

## Penny & Giles Hall-Effect Paddle Joystick JC1200

- Robust design for arduous applications
- Return-to-center or return-to-end options
- Under-panel depth minimized to 9mm
- Rated for 10 million cycles
- Hall-effect sensor technology
- Dual outputs with sense and voltage span options
- IP67 sealing above panel
- Color-coded 'Tab' options
- Can be supplied as 'base-only' so the colored tabs can be fitted at final installation



The JC1200 offers the next generation of paddle joystick from Curtiss-Wright to build on the success of the Penny & Giles potentiometric JC120. This new joystick utilizes noncontacting, Hall-effect sensing technology for long-life integrity of the output signal. Operating feel has been an important part of this new development to make this unit as smooth and easy to operate as possible throughout the 10 million cycle life.

Hall-effect sensing eliminates contact wear and provides safety functionality via dual outputs, which can be set to positive or negative ramps, or a combination of both. Electronic robustness is assured with sealing of the internal PCB to a rating of IP65, while a joystick to panel rating of IP67 can be achieved.

A choice of paddle 'Tabs' is available in nine different colors. These can be fitted at the factory or supplied as loose parts to be selected as part of the final installation process.



Return-to-Center

Return-to-End

## **SPECIFICATIONS**

**ELECTRICAL** 

SUPPLY VOLTAGE 5Vdc  $\pm$  0.5Vdc

OUTPUT VOLTAGE (FACTORY SET) 10% to 90% or 20% to 80% of the Supply Voltage

CENTER REFERENCE 48.0% to 52.0% of supply voltage

OUTPUT SENSE

The dual outputs can be configured to have positive ramps, negative ramps or a

combination of both.

CURRENT CONSUMPTION < 25mA
CONNECTION 7-way Molex

**MECHANICAL** 

BREAKOUT FORCE AT HANDLE TIP 1.0N
OPERATING FORCE AT HANDLE TIP 3.5N

MAXIMUM LEVER LOAD ON HANDLE TIP 50N transverse or in-line with operation MECHANICAL ANGLE ±30° return-to-center; 60° return-to-end

GATE Single axis

MECHANICAL LIFE 10 million cycles

MTTFd > 100 years

WEIGHT Less than 40g

**ENVIRONMENTAL** 

OPERATING TEMPERATURE -40°C to 85°C STORAGE TEMPERATURE -40°C to 85°C

ENVIRONMENTAL PROTECTION IP67 above panel, IP55 electronics and connector

EMC IMMUNITY LEVEL EN 61000-4-3: 2002 100V/m, 80MHz-1GHz and 1.4GHz-2.7GHz

EMC EMISSIONS LEVEL EN 61000-6-4: 2011 30MHz to 1GHz

ESD IMMUNITY LEVEL EN 61000-4-2, Level 2: 1995 4KV contact (including connector pins); 4kV air discharge

VIBRATION EN 60068-2-64: 2008 random, 3.6gn, 10-200Hz, 2h per axis

BUMP EN 60068-2-29: 2008 25gn, 10ms, 500 bumps in each of 6 directions

FREE FALL DROP EN 60068-2-31: 1993 1.0m at level C, 1.2m at level E

SHOCK EN 60068-2-27: 2008 50g, 6ms, Half Sine, 3 shocks in each of 6 directions

**COLOR TAB OPTIONS** 

NONE Tab not fitted when joystick supplied

**BLACK RAL9005 GRAY** RAL7042 WHITE RAL9003 YELLOW **RAL1023 ORANGE** RAL2007 RED **RAL3028 PURPLE RAL4006 BLUE** RAL5017 **GREEN** RAL6038





