CURTISS-WRIGHT

Penny & Giles

Hall-Effect Paddle Joystick

JC1210

- **Robust design for arduous applications**
- **Options for Overpress and Latch at ends of travel**
- **Soft Touch sections of the ‘Tab’**
- **Under-panel depth minimized to 9 mm – Molex connector**
- **Three electrical termination options**
- **Rated for 5 million cycles up to start of overpress**
- **Hall-effect sensor technology**
- **Dual outputs with sense and voltage span options**
- **IP67 sealing above panel**
- **Two mounting panel fixing options in the one body design**
- **Color-coded ‘Tab’ options**

The JC1210 builds on the success of the JC1200 and incorporates the same robust design with exceptional life and now offers the option of overpress and latch features at the ends of travel. This new joystick utilizes non-contacting, 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 a 5 million cycle-life to the start of overpress.

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 IP67, while a joystick to panel rating of IP67 can be achieved.

The joystick is available with Overpress and Latch options at the ends of travel, which can be combined to meet your system needs to hold functions at full speed/float.

There are three options for electrical termination – integrated Molex connector, flying lead with Molex connector or header pins.

A soft-touch colored insert area of the paddle – which has a choice of nine colors – increases operator comfort and decreases the likelihood of finger-slip during operation.

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SPECIFICATIONS

ELECTRICAL		
SUPPLY VOLTAGE	5Vdc ± 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	Integrated 7-way Molex or flying lead with 4-way Molex connector or 4-way header pins	
MECHANICAL		
BREAKOUT FORCE AT HANDLE TIP	1.0N	
OPERATING FORCE AT HANDLE TIP	3.5N without overpress or latch at ±30° of full travel	
OPERATING FORCE AT HANDLE TIP	4.5N with overpress and/or latch at ±40° of full travel	
OPERATING FORCE TO OPERATE OVERPRESS	6 N	
OPERATING FORCE TO ENGAGE LATCH	8N	
MECHANICAL ANGLE	±30° without overpress/latch; ±40° with overpress/latch	
MECHANICAL FEATURES	Overpress or Latch or Overpress and Latch at both ends of travel	
GATE	Single axis	
MECHANICAL LIFE	Linear section >5 million cycles Overpress >200,000 operations/overpress Latch >150,000 operations/latch	
MTTFd	> 200 years	
WEIGHT	Less than 40g	
ENVIRONMENTAL		
OPERATING TEMPERATURE	-40°C to 85°C	
STORAGE TEMPERATURE	-40°C to 85°C	
ENVIRONMENTAL PROTECTION	IEC 60529	IP67 above panel, IP67 electronics and customer responsibility to seal the connector
EMC IMMUNITY LEVEL	ISO 11452-2	150V/m, 20MHz-1GHz
EMC EMISSIONS LEVEL	ISO 14982 or CISPR 25 ed.3 class 3	30MHz to 1GHz
ESD IMMUNITY LEVEL	ISO 10605	±8KV contact (including connector pins); ±15kV air discharge
VIBRATION - RANDOM	ISO 15003	random, Level 1 in 3 axes
FREE FALL DROP	IEC 60068-2-31	1.0m on all edges and faces
SHOCK	EN 60068-2-27	40g, 6ms, Half Sine, 100 shocks in each of 3 directions
COLOR TAB OPTIONS		
BLACK	RAL9005	
GRAY	RAL7042	
WHITE	RAL9003	
YELLOW	RAL1023	
ORANGE	RAL2007	
RED	RAL3028	
PURPLE	RAL4006	
BLUE	RAL5010	
GREEN	RAL6038	

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