

# JC6000 JOYSTICK CONTROLLER HANDLE OPTIONS



## HKN

The HKN handle is the simplest option available for the JC6000. This handle does not include any additional functionality, but is designed to allow the joystick to be controlled by the operator gripping the handle palm downwards.

## NH or NHF

These options are selected when no handle is required to be fitted. NHF option has wires fitted to the joystick connector on the base, through the operating lever.

## HB

Developed to replicate the functionality of the traditional mechanical handle, the HB range of hand grips can be specified with either a button or rocker switch, mounted into the top of the handle, within easy reach of the operator's thumb. These can be configured as a 'Person Present' feature or, for example, the steer signal for an access platform.



## A RANGE

Designed to meet the demands for more complex control systems in off-highway applications, the 'A' range of ergonomic hand grips can be fitted with a combination of analogue outputs, push button and 'Person Present' switches. The handle can be specified with two independent analogue outputs generated by proportional rockers which, in turn, provide auxiliary directional switching in addition to the potentiometric output. When coupled with the two axis JC6000 base joystick this unit can provide a four-axis controller.

This handle can also be purchased separately, for fitting to customer levers or assemblies. Ask our sales team for more details on this option.

## MG

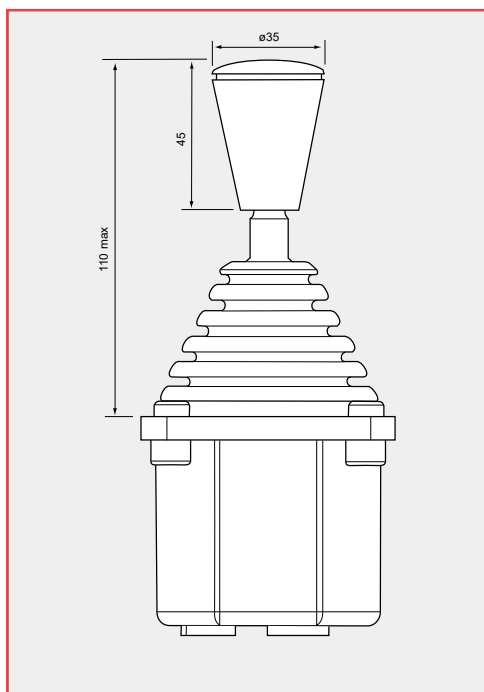
Designed to provide a simple approach to a 'Person Present' handle whilst offering the flexibility of switch options in the top of the handle. The profile of the MG handle ensures the operator's fingers are permanently close to the buttons, minimising operator fatigue and maximising functional control. The handle can be supplied with or without a hand rest and can be configured with a combination of trigger lever, single or dual switches.

This handle can also be purchased separately, for fitting to customer levers or assemblies. Ask our sales team for more details on this option.



# HKN HANDLE OPTION

## DIMENSIONS

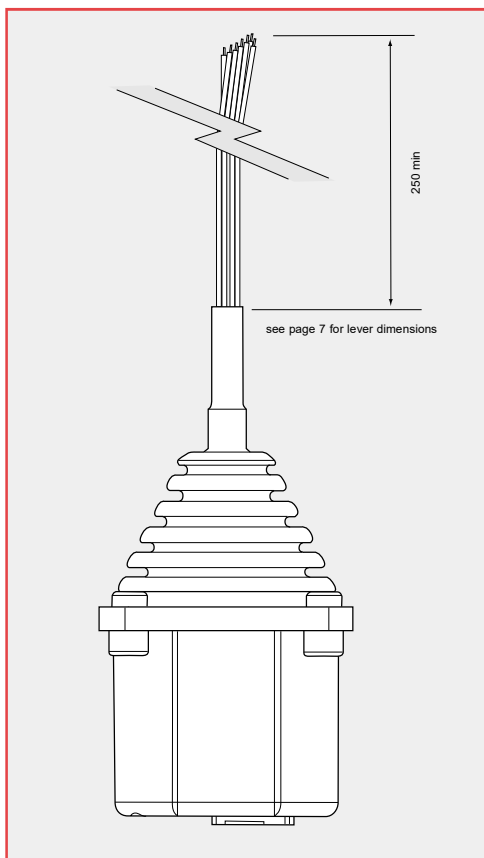


# NH OR NHF HANDLE OPTIONS

## ELECTRICAL CONNECTIONS

**Wire size**  
**Wire current**

28AWG  
1.4A



NH option has no wires fitted.

