

Medium Hall Effect Joystick with Grip Options



HJMG3 Joysticks with Universal Grips

The HJMG3 is a top mount JHM medium Hall effect joystick with a variety of grip, faceplate, output and gating options. The new HJMG3 allows you to easily create a catalog codable joystick with grip. Grip choices include small G3 Universal, medium G3 Universal, Universal Contour and the G3-D Control Grip, with a total of 30 faceplate design options.

Analog and digital control outputs, CANopen, CANbus J1939, PWM, USB, and redundant sensor output selections are available. Gating options are single axis, dual axis, friction y-axis, and various omnidirectional selections that include round smooth feel, on-axis and off-axis guided feel and square on-axis guided feel.

The HJMG3 can be configured for top-of-the-line machines requiring high switch content, or to provide very basic functions on lower tier units, and can be manufactured with an almost unlimited variety of switches, custom termination and custom mounting options. The HJMG3 serves agriculture, construction, off-highway, material handling and specialized industrial equipment markets.

Features:

- Designed for armrest and panel mounting
- Contactless Hall effect technology
- Multiple output options, both analog and digital
- Electronics sealed to IP68S
- Redundant sensors available
- Variety of gating options
- RoHS compliant



HJMG3 Joystick with G3-D Grip

Standard Characteristics/Ratings:

ELECTRICAL: Output options AA-FT and LL

Joystick				
Rated at Vcc = 5V @ 20°C	Units	Min	Typ	Max
Load = 1 ma (4.7 KΩ)				
Supply Voltage, Vcc	VDC	4.5	5.0	5.5
Output Voltage Tolerance at Center	VDC	-.25	N/A	+.25
AA, BB, CC, DD, EE, FF, GG, HH	@ 5V Vcc			
Output Voltage Tolerance at Center	VDC	-.15	N/A	+.15
AT, BT, CT, DT, ET, FT	@ 5V Vcc			
Output Voltage Tolerance at	VDC	-.25	N/A	+.25
Full Travel	@ 5V Vcc			
Supply Current Per Sensor B=0, Vcc=5V, Iout=0	mA	N/A	N/A	10
Output Source Current Limit B=X*, Vo=0	mA	-1.20	N/A	1.20

P9 Switches

Electrical Rating	10mA Resistive Load @ 5VDC
Electrical Life	1,000,000 Cycles

HTW Switches

Supply Voltage, Vcc	VDC	4.5	5.0	5.5
Output Voltage	VDC	-.15	NA	+.15
Tolerance at Center	@ 5V Vcc			
Output Voltage	VDC	-.25	N/A	+.25
Tolerance at Full Travel	@ 5V Vcc			
Supply Current B=0, Vcc=5V, Iout=0	mA	N/A	N/A	10

HTWM and HTLT4 Switches

Output Voltage	VDC	-.25	NA	+.25
Tolerance at Center	@ 5V Vcc			
Output Voltage	VDC	-.25	N/A	+.25
Tolerance at Full Travel	@ 5V Vcc			
HTWM Supply Current B=0, Vcc=5V, Iout=0	mA	N/A	N/A	10
HTLT4 Supply Current B=0, Vcc=5V, Iout=0	mA	N/A	10	12

TC-5 Switches

Electrical Rating @ 1-32 VDC	10-100mA
Electrical Life	3,000,000 Cycles

MECHANICAL:

Joystick

Mechanical Life	5,000,000 cycles; 2,500,000 cycles (Friction)			
Travel Angle	Degrees	18	20	22
Op. Force (w/Boot) High Force @ GRP, Ret. to Ctr.	Lbs.	1.5	2.5	3.5
Op. Force (w/Boot) Low Force @ GRP, Ret. to Ctr.	Lbs.	1.0	2.0	3.0
Op. Force (w/Boot) High Force @ GRP, Friction	Lbs.	1.0	2.5	4.0

P9 Switches

Mechanical Life	1,000,000 cycles			
Operating Force	Oz.	8	12	16

HTW and HTWM Switches

Mechanical Life Full Forward to Full Back	3,000,000 cycles			
Travel Angle	+/- 40°			
Operating Force 25°C at Top of Roller	Oz.	2	5	8
Maximum Allowable Radial Load	Lbs.	N/A	N/A	30

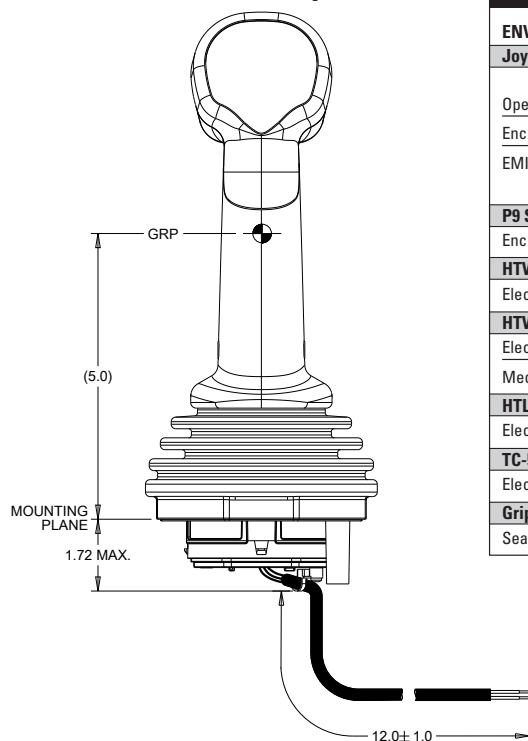
HTLT4 Switches

Mechanical Life	3,000,000 cycles			
Travel Angle	Degrees	19	20	21
Operating Force (w/Boot) at Top of Button, @ 20° C	Oz.	5	8	16
Max Allowable Vertical Force on Button	Lbs.	N/A	N/A	25
Max Allowable Radial Force on Top of Knob	Lbs.	N/A	N/A	25
Max Allowable Torque on Button about Shaft Axis	In-Lbs.	N/A	N/A	5.5

