

# POSITAL

## FRABA

### UBIFAST CONFIGURATION TOOL INSTALLATION LEAFLET



Thank you for purchasing our UBIFAST Configuration Tool. The UBIFAST Configuration Tool is used to configure the parameters of POSITAL's IXARC programmable encoders through a simple browser based programming interface. Please read this leaflet thoroughly and carefully before installation and using the device.

#### UBIFAST Configuration Tool Includes

- UBIFAST Configuration Tool
- Terminal block adapter to connect encoders with cable exit or to build your own connecting cables
- 12 VDC Power Adapter, Input 100 to 240V AC, 47 to 63Hz and interchangeable plugs for Europe, UK, US, India, Brazil, China, Argentina, Australia, Korea

#### Safety Notes



Recommended to use power adapter provided by POSITAL. In case of replacement, check for compatible supplies with same voltage and current rating (12 V / 1 A)



Do not remove the Micro-SD card or the Wi-Fi USB Adapter from the configuration box



Do not connect or disconnect the encoder when device is under power



Do not connect any other devices to unused USB or RJ45 ports on the Configuration Tool

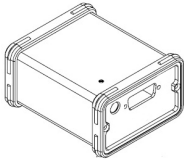


Do not close browser or webpage when configuration is in progress

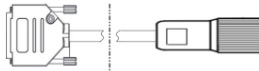
### UBIFAST CONFIGURATION TOOL INSTALLATION LEAFLET

#### Encoder Connection to the UBIFAST Configuration Tool

- Adapter cable for encoders with standard POSITAL Pin assignment and connector
- Terminal block adapter to connect encoders with cable exit or to build your own connecting cables



UBIFAST Configuration Tool



Adapter Cable



Terminal Block

#### Accessories

Encoder Output	Encoder Connector	Ordering Number
Incremental	M12 5 Pin	10028946
	M12 8 Pin	10028947
	M23 12 Pin	10030239
SSI+Incremental	M23 12 Pin	10026479
	M23 16 Pin	10026481
All	Terminal Block	10030474

#### Pin Configuration and Wiring for Terminal Block

Pin No	Wiring for SSI + Incremental	Wiring for Incremental
1	Data -	Do not connect
2	Clock -	Do not connect
5	Sensor Power Supply (12VDC)	Sensor Power Supply (12VDC)
7	Do not connect	Z
9	Data +	Do not connect
10	Clock +	Do not connect
12	GND - Sensor Ground	GND - Sensor Ground

#### Diagnostic LEDs

Color	State	Description
Yellow	Solid	Power to UBIFAST Tool is ON
Yellow	Blink	UBIFAST Wi-Fi Hotspot Ready
Green	Solid	Programming of Device in Progress

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### UBIFAST CONFIGURATION TOOL INSTALLATION LEAFLET

#### Sequence of Operation



- Prepare/start WiFi-enabled device like smartphone, tablet, laptop or computer
  - Connect encoder to the UBIFAST Configuration Tool
  - Connect the power supply to the UBIFAST Configuration Tool, it will automatically start when the power is applied
  - Once powered-on, wait for the YEL-LOW LED to start blinking, this can take up to 50 s
  - Enable Wi-Fi on your device (smartphone, tablet, laptop or computer) and connect to the configuration hotspot **“POSITAL Configuration Tool”** with password **“ubifast14”**
- Once connected, open a web browser and go to [ubifast.fraba/WebApp/](http://ubifast.fraba/WebApp/) (Bookmark this link for easier access later on)
  - Main navigation page will open and you can begin the configuration

#### Note

- The UBIFAST Configuration Tool can be used to program both Incremental only and Hybrid (SSI + Incremental) encoders. The encoder type is automatically detected by the UBIFAST Configuration Tool and the programmable parameters in the subsequent steps are displayed accordingly
- The serial number (SN) of the encoder connected is always displayed on TOP of the screen
- The current encoder parameters are displayed automatically. They can be changed as shown in the following sections
- Use the **< Back** and **Next >** keys to navigate through the user interface
- Do not use the standard back, next and reload buttons available in the web browser
- **WARNING:** Do not disconnect the encoder until the configuration process is completed