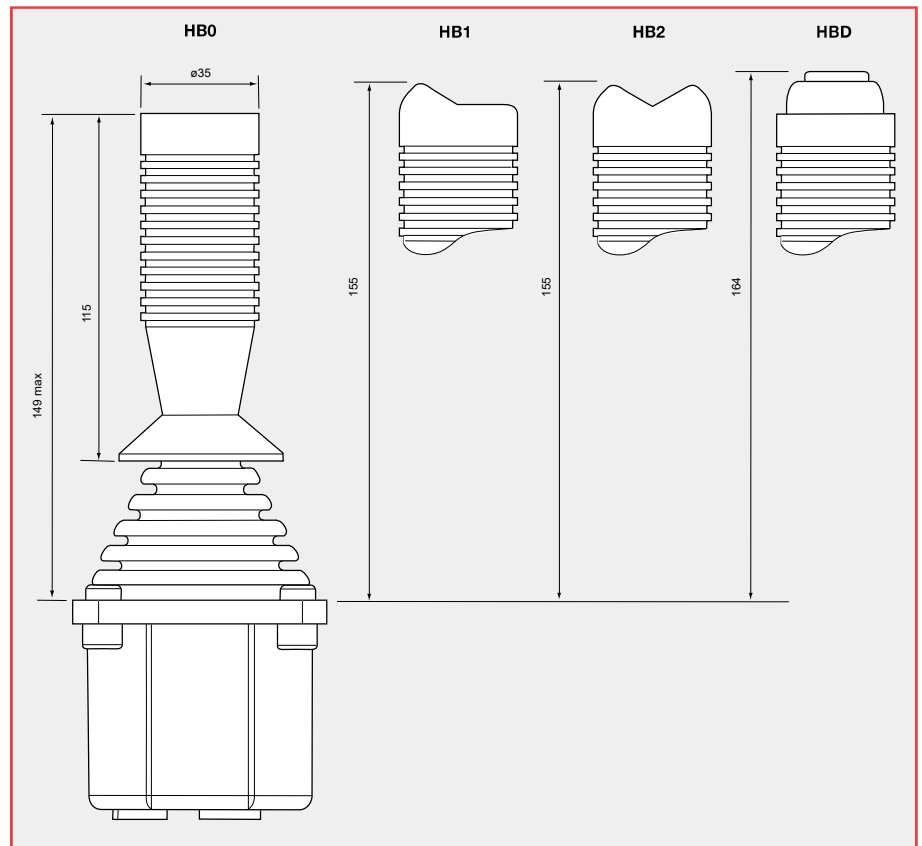
NHF option allows customer to fit own handle style to joystick operating lever.

Pin	Wire color
1	Grey
2	Yellow
3	Red
4	Orange
5	Brown
6	Black
7	Green
8	White
9	Blue
10	Violet
11	Pink
12	Red/Yellow
13	Not connected
14	Not connected
15	Not connected
16	Not connected

NHF handle option note: Wires terminate on the 12-way connector (Potentiometer version), or the 16-way connector (Hall sensor version).

# HB HANDLE OPTIONS

## DIMENSIONS



## SPECIFICATION

		<b>HBO</b>	<b>HB1</b>	<b>HB2</b>	<b>HBD</b>
<b>Maximum height above flange</b>	<b>mm</b>	149	155	155	164
<b>Maximum grip diameter</b>	<b>mm</b>	35	35	35	35
<b>Environmental sealing (IEC 60529)</b>		IP65	IP65	IP65	IP65
<b>Number of switches</b>		0	1	2	1
<b>Action</b>			Momentary rocker	Momentary rocker	Momentary button
<b>Switch operating force</b>	<b>N</b>	-	-	-	7
<b>Maximum current @ 30Vdc</b>	<b>A</b>	-	2.5	2.5	5
<b>Expected life (operations)</b>		100,000	100,000	100,000	100,000

