

A RANGE HANDLE OPTIONS

SPECIFICATION

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

ROCKER

Rocker profile	Standard (S) or V profile (V)
Breakout force N	5 at the end of the rocker
Operating force N	15 at the end of the rocker
Mechanical movement °	±10 (±1°)
Electrical movement °	±9 (±1°)
Expected life (operations)	5 million
Load current (maximum) mA	200 (see note on page 4)
Power dissipation @ 25°C W	0.25
Track resistance	Will match JC150 resistance†
Output voltage	Will match JC150 output†
Center tap angle °	±1.5
Directional or center off switch	Standard
Switch gap °	2.5 either side of center
Switch supply voltage Vdc	35

† Unless requested otherwise.

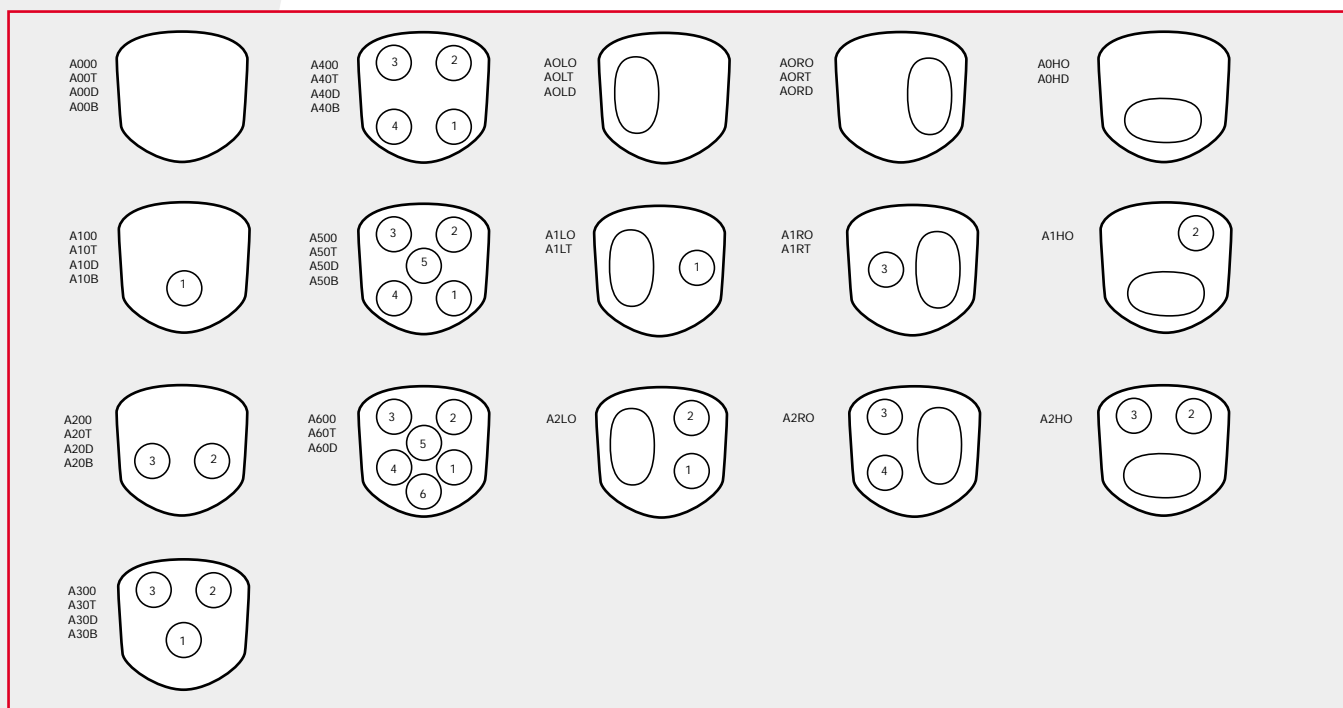
FUNCTIONALITY

SWITCHES

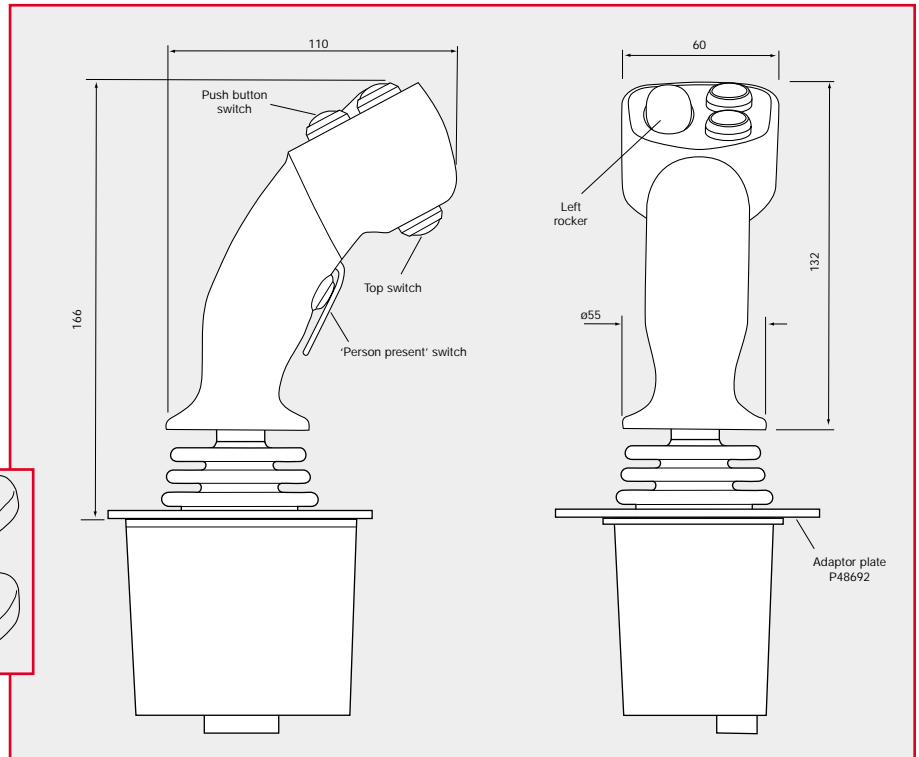
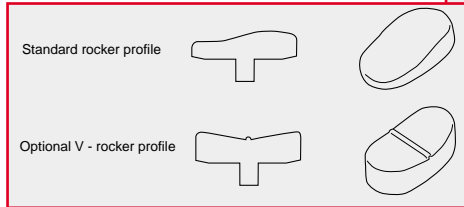
ROCKERS

