

BB-02D2 DIGITAL INDICATOR **USER GUIDE**



BB-02D2 Digital Indicator

The Unitech UB series pipe bending machines utilize the BB-02D2 digital indicator. This document details the functionality of the BB-02D2 digital indicator.

General Precautions:

1. Ensure the power is switched off before making connections or carrying out maintenance.
2. Verify the supply voltage before installing the device.
3. Shield the device from water and moisture.

Technical Specifications:

Electrical Properties	
Supply voltage	24 VDC
Supply voltage range	15 - 36VDC
Power consumption	*0,5A IMax : 1,5A *:(excluding valves)
Output type / Current / Quantity	PNP transistor / IOut: 5 A Max. / 4 Adet
Input type / Current / Quantity	PNP input / 5 - 20 mA / 10 pcs
Encoder input	A / B Puls 2 pcs
Encoder supply voltage	12VDC or 24 VDC will be specified with the order.
Control range	0.00 to 9999 for SET1 and SET2
Resolution	Selectable point shift
Operating temperature	0 - 70 C
Humidity in the environment	25% to 85% non-condensing
Physical properties	
Dimensions	E: 97,0 x B: 97,0 x U: 70,0 mm (without terminal connections)
Weight	230 gr

Buttons and Indicators



Indicators

ACT: Indicates the current actual location value.

SET: Specifies the limit value for forward movement.

Buttons:

All buttons have two functions;

SET: Used to input the "set" parameter either automatically or manually. It facilitates adjusting the parameter and entering the value.

↓: It is a decrease key at the parameter and value input

HOME (Esc): The HOME button is used to reset the indicator and install the front setting value. It is the output key without saving in parameter mode.

PROG (←): Used to enter the programming mode. It is the key to confirmation of value in parameter mode.

Adjusting the limit values for forward movement.



1. Press the "Set" key until you see the "Set" in the "Act" field.
2. When the "Set" text appears, enter the correct value using the up/down keys.
3. After setting the "set" value you want, press the "Prog" key to save it.

After setting this value, the movement will cease once it reaches the set value, regardless of further pressing of the pedal in the forward direction.

Adjusting HOME Position Values



1. Press the “Home” button until the “Home” screen appears in the “Act” window.
2. Utilize the pedal to position the machine at the desired zero point.
3. Input the password using the “Up/down” keys.
4. The default password is either “20” or “1”.
5. Save the new zero point by pressing the “Prog” key or exit by pressing “ESC”.

Adjust the value settings for sets and home points during backward and forward movements (hysteresis).



PR - 1: This setting acts as the "correction factor for forward movement." It helps fine-tune the forward target point for where the return will stop.

Example: If the machine stops 0.1 mm after the target, raise “PR - 1” value “+0,1”.



PR - 2: This setting functions similar to the "Correction factor in backward movement (HOME)." It allows for fine-tuning the rear target point where the return will halt.

Example: If the machine stops 0.1 mm after the target, raise “PR - 1” value “+0,1”.

Calibrating the Measurement



“Pr – 3 & Pr – 4: This setting controls the hydraulic operations of our system. It's calculated using engineering math and needs expertise for accurate calculation.

***** Changing this value is not recommended.**

Setting the Measurement Unit System (mm or cm)



Pr - 5: Use this parameter to specify the decimal place for the number.












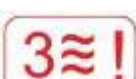



Establishing the minimum and maximum values that can be input.



Pr – 6: Identify the minimum allowable input value.

Pr – 7: Identify the maximum allowable input value. (suggested value 180)

Indicator Descriptions

	Setting parameters in program mode indicates the correct password.
	Indicates that program mode is currently active.
	Flashes to warn when the stop button is pressed.
	Shows that the system is operational.
	The left pedal is being used. It is currently pressed.
	The right pedal is being pressed, activating the right pedal input.
	Button pressed to start.
	Stop button has been pressed.
	Machine door open error. The door switch is active.
	Machine position error occurs due to incorrect calibration, inputting wrong multiplication/division values, or when a signal surpasses the device's reading speed or becomes distorted.
	Motor thermal error. Motor may experience overcurrent.
	Phase sequence or phase missing error.
	Shows that the value displayed on the screen represents the parameter value.
ACT 	Displays the encoder position.
	It displays the set value.