## ELECTRICAL CONNECTIONS

<b>Common terminal</b>		11	11	11
<b>N/O contact switch 1</b>		4	4	1
<b>N/C contact switch 1</b>		1		
<b>N/O contact switch 2</b>			1	

Note: Signals terminate on the 12 way connector (potentiometer version) or the 16 way connector (Hall sensor version)

# A RANGE HANDLE OPTIONS

## SPECIFICATION

<b>Maximum height above flange</b>	<b>mm</b>	166
<b>Maximum grip diameter</b>	<b>mm</b>	61
<b>Environmental sealing (IEC 60529)</b>		IP65
<b>Number of switches</b>		1 to 6 in the top plate
<b>Action</b>		Momentary button
<b>Switch operating force</b>	<b>N</b>	3
<b>Maximum current @ 50Vdc</b>	<b>mA</b>	200
<b>Expected life (operations)</b>		1 million
<b>Weight</b>	<b>g</b>	170 - A2LD option
<b>Operating temperature</b>	<b>°C</b>	-40 to +70
<b>Storage temperature</b>	<b>°C</b>	-40 to +80

## ROCKER

<b>Rocker profile</b>		Standard (S) or V profile (V)
<b>Breakout force</b>	<b>N</b>	5 at the end of the rocker
<b>Operating force</b>	<b>N</b>	15 at the end of the rocker
<b>Mechanical movement</b>	°	±10 (±1°)
<b>Electrical movement</b>	°	±9 (±1°)
<b>Expected life (operations)</b>		5 million
<b>Load current (maximum)</b>	<b>mA</b>	200 (see note on page 5)
<b>Power dissipation @ 25°C</b>	<b>W</b>	0.25
<b>Track resistance</b>		Will match JC6000 Y axis resistance †
<b>Output voltage</b>		Will match JC6000 Y axis output †
<b>Center tap angle</b>	°	±1.5
<b>Directional or center off switch</b>		Standard
<b>Switch gap</b>	°	2.5 either side of center
<b>Switch supply voltage</b>	<b>Vdc</b>	35

