



MP1 DISPLACEMENT JOYSTICKS



Joysticks are the most suitable hand controller for dynamic applications such as the remote operation of a vehicle or camera tracking system. They are available in two basic forms: 'force sensitive' or the more traditional 'displacement' type where the handle is free to move through an arc of typically ± 20 degrees. This act of moving a joystick handle to control a remote device feels very natural and has made displacement joysticks the most popular choice.

Daco offers two ranges of displacement joysticks. The first, described overleaf, is a series of modular products with standard options that can be configured in many different ways to make them suitable for the majority of applications. Alternatively, for those requiring more specialised products, we can provide a joystick individually designed through our cost effective design service which is explained in the datasheet "Custom Built Hand Controllers".

MP1 joysticks

As MP1 joysticks are part of Daco's modular product range, customers can specify a combination of stock components to create a joystick tailored to their individual needs. Over 100 different configurations are possible, all of which are available on short delivery times and are suitable for use in demanding industrial and military applications. The joysticks are extremely rugged yet have a very smooth action making it possible for operators to take advantage of the continuous resolution electrical output. Although available without a handle the MP1 has a hollow stainless steel central shaft which can accommodate up to 25 wires to allow use with complex multi-function grips such as Daco's MG1 series.

The modular options for MP1 joysticks include several different electrical interfaces and a choice of grips.

Daco hand controllers are manufactured under an ISO 9001 approved quality system and are covered by a minimum two year warranty.

Characteristics

- Extremely rugged
- Wide operating temperature range
- Smooth operation
- 2 axis units panel sealed to IP66
- 2 or 3 axes (more if multi-function grip attached)
- Choice of electrical interfaces
- Choice of mounting detail
- No backlash
- Conductive plastic potentiometers give continuous resolution, high level analogue output.

