

- Robust design based on inductive technology
- Sleeve or threaded core options
- Contactless – Hall-effect technology
- Single axis control with spring to center or friction hold lever action
- Lock and detent features
- Choice of handles and grips
- 5Vdc or 9-30Vdc supply
- Dual channel output with optional ramp directions
- Analog (Vdc) or Digital (PWM) outputs
- Extremely low signal noise – less than 1mVrms
- Operating temperature -40 to +85°C
- Environmental protection to IP69K above the panel
- 53mm under-panel depth
- Electrically interchangeable with potentiometers



The JC1500 joystick utilizes contactless rotary position sensor technology combined with a rugged, low profile design.

The joystick provides reliable and accurate output signals - and includes a second output to enable error checking of the system integrity. The JC1500 is intended for use in the off-highway specialist vehicles market - particularly where reliability and strength are paramount e.g. Aerial Work Platforms.

The JC1500 joystick complements the existing range of JC150 potentiometer track joysticks and has the same panel mounting details – allowing replacement or upgrade with no panel modifications.

The new joystick is designed to share the same range of handles and grips used in the JC150 and JC6000 models.

SPECIFICATIONS

SUPPLY

SUPPLY VOLTAGE	5Vdc \pm 0.5Vdc or 9-30Vdc
SUPPLY CURRENT	< 25mA (12.5mA per channel)
OVER VOLTAGE	15Vdc continuous
REVERSE POLARITY PROTECTED	Yes
POWER-ON TIME	< 1s
CONNECTIONS	6-way Deutsch DTM04-6P integrated connector

OUTPUT

OUTPUT VOLTAGE (5V)	10–90% \pm 1% of Vsupply
OUTPUT VOLTAGE (9-30V)	0.5–4.5V \pm 1%
MONOTONIC RANGE (5V)	5–90% of Vsupply nominal
MONOTONIC RANGE (9-30V)	0.25-4.75V nominal
OUTPUT NOISE	<1mV rms
INPUT/OUTPUT DELAY	2.5ms
PWM FREQUENCY	244Hz \pm 20% over temperature range
PWM LEVEL (5V)	0-Vsupply \pm 1%
PWM LEVEL (9-30V)	0-5V nominal \pm 3%
PWM DUTY CYCLE	10-90% over measurement range
PWM RISE/FALL TIME	<20 μ s typical
RESOLUTION	Virtually Infinite
NON-LINEARITY	< \pm 0.4%
LOAD RESISTANCE	10k Ω min. to GND
SHORT CIRCUIT PROTECTION	Output to GND and output to 10V max.

MECHANICAL

ANGLE	\pm 20° forward/reverse	
WEIGHT	750g without handle fitted	
LEVER OPERATING FORCE	Breakout Operating Maximum allowable	0.75Nm or 1.50Nm 1.25Nm or 1.5Nm (full deflection) 1000N (110 overload)

ENVIRONMENTAL

OPERATING TEMPERATURE	-25°C to 80°C (-25°C to 80°C with microswitches)
STORAGE TEMPERATURE	-25°C to 85°C (-25°C to 85°C with microswitches)
VIBRATION	Level \pm 3g, 10Hz to 200Hz (random) @ 3.6g(rms)
LIFE	15 million operations (5 million for potentiometer track version)
SHOCK	20g, 6mS, half sine profile
EMC IMMUNITY LEVEL	100V/m, 30MHz to 1GHz, 1KHz 80% sine wave modulation, EN50082-2
EMC EMISSIONS LEVEL	Complies with EN50081-2 (1993), 150kHz to 30MHz, level B
PROTECTION	IP66 IEC 60529 (fitted with HKN handle)