



MT4 and MT6 TRACKERBALLS



Trackerballs are particularly suitable for the precise positioning of a cursor on a display screen. They are often preferred for professional applications because they are robust, not vulnerable to cable damage and do not need a large clean surface on which to operate.

Daco offers two ranges of trackerballs. 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 trackerball individually designed through our cost effective design service which is explained in the datasheet "Custom Built Hand Controllers".

MT4 and MT6 Trackerballs

MT4 and MT6 trackerballs are standard modular products, available on short delivery times, that can be configured from stock components in over 500 different ways. They are designed to be incorporated in control panels and are intended for use in industrial and military applications. They conform to the design concept that the functions of supporting the ball and the sensing of its rotation should be separated to enable each to be optimised. This results in trackerballs that are extremely rugged yet smooth and quiet to operate.

The modular options for these products include 4 different ball sizes, various electrical interfaces and mounting plates with up to three switches. As with all Daco hand controllers MT4 and MT6 trackerballs are manufactured under an ISO 9001 approved quality system and are covered by a minimum 2 year warranty.

Characteristics

MT4 AND MT6 SERIES TRACKERBALLS SHARE THE FOLLOWING CHARACTERISTICS:

- High reliability
- Very smooth action
- Quiet operation
- Extremely rugged
- Low start up and operating force
- Operating force unaffected by direction of rotation
- Operates at any angle of mounting
- Operates even under heavy vibration
- When spun to make large movements the ball, and hence cursor, direction remains linear ie. does not exhibit a curving response
- Choice of ball sizes:- 1.5, 2.0, 2.5, 3.0 inch (38, 50, 63, 76mm)
- Choice of ball colours

MT4 SERIES TRACKERBALLS HAVE THE FOLLOWING ADDITIONAL CHARACTERISTICS

- Anodised main structure to give extra corrosion resistance
- Fully floating drip seal
- Uses wire with dual wall insulation combining radiated polyalkene and radiated polyvinylidene fluoride. This wire has low toxicity products of combustion and meets a wide range of specifications including MIL W 81004 and DEF STAN 61-12 part 18.
- Operating temperature range extended to -40 to +70°C
- Warranty extended to 3 years
- Aluminium top flange to reduce products of combustion
- High temperature components on interface circuit boards

