

FG series

Fixed Grip™ hand grip controllers •
fully customizable & ambidextrous operation



DISTINCTIVE FEATURES

- Custom configured
- Analog or USB outputs
- Rugged hand operation
- Readily available with TS series thumbstick
- Operator presence paddle option



ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature: -40 °C to +85 °C (-40 °F to +185 °F)
- Storage Temperature: -40 °C to +85 °C (-40 °F to +185 °F)
- Above panel sealing: Up to IP65 (subject to final specifications)
- EMC Immunity Level (V/M): EN61000-4-8:2009
- EMC Emissions Level: EN61000-4-3: 2006
- ESD: EN61000-4-2:2008



ELECTRICAL SPECIFICATIONS

- Electrical Resistive Load: 5 A (subject to selected switch)
- Electrical Inductive Load: 3 A (subject to selected switch)
- Low Level: 10 mA @ 30 mV (subject to selected switch)
- Electrical Life: 1 million cycles 5 A @ 28 VDC
Resistive snap-action (depending on selected switch)



MECHANICAL SPECIFICATIONS

- Operating Force: 7.5 N ±2.0 N (1.69 lbf ±0.11 lbf)
- Maximum Vertical Load: 1000 N (224.8lbf)
- Maximum Horizontal Load: 600 N (134.9 lbf)
- Mechanical Angle of Movement: 40°
- Expected Life: 1 million lifecycles
- Mass/weight: 317.5 g (11.2 oz)

The company reserves the right to change specifications without notice.

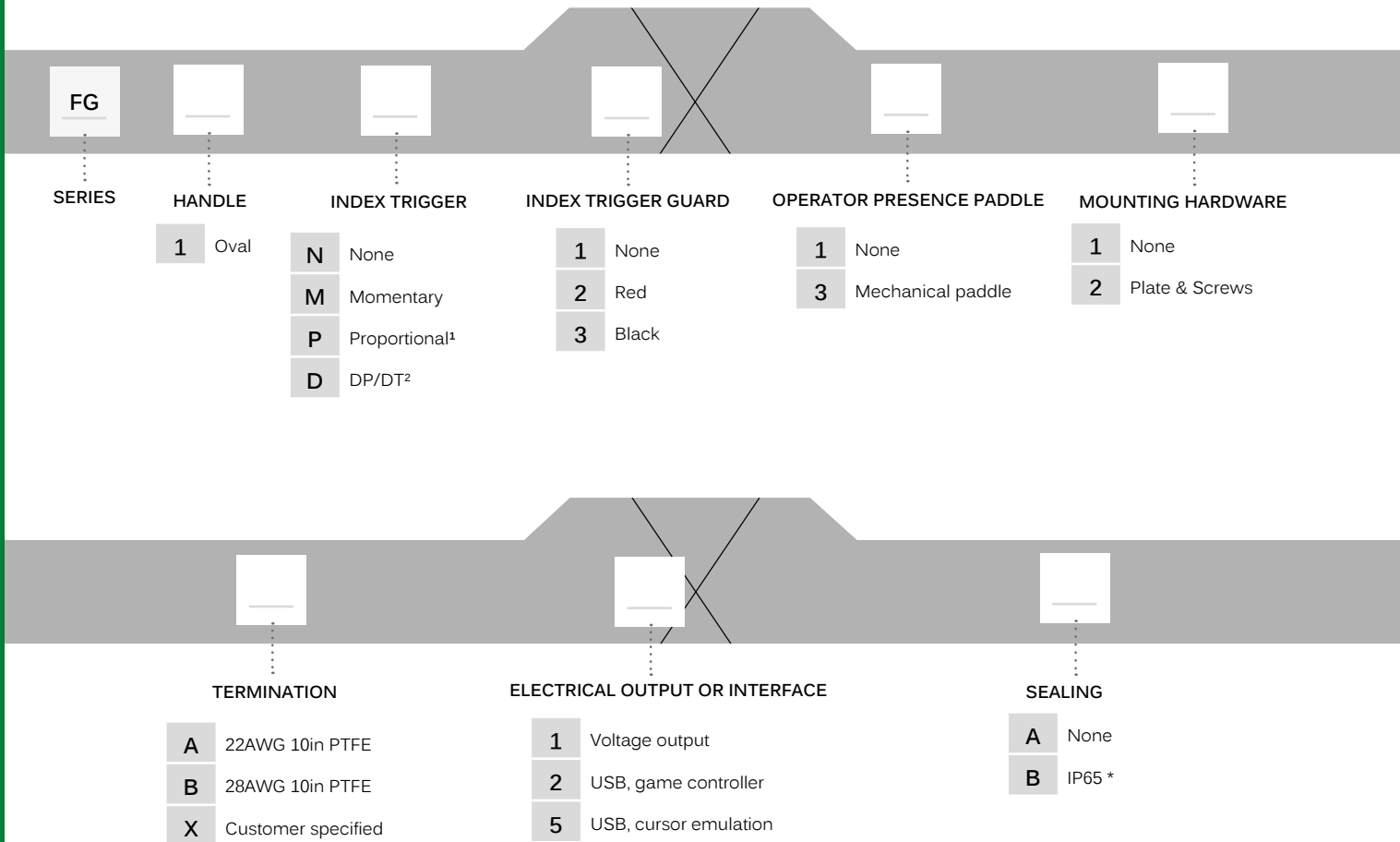


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BUILD YOUR PART NUMBER



Notes:

