

# HE2 Series Specifications

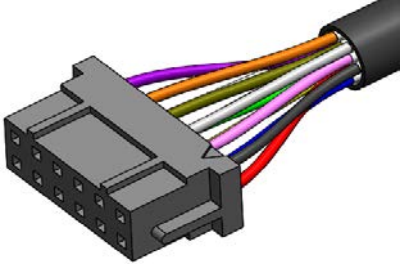
MECHANICAL (X & Y AXES)	
ANGLE OF MOVEMENT	40° (20° EACH DIRECTION)
EXPECTED CYCLE LIFE	5 MILLION
CENTERING	SPRING RETURN
MAX. APPLIED FORCE	150 lbf
MATERIAL	GLASS/MINERAL FILLED NYLON

MECHANICAL (Z AXIS)	
ANGLE	90° (45° EACH DIRECTION)
CENTERING	SPRING RETURN
MAX. APPLIED TORQUE	14 lbFin

ELECTRICAL	
SENSOR TYPE	HALL EFFECT
RESOLUTION	12 BIT
SUPPLY VOLTAGE	5VDC ± 0.01VDC
OUTPUT VOLTAGE	SEE OPTIONS
RETURN TO CENTER VOLTAGE	± 50mV
OVERVOLTAGE MAX.	20VDC
REVERSE POLARITY MAX.	-10VDC

ENVIRONMENTAL	
OPERATING TEMPERATURE	-40°F TO 185°F
STORAGE TEMPERATURE	-40°F TO 185°F
IP SEALING ABOVE PANEL	IP67 STANDARD
EMC IMMUNITY LEVEL	EN61000-4-3 *Compliance to 30A/m
EMC EMISSIONS LEVEL	EN61000-6-3
ESD IMMUNITY LEVEL	EN61000-4-2 *Compliance to ±15kV/±8kV
VIBRATION TESTING	Per SAE J1455 Section 4.9 & MIL-STD810G 514.6
MECHANICAL SHOCK	Per SAE J1455 Section 4.10 & MIL-STD-202G

HIROSE DF11-12DP-2DS(24) CONNECTOR (ANALOG)		
PIN #	WIRE COLOR	DESCRIPTION
1	BLACK	GROUND
2	RED	POWER (+5V)
3	PINK	N/A
4	BLUE	X AXIS SENSOR
5	GREY	N/A
6	YELLOW	Y AXIS SENSOR
7	BROWN	N/A
8	GREEN	Z AXIS SENSOR
9	ORANGE	BUTTON 1
10	WHITE	BUTTON COMMON
11	VIOLET	BUTTON 2
12	N/A	N/A



10" CABLE PROVIDED,  
ANALOG VERSION

\*Extended Testing Levels

HE2 ELECTRICAL SPECIFICATIONS (USB VERSION)	
RESOLUTION	10 BIT
SUPPLY VOLTAGE	5VDC via USB CABLE
SYSTEM SUPPORT	WINDOWS (ALL), OSX, LINUX
SUPPORTED PROTOCOLS	USB HID 1.1 GAME CONTROLLER STANDARD DIRECTX HID DRIVERS JOYSTICK: 2 OR 3 HID AXES PUSHBUTTONS: UP TO 2 HID BUTTON
CABLE	USB MALE TYPE A to RIGHT ANGLE MINI B 5FT (60") LENGTH (MINI B TO JOYSTICK)

CURSOR CONTROL OUTPUT OPTION:	
<p>The <i>Cursor Control</i> output option converts the analog joystick output into a USB cursor control device. This is achieved by the joystick's microprocessor converting the absolute position of the joystick into a cursor velocity or mouse position.</p>	
CABLE	USB MALE TYPE A to RIGHT ANGLE MINI B 5FT (60") LENGTH (MINI B TO JOYSTICK)