Specification

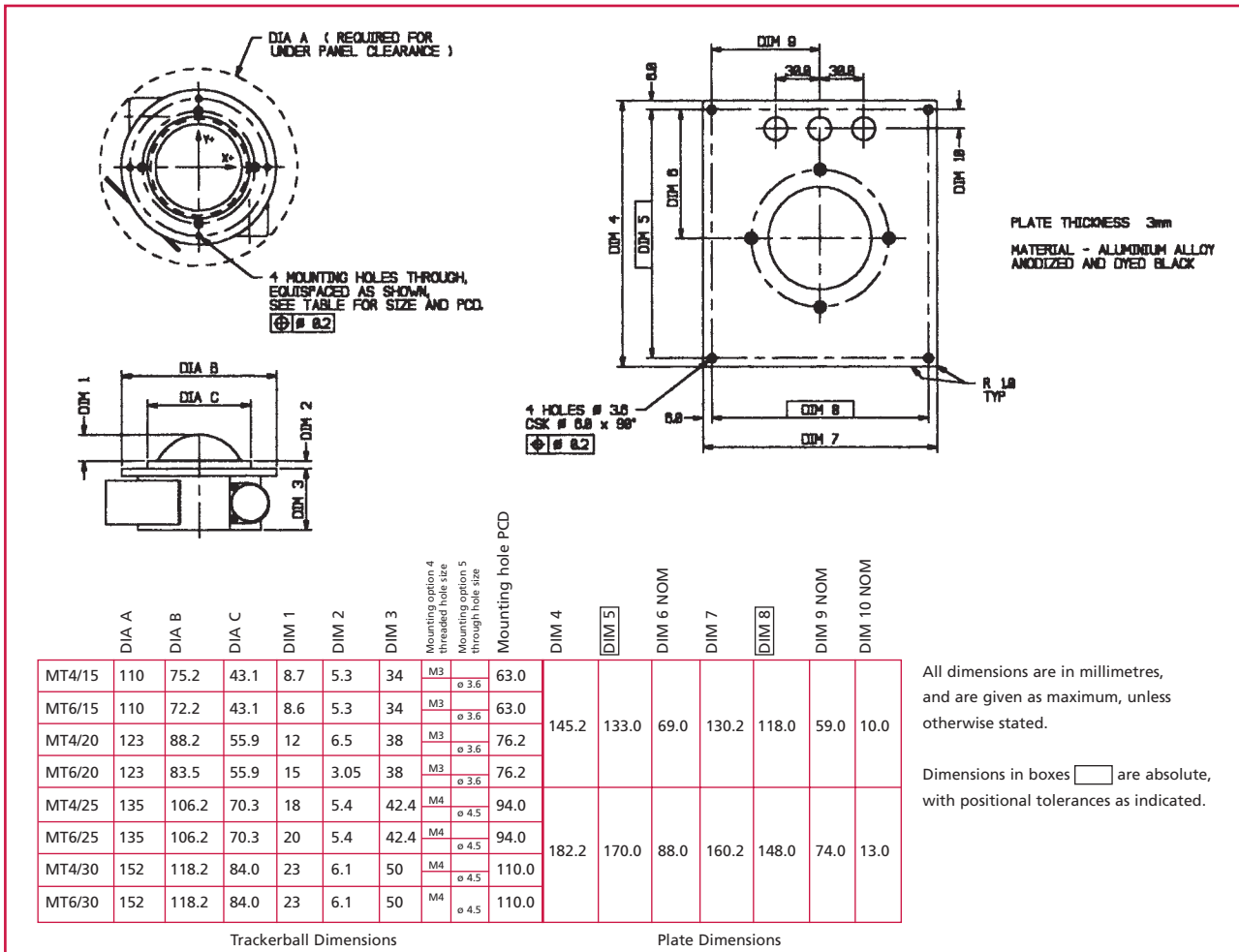
Electrical

Excitation	voltage	5 ± 0.5 Vdc	
	current	150 mA + output current	
Output voltage, each encoder	TTL compatible true square wave on output A (yellow) and B (orange).		
	High :	2.7V min.	
	Low :	0.8V max.	
Output current, each encoder	18 mA max sink. Fan out of 10 TTL		
Insulation, each encoder	>10 M _Ω at 500V		
Direction sensing :	+ X	XB leads XA by 90 ± 30°	
	+ Y	YA leads YB by 90 ± 30°	
Resolution	Typically :	1.5 inch ball	150 pulses per ball resolution
		2.0 inch ball	200 pulses per ball resolution
		2.5 inch ball	250 pulses per ball resolution
		3.0 inch ball	300 pulses per ball resolution

Environmental

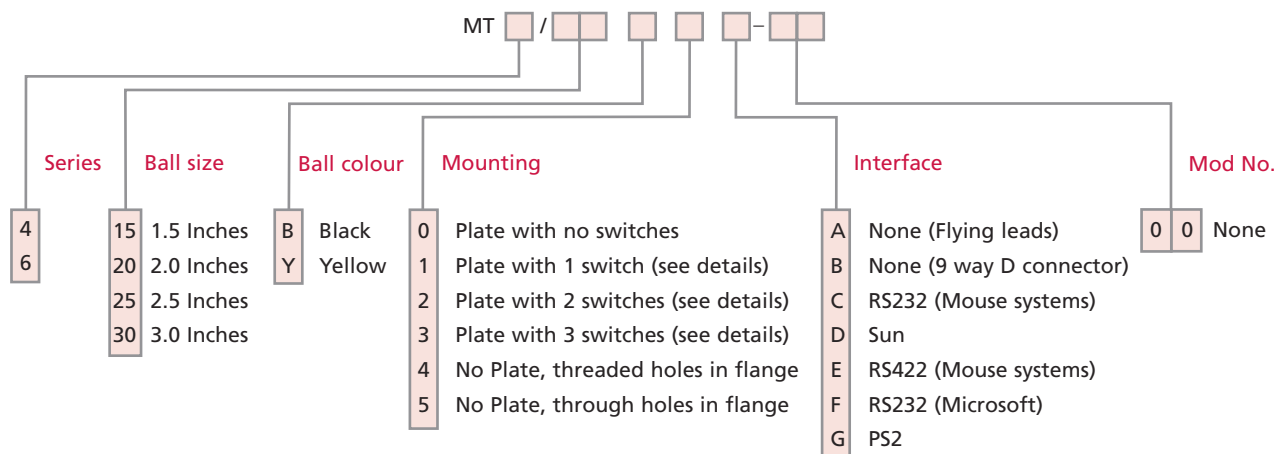
Storage temperature	MT4 series	-60 to +80°C	
	MT6 series	-10 to +55°C	
Operating temperature	MT4 series	-40 to +70°C	
	MT6 series	0 to +50°C	
Humidity	MT4 series	Up to 100% non-condensing	
	MT6 series	Up to 95% non-condensing	
MTBF	Trackerball only	100,000 hours	2,000,000 ball revolutions
	Assumes a level of routine maintenance.		

Dimensions



How to order

To order MT4 or MT6 trackerballs please refer to the drawing and use the full list of modular options in the chart below to create a descriptive part number.



NOTES:

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.

If interface option B is selected the 9 way D connector is mounted in place of an interface circuit board.

Interface option F can only encode 2 switches.



Range of trackball
sizes and MT6 series
trackball in plate
with 3 switches.

MT6/20Y3A-00





DACO hand controllers

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