† unless requested otherwise

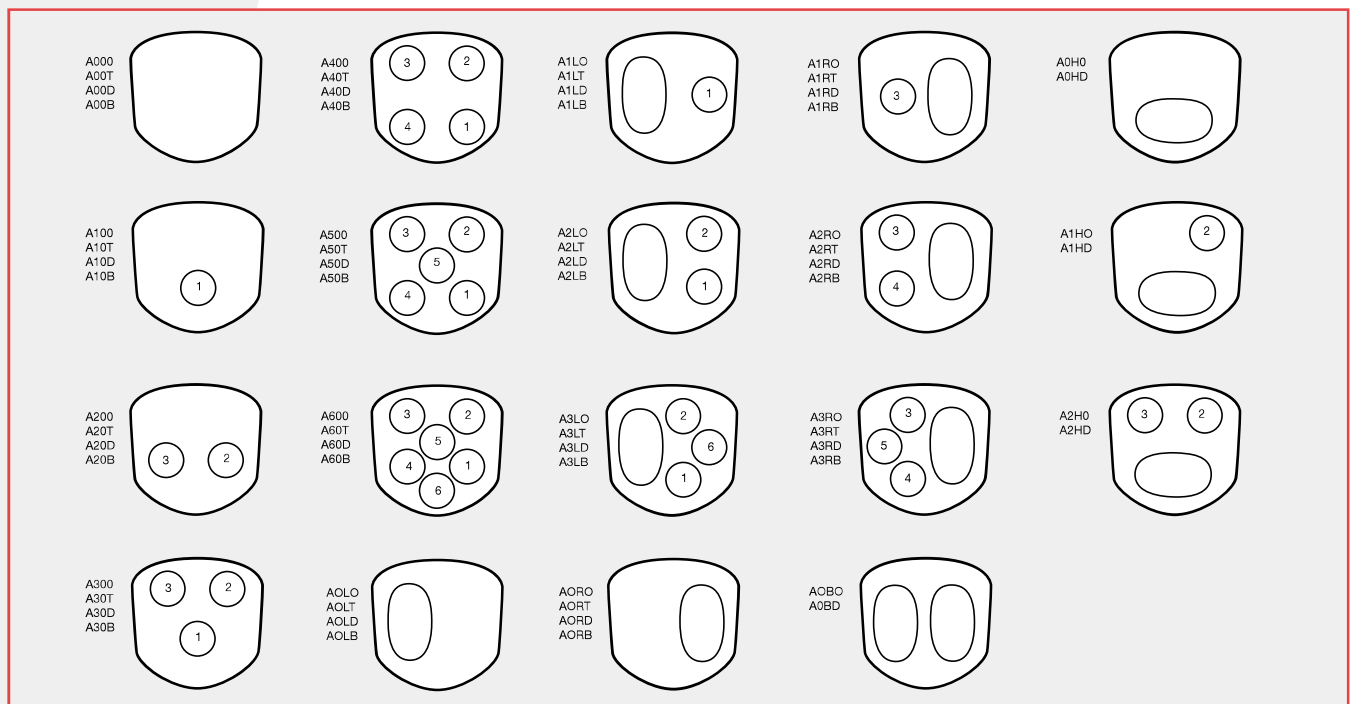
## FUNCTIONALITY

## SWITCHES

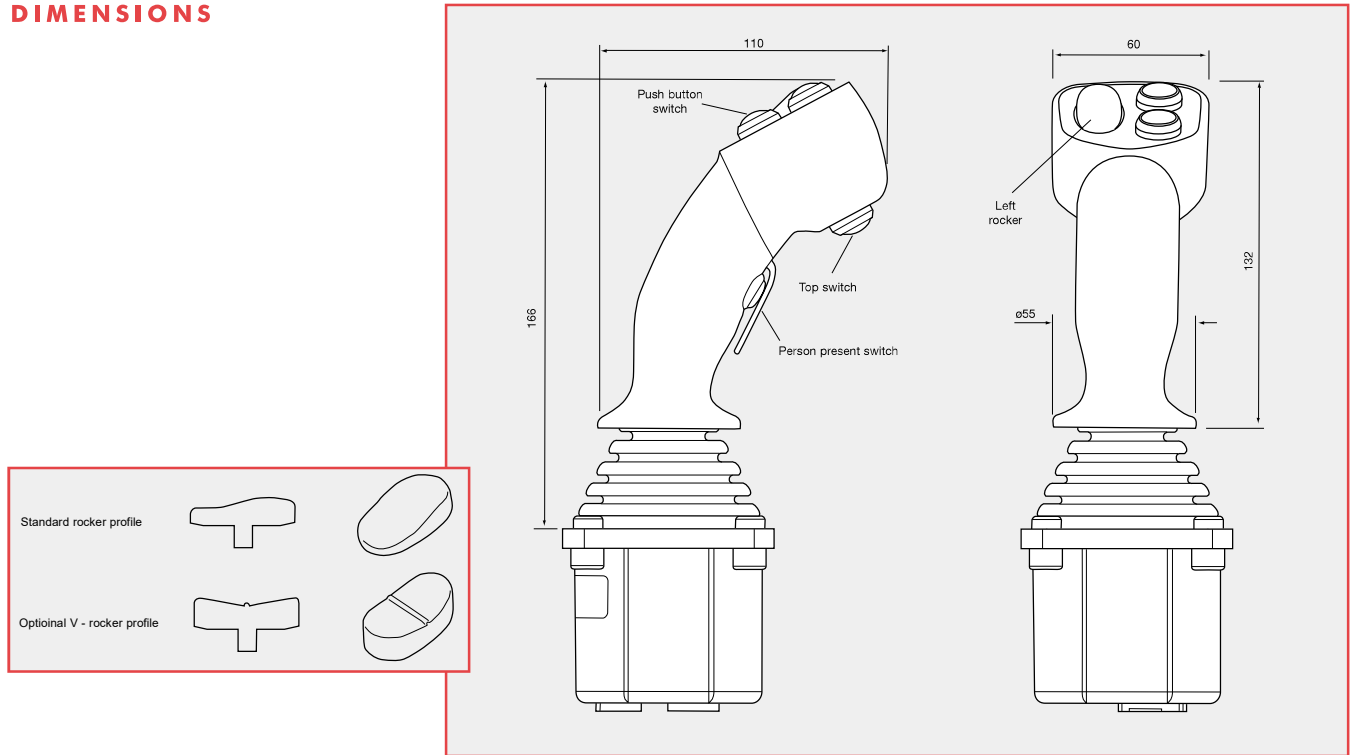
## ROCKERS

	1	2	3	4	5	6	TOP	Person Present	LEFT	RIGHT	HORIZONTAL
<b>SWITCH 1</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>SWITCH 2</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>SWITCH 3</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>SWITCH 4</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>SWITCH 5</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>SWITCH 6</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>TOP SWITCH</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>PERSON PRESENT</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>LEFT ROCKER</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>RIGHT ROCKER</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>HORIZONTAL</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## SWITCH AND ROCKER OPTIONS



## DIMENSIONS



## ELECTRICAL CONNECTIONS

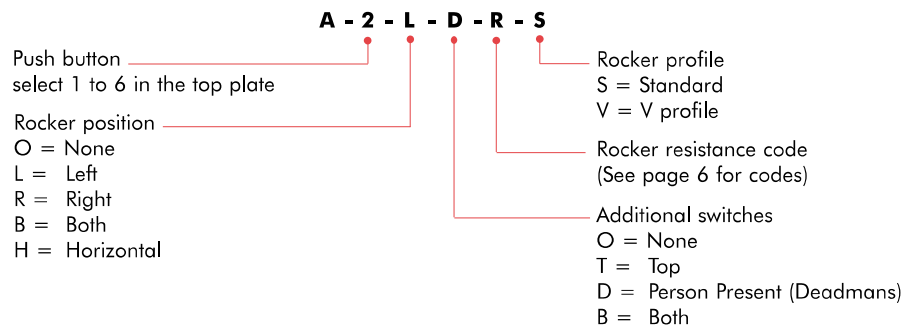
	<b>Pin</b>	<b>Wire color</b>		<b>Pin</b>	<b>Wire color</b>