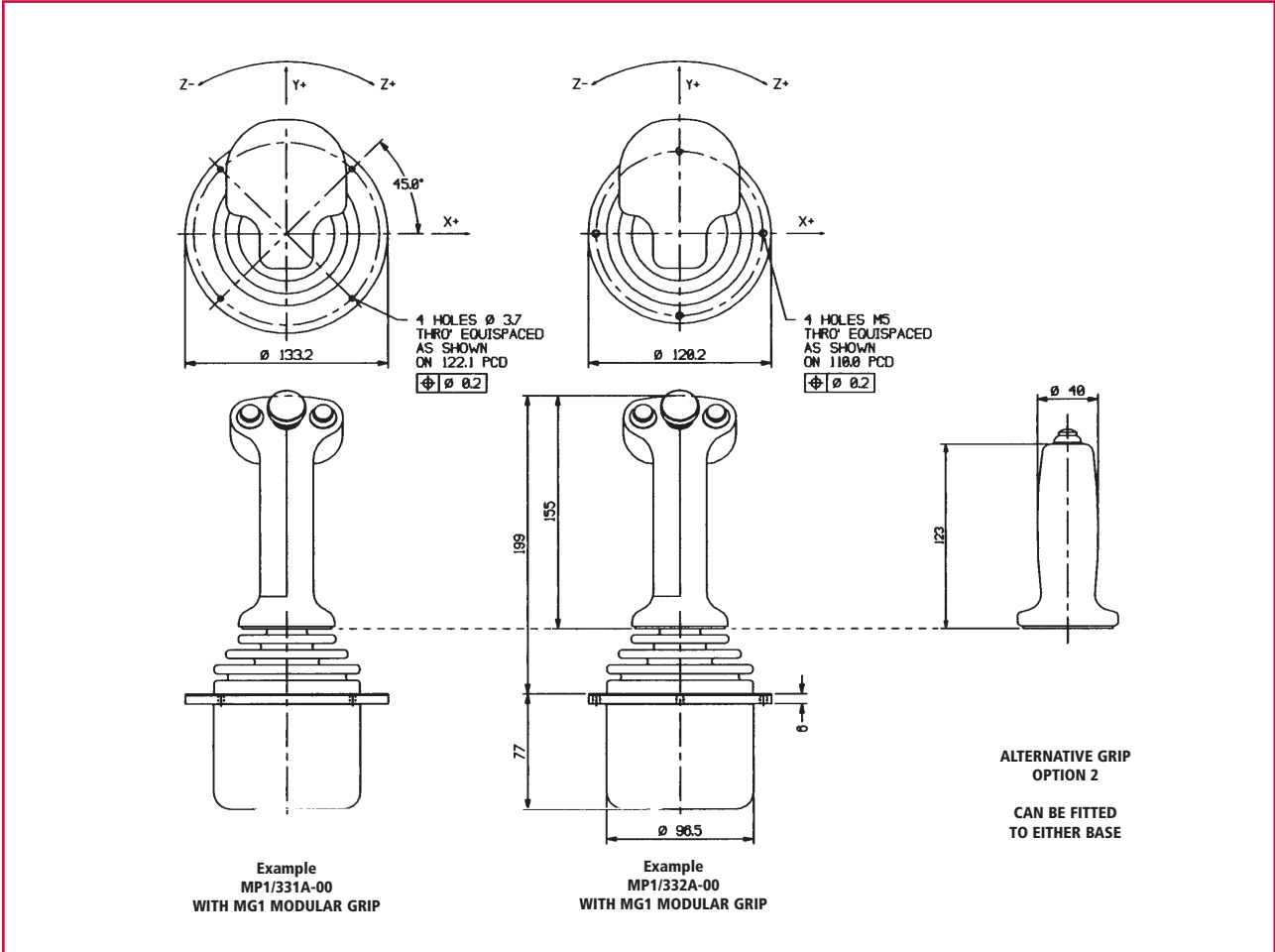


±20° movement



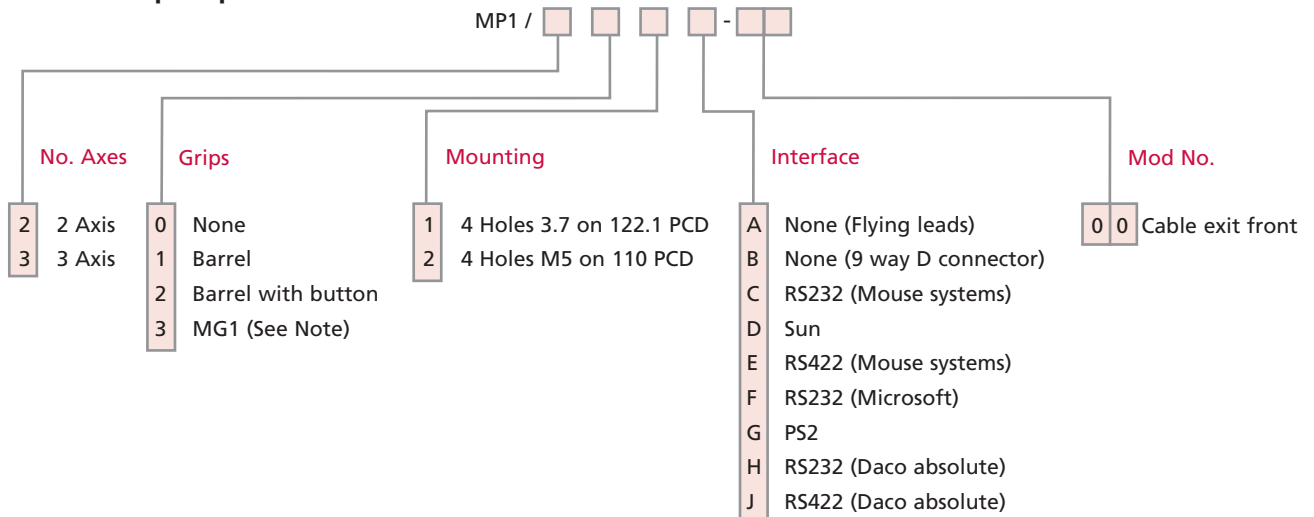
MP1/2222-00

Dimensions, mounting options and alternative grips



How to Order

To order MP1 joysticks please refer to the drawing and use the full list of modular options in the chart below to create a descriptive part number.



NOTES:

If the MG1 grip is ordered, please use the MG1 datasheet to create a second part number specifying the grip's functions.

If an interface is required on an MP1- MG1 combination it will be fitted in the MP1 base.

The Mod number gives customers the opportunity to specify minor design changes. If you wish to make such a change please contact us to discuss possibilities. In all other cases the Mod number 00 should be quoted.

All Interface options are supplied with a 500mm unterminated flying lead.

Specification

Electrical

Potentiometer resistance	10 KK $\pm 10\%$
Power dissipation	0.1W at 70°C
Excitation	10Vdc (25Vdc Max)
Output (full scale, 10Vdc excitation)	$\pm 5\text{Vdc} \pm 10\%$
Life	5×10^6 joystick deflections
Insulation	100 MK @ 500Vdc

Mechanical

Deflection, full scale :	Major axes (X & Y)	$\pm 20^\circ$
	45° to major axes	$\pm 27^\circ$
	Z axis	$\pm 20^\circ$
Dead band		$\pm 1^\circ$
Force, X and Y axes 125mm above mounting face, break out		6N nom
Force, X and Y axes 125mm above mounting face, at $\pm 20^\circ$ deflection		9.5N nom
Force, Z axis break out		0.39Nm nom
Force, Z axis at $\pm 20^\circ$ deflection		1.0Nm nom
Weight		600gms typical (excludes grip)
Temperature, operational		-40 to +85°C
Seal to panel (2 axis joystick)		IP65

DACO hand controllers

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