¹ 0.5V to 4.5V output

² Double pole / double throw

* Above panel (dependant on handle configuration)



ABOUT THIS SERIES

Notes:

1. Dimensions are in mm/(inch)

2. Faceplate:

The FG series Fixed Grip hand controller features a modular faceplate that can be customized for specific applications. Ambidextrous for most configurations, the faceplate may be populated with a variety of thumb actuated switches including momentary pushbuttons, latching pushbuttons, two or three way toggle switches, 4 or 5 way trims and miniature proportional joysticks. Every FG faceplate is custom configured to order. Please consult APEM for options.

3. Index Trigger:

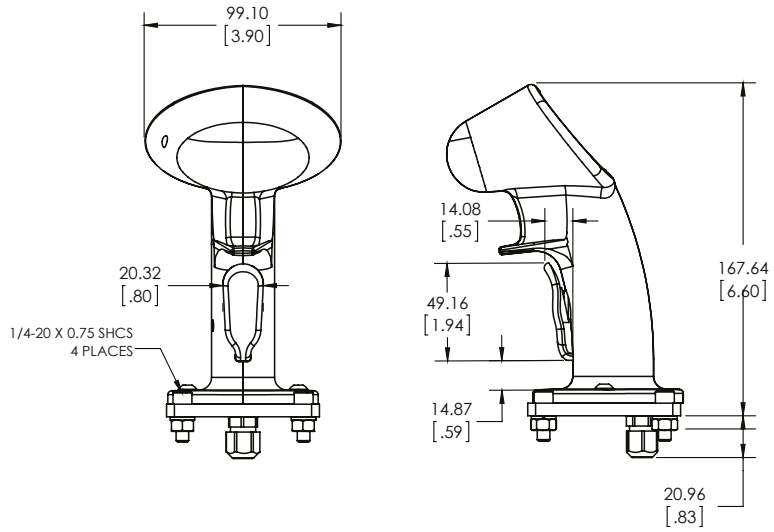
The FG series Fixed Grip controllers may be equipped with or without an index trigger switch. Index trigger configuration options include a single pole normally open momentary switch, a double pole double throw tactile switch, or a proportional Hall effect device.

Index Trigger Options: N: None M: Momentary, single pole normally open P: Hall effect, 0.5V to 4.5V proportional output D: Double pole, double throw

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DIMENSIONS



HANDLE OPTIONS



Index trigger with trigger guard



Index trigger



No index trigger

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USB OPTIONS

- Supply Voltage Range: 5.00 VDC
- Maximum current: 70 mA
- USB version: 2.0

USB GAME CONTROLLER

Featuring USB 2.0 HID compliant interface, APEM's USB joysticks are recognized as standard HID "game controller" devices. Adhering to the HID specification, APEM's USB joysticks are plug-and-play with most versions of Windows. Joystick button and axis assignments are dependent upon the controlled application.

Features

- USB 2.0 HID compliant "game controller" device
- Easy to install and operate
- Functions determined by controlled application
- 12-bit (0 to 4095) axis resolution

Termination (supplied cable)

- USB Male Type A Connector (198 cm)
 - (72" +/-1") - overmolded cabled - Mini B to Male Type A USB connector (option 0U)
 - (84" +/-1") - overmolded cable - Male Type A USB connector (option 2U)

USB CURSOR EMULATION

The Cursor Emulation option converts multi-axis joystick output into a mouse or cursor control device. The Cursor Emulation option is ideal for vehicle applications subjected to dirt and high vibration which makes operating a traditional cursor control device difficult. Cursor simulation is only compatible with Window OS.

Features

- HID compliant "mouse" device

Button Function

- B1: Left Mouse Click
- B2: Right Mouse Click

Termination (supplied cable)

- USB Male Type A Connector (185 cm):
 - (72" +/-1") - overmolded cabled - Mini B to Male Type A USB connector (option 0U)

SUPPORTED OPERATING SYSTEMS: USB GAME CONTROLLER AND CURSOR EMULATION

Windows Operating System

- Windows 7
- Windows 8.1
- Windows 10

Linux Operating System

APEM's USB joysticks are compatible with Linux, although system compatibility is not guaranteed. The user is responsible for verifying specific Linux OS compatibility.

Custom Firmware

Custom configurations and firmware is available upon request. Available options include:

- 8-bit axis resolution
- 10-bit axis resolution
- Signed bit axis resolution
- Custom USB product name



VOLTAGE REGULATOR SPECIFICATIONS

The Voltage Regulator allows APEM's Hall effect joysticks to operate with a range of supply voltages..

Voltage Regulator - Unipolar

- Supply Voltage Range: 8-35 VDC
- Output Voltage Range: see output options
- Maximum Current: 90 mA

Voltage Regulator - Bipolar

- Supply Voltage Range: 11-35 VDC
- Output Voltage Range: ± 10 VDC
- Maximum Current: 90 mA

Termination (flying leads)

- 28 AWG 20.32 cm (8.0") ± 1.54 cm (1") PTFE