ELECTRUM AUTOMATION AB

EMIC 7

Compact ergonomic design

The EMIC 7 (Ergonomic Mini Integrated Controller) is a mulitfunction mini-coordinate joystick that incorporates 3 analog axes and a seven-button handle design, with ruggedness, functionality, light weight and high flexibility for mobile market applications.

All proportional output signals in X, Y and handle rocker are of contactless Hall effect type with dual sensors to provide a diverse signal redundancy, helping the integrator to conform to safety regulations for machinery control systems.

The primary signal for each analog axis is 10-90% of supply voltage. Corresponding secondary signal is 90-10%.

Overview

- Designed for in-cab environments in different types of mobile equipment
- Total weight is 200 g
- Operating ambient temperature -40 - +70˚C

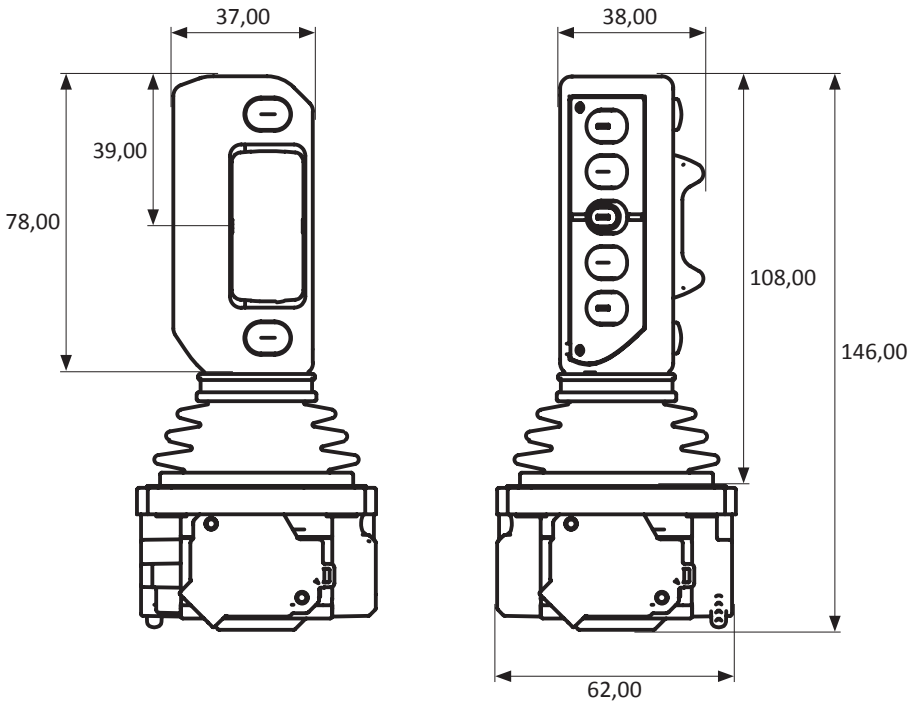
Ergonomical design

Compact and ergonomic design, making it ideal for armrest and panel mounting.

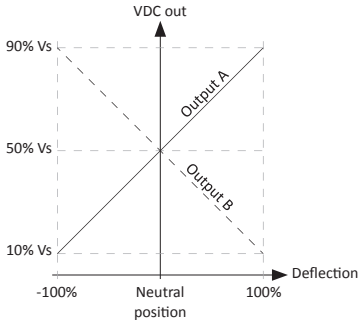
Tactile pushbuttons

The highly tactile pushbuttons integrate location index for easy identification.

Dimensions & connectors



Deflection vs. output diagram



Characteristics

General

Parameter		Min.	Typ.	Max.	Unit
Environmental temperature	Operating	-40		70	˚C
	Storage	-40		85	˚C
EMC	Immunity		100		V/m
Actuation force	X & Y		150		g
	Handle rocker		250		g
Weight			200		g

Analog

Parameter		Min.	Typ.	Max.	Unit
Power supply (Vs)		4.5		5.5	V_{DC}
Current (@ 5 V_{DC})	Base			45	mA
	Rocker			20	mA
Mechanical angle of movement	Base		+-20		°
	Rocker		+-15		°
Expected life (cycles)			5 million		
Analog output range	10-90% redundant crossed				
Ingress protection	IP65				

Pushbuttons

Parameter		Min.	Typ.	Max.	Unit
Expected life (operations)			1 million		
Actuating force			3		N
Switch travel			0.7		mm
Electrical function	NO				
Supply voltage		0.02		35	V
Current		0.01		100	mA
Ingress protection (tactile switch)	IP67				