    4. Press SELECT for more than 3 second to cancel

Programming Options

PROGRAM button

- SCROLL UP/DOWN cycles through selections
  - Reset
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Init
    1. Preset Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Preset
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Work Preset
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Zero Shift
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - NPN Select (Turns off PNP select)
    3. Press SELECT
    4. Press PROGRAM for more than 3 seconds
  - PNP Select (Turns off NPN select)
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Normally Open Select (Turns off Normally Closed select)
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Normally Closed Select (Turns off Normally Open select)
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Off Delay
    1. Press SELECT
    2. SCROLL UP/DOWN to set 1 to 9999 msec
    3. Press PROGRAM for more than 3 seconds
  - On Delay
    1. Press SELECT
    2. SCROLL UP/DOWN to set 1 to 9999 msec
    3. Press PROGRAM for more than 3 seconds
  - One-Shot Output
    1. Press SELECT
    2. SCROLL UP/DOWN to set 1 to 9999 msec

Press PROGRAM for more than 3 second

Continued

- SCROLL UP/DOWN cycles through selections
  - Hysteresis
    1. Press SELECT
    2. SCROLL UP/DOWN to set value
    3. Press PROGRAM for more than 3 seconds
  - Speed
    1. Press SELECT
    2. SCROLL UP/DOWN to select option
       - High Speed low noise immunity
       - Med Speed medium noise immunity
       - Low Speed, high noise immunity
    3. Press PROGRAM for more than 3 seconds
  - Clone (Copies parameters to adjacent sensors)
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Key lock or Unlock (Toggles)
    1. Press SELECT
    2. Press PROGRAM for more than 3 seconds
  - Password (Toggles)
    1. Press SELECT
    2. SCROLL UP/DOWN to select password#
       - NOTE: 0000 is password cancel
    3. Press PROGRAM for more than 3 seconds