TC-5 Switches

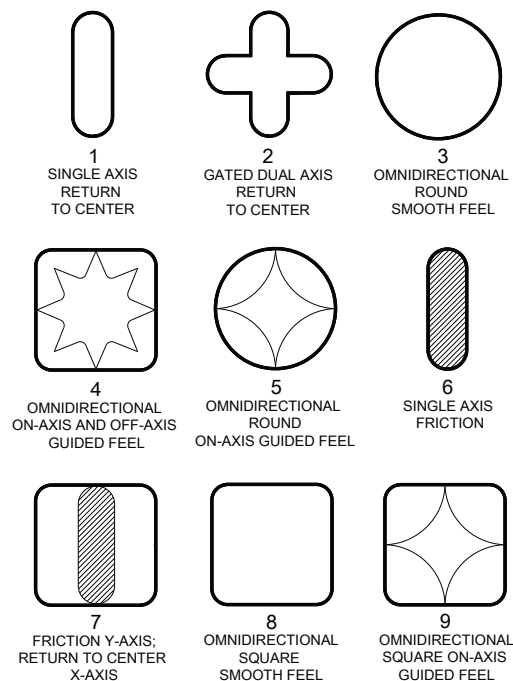
Mechanical Life	3,000,000 cycles			
Operating Force	Oz.	8	16	24

Small Universal with AS Faceplate

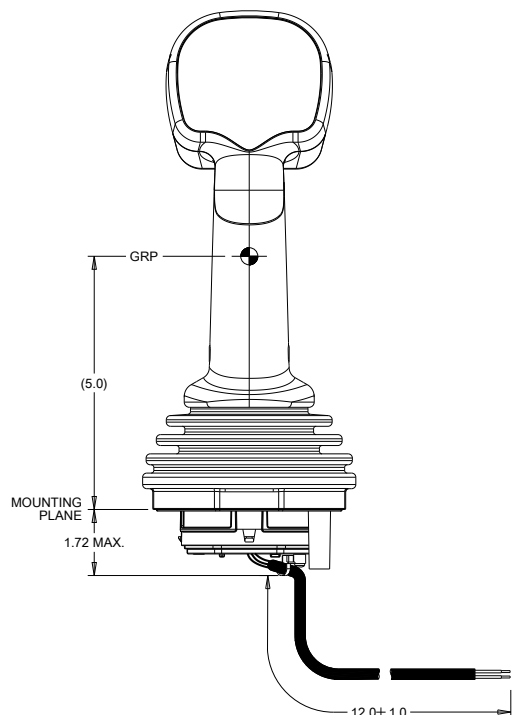


Standard Characteristics/Ratings:				
ENVIRONMENTAL				
Joystick				
	Units	Min	Typ	Max
Operating Temperature	°C	-40	20	85
Enclosure Design	Sealed to IP68S			
EMI/RFI Withstand	Per SAE J1113. Contact factory for details			
P9 Switches				
Enclosure Design	Sealed to IP68S			
HTW Switches				
Electronics Seal Integrity	IP68S			
HTWM Switches				
Electronics Seal Integrity	IP68S			
Mechanical Seal Integrity	Unsealed			
HTLT4 Switches				
Electronics Seal Integrity	IP68S			
TC-5 Switches				
Electronics Seal Integrity	IP68S			
Grip				
Seal Integrity	Unsealed			

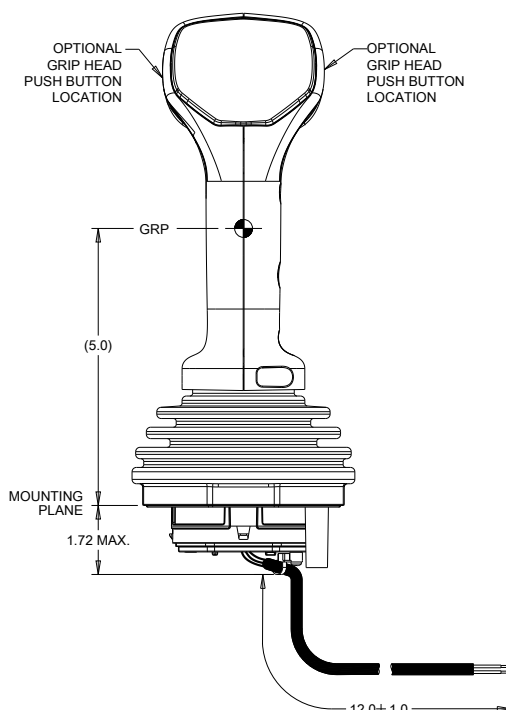
HJMG3 Gating Icons



Medium Universal with BL Faceplate



Universal Contour with CL Faceplate



G3-D Control Grip with DA Faceplate