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

SWITCH AND ROCKER OPTIONS



DIMENSIONS

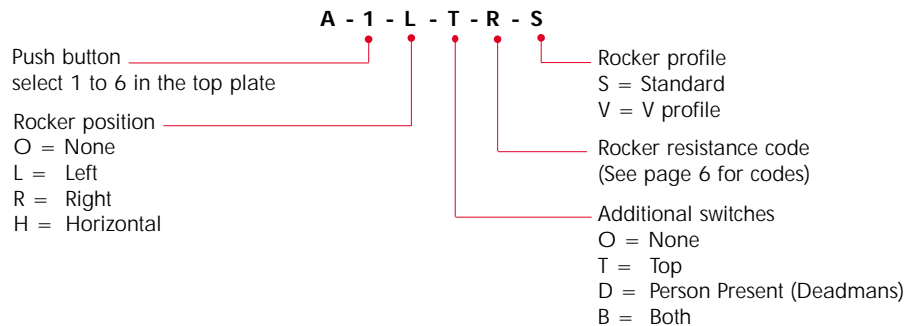


ELECTRICAL CONNECTIONS

	Pin	Wire color		Pin	Wire color
Common terminal (for all switches)	16	Black	Rocker center tap	8	Yellow/Red
Switch 1	6	Blue	Rocker zero or negative supply (L, R or H)	15	Pink/Grey
Switch 2	5	Yellow	Rocker output signal (L or H)	7	Pink
Switch 3	4	Blue/White	Rocker output signal (R)	7	White
Switch 4	3	White/Green	Rocker switch common	16	Black
Switch 5	7	Red	Rocker switch (L forward)	4	Blue/Orange
Switch 6	8	Violet	Rocker switch (L backward)	3	Green
Top switch	†	Pink with marker	Rocker switch (R forward)	5	Yellow
Person present switch	†	Red/Green	Rocker switch (R backward)	6	Blue
Person present switch	†	Black/White	Rocker switch (H left)	6	Blue/Orange
Rocker positive supply (L, R or H)	2	White/Red	Rocker switch (H right)	3	Green

† Depends on other options selected

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.

JC150 JOYSTICK CONTROLLER

HANDLE OPTIONS

HKN

The HKN handle is the simplest option available for the JC150. This handle does not include any additional functionality, but is designed to allow the JC150 joystick to be controlled by the operator gripping the handle, palm downwards.



CL/EL

Developed to improve the integrity of your control system, the Center Lock (CL) and End Lock (EL) handles provide a mechanical safety lock – eliminating unwanted movement of the lever. They mechanically hold the shaft of the JC150 in its safe central position or at either end of the JC150's range of travel. Lifting the collar under the base of the handle unlocks the shaft.



HB RANGE

Developed to replicate the functionality of a traditional mechanical handle, the 'HB' range can be supplied with either a momentary action 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.



MG RANGE

This option is designed to provide a simple approach to a 'Person Present' handle. The 'MG' range can be supplied with or without an operator's hand rest and can be configured with a combination of momentary action button or rocker switch in the top of the handle, with a trigger switch at the front of the hand grip. The handle profile ensures the operator's fingers are permanently close to the buttons, minimising operator fatigue and maximising functional control. *This handle can also be purchased separately, for fitting to customer levers or assemblies. Ask our sales team for more details on this option.*



A RANGE

This option is designed to meet the demands for more complex control systems in off-highway applications. The 'A' range of ergonomic multifunction hand grips can be fitted with a combination of analog outputs, push button and 'Person Present' switches. The handle can be supplied with two independent analog outputs generated by proportional rockers which, in turn, provide auxiliary directional switching in addition to the potentiometric output. When coupled with the JC150 joystick, this unit can provide a three-axis control device.

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



W RANGE

This option provides an alternative approach to a 'Person Present' handle whilst offering the flexibility of multiple switches in the top of the handle. The 'W' range can be supplied with (WT) or without (WN) the 'Person Present' trigger switch as well as up to four switches in the handle top. These can be specified to be in any of the four 'on axis' positions.



Penny+Giles Ergonomic Handles

This brochure details Penny & Giles' current range of ergonomic handles that complement their extensive range of electronic joysticks. It should be read in conjunction with their joystick brochure, which can be supplied on request.

The functionality and size of each handle has been specified for finger, palm or hand operation. The layout and

operating force of all switches, potentiometers or membrane keypads minimise both the amount of finger movement and the effort needed to activate each operation. The subsequent reduction in the mental and physical effort required to operate your machine can help to increase its productivity.

					Functionality				
Handle	Compatible with				Switches (Maximum Number)			Z Axis (Action)	Deadman's
	JC150	JC300	JC400	JC600	Momentary	Rocker	Membrane		
CL	✓			✓					JC600 only
EL	✓								
HB	✓			✓	✓ 1	✓ 1			✓
HC	✓			✓	✓ 6		✓		
HP	✓			✓	✓ 4			✓ Push	
HS	✓			✓	✓ 6				
WT	✓			✓		✓ 4			✓
WN	✓			✓		✓ 4			
A	✓			✓	✓ 8	✓ 2		✓ Rocker	✓
TR	✓			✓	✓ 3				
ZA		✓	✓					✓ Rotary	
ZAS		✓	✓					✓ Rotary	
ZC		✓	✓						
ZCS		✓	✓		✓ 1				✓
KW		✓	✓						
KWS		✓	✓		✓ 1				✓

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