# **Embedos Engineering**

## **Reach Height Display** User Manual



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## 1. Connection Details

A   A   A   4   4   T   R   D																			
	A I 0 1	A I 0 2	A I 0 3	A 1 0 4	4 8 5 A	4 8 5 B	T 2 3 2	R 2 3 2	D I 0 1	D 1 0 2	D 1 0 3	D I 0 4	D I 0 5	D I 0 6	D I 0 7	D I 0 8	N A C	L A C	

Pin Label	Function	Alternate Function		
AI01				
AI02	Analog Inputs			
AI03				
AI04				
485A				
485B	RS-485 Comm. pins			
T232	RS-232 Tx	N/A		
R232	RS-232 Rx	N/A		
DI01	Digital Input 1	Sensor Input 1		
DI02				
DI03	Digital Inputs			
DI04				

DI05	
D106	
DI07	
D108	
N AC	220)/ AC Input Dower Supply
L AC	250V AC Input Power Supply



Pin Label	Function	Alternate Function		
+24 V				
GND	24V DC Input Supply (Optional)			
GND				
DGND	Digital GND	N/A		
CANH	CAN Llick and Low Dire			
CANL				
ΑΟΡΙ	Analog Output (Current)	N/A		
AOPV	Analog Output (Voltage)	N/A		

D007	
DO06	
DO05	
DO04	Digital Outputs
D003	Digital Outputs
D002	
D001	

#### 2. Electrical Characteristics

Parameter	Min	Avg	Max	Unit
Supply Voltage	10	24	30	V DC
Input High Level	10	24	30	V
Input Low Level	0	0	1	V

### 3. Wiring Diagram



## 4. Dimensions



#### 5. Configurable Options

• 5. 1 Start-up Screen



✓ This is the screen which loads on boot-up.



✓ When a home positioning pulse is received from the output of Sensor1, the main page will be displayed showing the Home-Set value. This is the value that was saved to the system initially. It should be updated to actual prior to calibration.

#### • 5.2 Main Display Page



- ✓ Main Screen where the Position value will be displayed.
- ✓ Position shown with unit as selected.
- ✓ Settings Button to configure various setting options as described in the next section.

#### • 5.3 Settings



- ✓ Enter Password and press 'OK' to continue.
- $\checkmark$  Press 'CN' to go back to the main display page.
- ✓ On correct entry of password, it will lead you to the Settings page.

Reach Height Display	www.embedos.io		
Scale Factor: -0.28 Offset: 970259.06		Internally calculated accd. to the calibration	
Calibrate		value.	
Units: Milimeters			
Un-calibrated values		Various options	
Home Offset	a second s	for configuration.	
Password			
Back		Leads you to main display page.	

- ✓ Various Sub -Setting Options for configuration: Calibrate, Units, Un-calibrated values, home-offset, Password, each leading to its respective screens as described below.
- ✓ Back button: which on press, leads you to the main page where the position value is being displayed.

## • 5.4 Calibration

Scale Factor: -0.28 Offset: 970250.06	
Calibrate Units: Milimeters	Click 'Calibrate' to set Calibration Value.
Home Offset	
Password	
Back	
Initial Position Screen	
Init position   1 2 3	
4 5 6	Click 'CN' to cancel and go back to main
7 8 9 CN	display page.
• 0 <- 0K	Click 'OK' to set Calibration Value.



- ✓ Calibrate option for calibrating the device position value with the encoder value.
- $\checkmark$  Rotate the encoder to the initial most position and enter the desired position value.
- Click OK to proceed to the next screen or click CN to cancel calibration and go to the main Position Display page.
- ✓ Rotate the encoder to the maximum position and enter the desired value on the final position screen. Click OK to finish calibration or CN to cancel calibration and go to main display screen.
- ✓ When the value is set, it internally calculates the Scale Factor (i.e. the multiplication factor) and the Offset value (i.e. the +/- value), which is displayed on the main settings page.

Scale Factor: -0. Offset: 97	.28 0259.06
Calibrate	
Units: Milimeters	
Un-calibrated value	ES
Home Offset	
Password	
	Back

## • 5.5 Unit Selection

Scale Factor:-0.28Offset:970259.06		
Calibrate		Click 'Units' to
Units: Milimeters		set the desired
Un-calibrated values	a sec	unit. The
Home Offset		be displayed
Password		next to the units
		shown.
Back		

Select system units	
Meters	
Feet	
Milimeters	
Inches	
	Back

✓ Select the Unit from various available options- Meters, Feet, Millimetres, Inches as required.

## • 5.6 Un-Calibrated Values

Scale Factor: Offset:	-0.28		
Calibrate	070200.00		
Units: Milimeters			
Un-calibrated values			
Home Offset			
Password			
	Back		



 ✓ Un- Calibrated Values displays the real values neglecting the value set under Calibration settings.

#### • 5.7 Home-Offset

Scale Factor:	-0.28		
Offset:	970259.06		
Calibrate			
Units: Milimeters			
Un-calibrated values			
Home Offset			
Password			
		Back	



✓ This Screen basically allows you to set the Initial Home Offset value which will be displayed when a pulse is given on its respective input pin.

#### • 5.8 Password Change





- ✓ This screen allows you to change the password which is required to configure Settings.
- ✓ Password can only be numeric with a maximum of 8 digits.
- ✓ Enter the password and press OK.

#### 6. Contact Details

For any other information / clarifications, please mail us at info@embedos.io.