

**CURTISS -
WRIGHT**

Williams Controls
CANbus Joystick
WM-580



Industrial Group

The WM-580 CANbus Joystick

Tough, accurate and ergonomic – Curtiss-Wright has applied the same design expertise to heavy-duty joysticks that has made us the leader in accelerator pedal and vehicle controls for over 75 years.

Designed from the base up as a clean sheet solution to today's mobile vehicle demands, the WM-580 joystick takes a no compromise attitude to punishing field conditions. This is the end result of countless hours of operator use analysis, ergonomic studies and endurance testing.

When you are working in isolated locations where every minute of run time counts the reliability of your vehicle controls is the last thing you want to worry about. The WM-580 meets or exceeds the published industry standards of virtually every industrial joystick currently on the market.

A fully encapsulated, CANbus circuit board provides superior resistance to shock, vibration and chemical exposure as well as trouble-free performance in high-moisture environments. Sealed control buttons and a life-cycle rating that exceeds 10 million cycles translate to less equipment down time.

The WM-580 is a fresh approach to providing variable control for on- and off-highway vehicle devices and mechanisms.

Configurable and Customizable

The WM-580 is available with a number of options listed below to meet the needs of your specific application. In addition, we can customize the WM-580 base or grip to provide an integrated solution to the overall control experience.

- Hall-effect, non-contact thumbwheels
- Full range of button colors
- Optional trigger switch
- Up to 6 buttons in multiple button panel layouts
- Right or left grip orientations
- Single-axis travel
- Overpress detents at end of travel



Rugged Test Specifications

Meets or exceeds the following standards:

- 24-hour dust exposure - 5 humidity test cycles
- Exposure to antifreeze, diesel and brake fluid
- 1 meter mechanical drop test
- Random broadband vibration 5-500Hz, 4.0Gs
- 5 thermal shock cycles -40°C to 85°C
- Powered during 96-hour salt spray exposure

SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

ABSOLUTE MAXIMUM SUPPLY VOLTAGE	-24Vdc to 175Vdc
OPERATING SUPPLY VOLTAGE	8-48Vdc
SUPPLY CURRENT	150mA max
OPERATING TEMPERATURE	-40°C to 85°C
EMC	SAE J1113 Class IV for EMI

MECHANICAL SPECIFICATIONS

SENSOR TYPE	Hall-effect
SEALING	IP68S, IPX9K
GRIP/SHAFT MOVEMENT	X- and Y-axis +20° to -20° with $\pm 2^\circ$ dead band at neutral, off axes +27° to -27°
GRIP SPRING FORCE	10.5N breakout (X- or Y-axis)
SHAFT SPRING FORCE	25.5N full stroke (X- or Y-axis)
LIFE EXPECTANCY	>10 million cycles (1 cycle equivalent to crossing X- or Y-axis)
RATED LOAD	1000N applied 120mm from pivot point

COMPONENT SPECIFICATIONS

ERGONOMIC TRIGGER PUSHBUTTON	Momentary, sealed to IP68S
RAISED DOME PUSHBUTTONS	Momentary, sealed to IP68S
HALL EFFECT THUMBWHEEL	Proportional output, sealed to IP68S

PROGRAMMING DEFINITION

CANbus OUTPUT	J1939 protocol
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MECHANICAL DIMENSIONS (mm)

TYPICAL OUTPUT CHARACTERISTICS (other outputs are available)

