

# ZA HANDLE OPTION

## PERFORMANCE

		ZA, ZA2	ZAS
Max height above flange	mm	80	80
Maximum diameter	mm	39	39
Operating temperature	°C	-25 to +50	-25 to +50
Environmental sealing (IEC 60529)		IP65	IP65

## Z AXIS MECHANICAL

Handle rotational torque		
breakout	Nm	0.1
operating	Nm	0.15 to 0.25
maximum allowable	Nm	1
Handle mechanical angle	°	±29 to ±30
Handle action		Self centering
Expected life		1 million operations

## Z AXIS ELECTRICAL

Analogue track (ZA and ZA2 only)

Resolution		Virtually infinite	Center tap angle	°	±2.5
Track resistance ±20%	kΩ	3.1 or 5.4 (ZA2)	Supply voltage - maximum	Vdc	30
Track operating angle	°	±27	Wiper circuit impedance	MΩ	> 0.1**
Output voltage range	%	7-93 or 25-75 (ZA2) of input	Power dissipation @ 20°C	W	0.25(no load)
Center tap voltage (no load)	%	47 - 53 of applied voltage			

\*\* The long life resistive elements require a high impedance load in the wiper circuit to minimise the current flowing through the wiper for optimum conditions

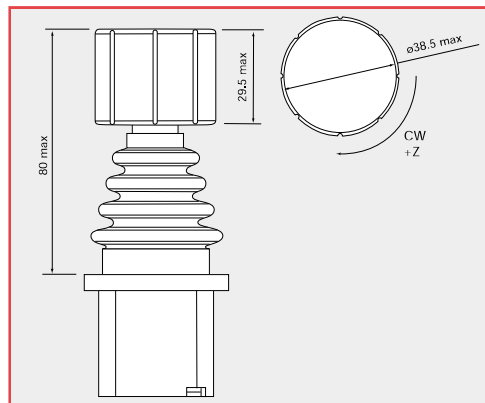
## Z AXIS ELECTRICAL

Directional or Centre Switch

		ZA, ZA2	ZAS
Switch operating angle	°	4 either side of center (±1)	20 either side of center (±2)
Supply voltage - maximum	Vdc	30	30
Load current - maximum	mA	2 (resistive)	2 (resistive)

## DIMENSIONS

Note: drawings not to scale



### Installation note

The protective rubber cap must be removed before fitting the joystick through the mounting hole. Re-fit the rubber cap after mounting in the panel.

## ELECTRICAL CONNECTIONS

Leads exit from the underside of the mounting flange. PVC insulated 7/0.2 (24AWG) flying leads, 240mm long

### Description

### Flylead colour

	ZA	ZAS
Z axis positive voltage supply	Yellow/Red	-
Z axis center tap	Blue	-
Z axis negative or zero voltage supply	Violet	-
Z axis output voltage signal	Pink	-
Z switch track N/O (handle CW +Z)	Yellow/Black	Yellow/Black
Z switch track N/O (handle CCW -Z)	White/Red	White/Red
Z switch track common	Red/Blue	Red/Blue

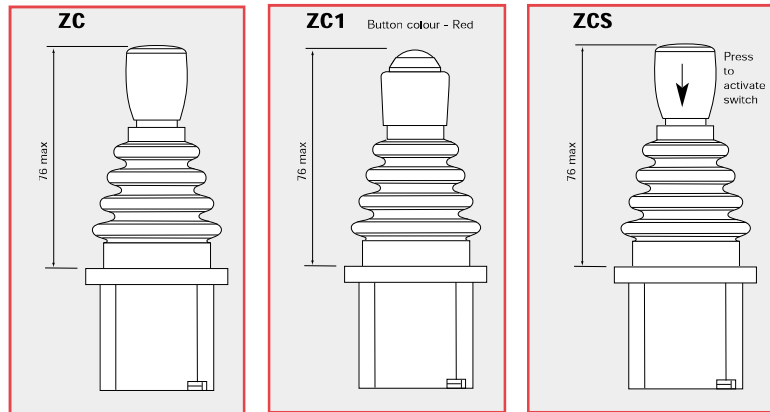
# ZC HANDLE OPTION

## PERFORMANCE

		ZC	ZC1	ZCS
Max height above flange	mm	76	76	76
Maximum diameter	mm	23	23	23
Environmental sealing (IEC 60529)		IP65	IP65	IP65
Number of switches		0	1	1
Action		-	Momentary button	Momentary handle depress
Switch operating force	N	-	3	7
Maximum current	mA	-	200 @ 50Vdc	100 @ 30Vdc
Expected life	(operations)	-	1 million	500,000

## DIMENSIONS

Note: drawings not to scale



## ELECTRICAL CONNECTIONS

Leads exit from the underside of the mounting flange. PVC insulated 7/0.2 (24AWG) flying leads, 240mm long

### Description

Common terminal  
N/O contact switch 1

### ZC1/ZCS Flylead colour

Red/Green  
White/Black