<b>Common terminal (for all switches)</b>	11	Black	<b>Rocker center tap</b>	6	Yellow/Red*
<b>Switch 1</b>	4	Blue	<b>Rocker zero or negative supply (L, R or H)</b>	10	Pink/Grey
<b>Switch 2</b>	3	Yellow	<b>Rocker output signal (L or H only)</b>	5	Pink
<b>Switch 3</b>	2	Blue/White	<b>Rocker output signal (R)</b>	9	White
<b>Switch 4</b>	1	White/Green	<b>Rocker switch common</b>	11	Black
<b>Switch 5</b>	†	Red	<b>Rocker switch (L forward)</b>	2	Blue/Orange
<b>Switch 6</b>	†	Violet	<b>Rocker switch (L backward)</b>	1	Green
<b>Top switch</b>	†	Pink with marker	<b>Rocker switch (R forward)</b>	3	Yellow
<b>Person present switch</b>	12	Red/Green	<b>Rocker switch (R backward)</b>	4	Blue
<b>Person present switch</b>	8	Black/White	<b>Rocker switch (H left)</b>	4	Blue/Orange
<b>Rocker positive supply (L, R or H)</b>	7	White/Red	<b>Rocker switch (H right)</b>	1	Green

† depends on other options selected

\*Center tap not connected on A3LB and A3RB handles

Note: Signals terminate on the 12-way connector (Potentiometer version), or the 16-way connector (Hall sensor version)

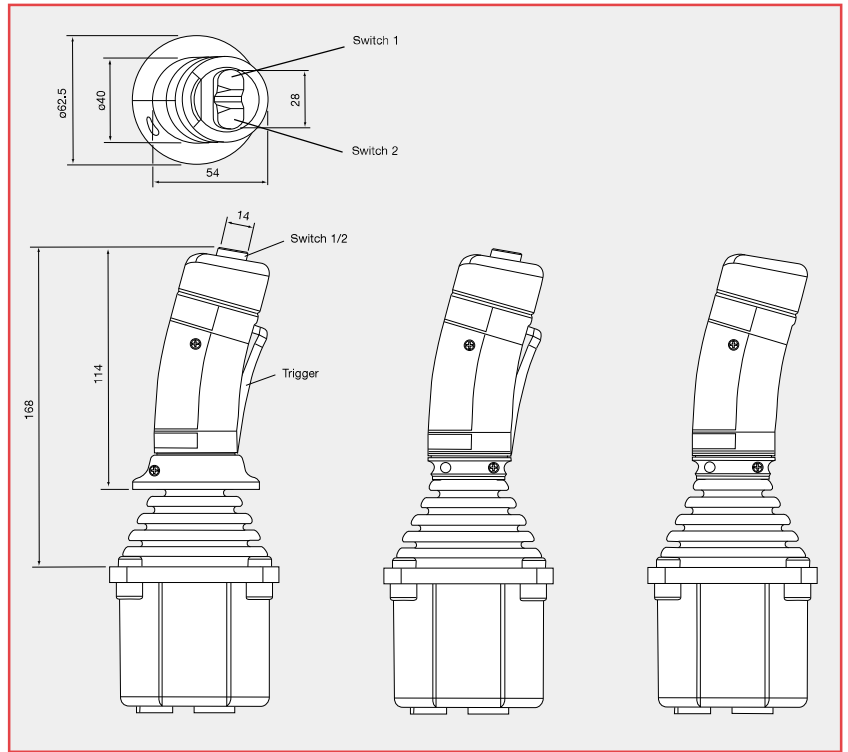
## ORDERING CODES



Note: When ordering a handle fitted with a rocker, two profiles can be supplied (S = standard profile; V = v profile) please specify style when ordering.

# MG HANDLE OPTIONS

## DIMENSIONS



## SPECIFICATION

<b>Maximum height above flange</b>	<b>mm</b>	168
<b>Maximum grip diameter</b>	<b>mm</b>	40
<b>Environmental sealing (IEC 60529)</b>		IP67 (IP66 with trigger switch)
<b>Number of switches</b>		0 to 3
<b>Action</b>		Momentary Button, Rocker or Trigger
<b>Switch operating force</b>		
<b>Trigger</b>	<b>N</b>	5
<b>Switch 1 or 2</b>	<b>N</b>	7
<b>Maximum current @ 30Vdc</b>	<b>mA</b>	100
<b>Expected life (operations)</b>		1 million
<b>Operating temperature</b>	<b>°C</b>	-25 to +75
<b>Storage temperature</b>	<b>°C</b>	-30 to +80

**HANDLE CODE**

	<b>Top switch position</b>	<b>Trigger switch</b>	<b>Hand rest</b>
<b>MG00</b>	None	No	No
<b>MG01</b>	1	No	No
<b>MG02</b>	1 & 2	No	No
<b>MG03</b>	1 & 2	Yes	No
<b>MG04</b>	1 & 2	Yes	Yes
<b>MG05</b>	1	Yes	Yes
<b>MG06</b>	1 & 2	No	Yes
<b>MG07</b>	1	No	Yes
<b>MG08</b>	1	Yes	No
<b>MG09</b>	None	Yes	Yes
<b>MG10</b>	None	None	Yes
<b>MG11</b>	None See Electrical Connections for wire color codes.	Yes	No

**ELECTRICAL CONNECTIONS**

	<b>Pin number</b>	<b>Wire color</b>
<b>Common terminal (for top switches)</b>	12	Black
<b>Switch 1- Left</b>	6	Blue
<b>Switch 2 - Right</b>	3	Green
<b>Trigger switch</b>	4	Blue/Orange
<b>Trigger switch</b>	5	Yellow

Note: Signals terminate on the 12-way connector (Potentiometer version), or the 16-way connector (Hall sensor version)