### UBIFAST CONFIGURATION TOOL INSTALLATION LEAFLET

**For Incremental encoders the following parameters are programmable:**

**POSITAL**  
FRABA

INCREMENTAL PARAMETERS  
SN: 202336

**Pulses Per Revolution**

1024  
min. 1 max. 16384

**Incremental Pulse Direction**

A before B

**Incremental Output Driver**

RS 422 (TTL) / 8-30 V Supply Voltage

< Back Next >

Configure

- Pulses Per Revolution (PPR) –  
Any value between 1 and 16384 pulses
- Incremental Pulse Direction –  
Choose „A before B“ or „B before A“  
(Refer to encoder datasheet for more details)
- Incremental Output Driver –  
Choose the Incremental Output Driver-  
Push-Pull (HTL) / 4.75 - 30 V Supply Voltage,  
RS422 (TTL) / 5 V Supply Voltage or  
RS 422 (TTL) / 8-30 V Supply Voltage

**For Hybrid (SSI + Incremental) the following parameters are programmable:**

#### Step 1: Incremental Parameters (INC)

**POSITAL**  
FRABA

INCREMENTAL PARAMETERS  
SN: 202336

**Pulses Per Revolution**

1024  
min. 1 max. 16384

**Incremental Pulse Direction**

A before B

< Back Next >

Configure

- Pulses Per Revolution (PPR)  
Any value between 1 and 16384 pulses
- Incremental Pulse Direction  
Choose „A before B“ or „B before A“  
(Refer to encoder datasheet for more details)

### UBIFAST CONFIGURATION TOOL INSTALLATION LEAFLET

#### Step 2: Absolute Parameters (SSI) parameters are programmable

**POSITAL**  
 FRABA  
 ABSOLUTE PARAMETERS (SSI)  
SN: 202308

**Singleturn Resolution**  

65536 (16 bit)
▼

**Number of Turns**  

65536 (16 bit)
▼

**Code**  

Binary
▼

**SSI Direction**  

Clockwise Down
▼

**Preset Value**  

0
min. 0 max. 4294967296

◀ **Back**
**Next** ▶

#### Configure

- Singleturn Resolution  
256 steps (8bit) to 65536 steps (16 bit)
- Number of Turns  
1 turn (singleturn) to  
65536 turns (16 bit multiturn)
- Code  
Binary or Gray Code Output
- Preset Value  
0 to maximum resolution (dependent on  
the configured resolution and number  
of turns)

#### Step 3: Summary

**POSITAL**  
 FRABA  
 SUMMARY  
SN: 202308

**Incremental Parameters**

Pulses Per Revolution: 1024  
 Incremental Pulse Direction : A before B

**Absolute Parameters (SSI)**

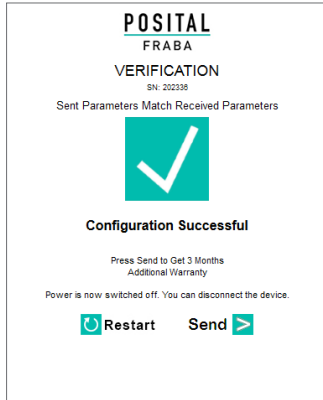
Singleturn Resolution: 65536 (16 bit)  
 Number of Turns: 65536 (16 bit)  
 Code: Binary  
 SSI Direction: Clockwise Down  
 Preset Value: 0

◀ **Back**
**Configure** ▶

- Verify the Incremental and Absolute parameters to be configured
- Press „Configure“ to start programming the encoder
- It is recommended to write the programmed parameters on the blank field provided on the encoder label

### UBIFAST CONFIGURATION TOOL INSTALLATION LEAFLET

#### Step 4: Verification / Completion



- Verify configuration status
- If successful
  - Press "Send" to draft an email to be sent to POSITAL - on availability of Internet on the device being used.  
(Note: The data is confidential and stored in our secure database)
  - Press "Restart" to go to main page, close the browser and power OFF the device
- If configuration unsuccessful
  - Re-check the wiring and connections
  - Press "Restart" and start once again from Step-1 to re-configure the encoder

#### Note

- During configuration the encoder is powered by the Configuration Tool. After successful configuration, the encoder can be unplugged
- When connecting the POSITAL Wi-Fi hotspot, it is recommended to disconnect the device from any other internet sources like LAN network or Cellular Data networks
- After 3 minutes of inactivity the UBIFAST box shall time out and the programming needs to be restarted from the beginning. The message "Session has timed out" is displayed
- Only one user at a time can access the UBIFAST programming Interface. Another user will see the message "Device is used by another user"
- If a user doesn't complete the programming, another user can start the programming after the time out of 3 minutes. The same user who didn't complete the programming can reconnect to the UBIFAST programming Interface and complete the configuration within these 3 minutes
- POSITAL strongly recommends sending all new configurations via e-mail, to ensure data protection and warranty for the encoder
- Please contact your regional POSITAL office or local sales partners for any technical questions
- Kindly register for our POSITAL newsletter to get the latest news on any software updates or product releases



# POSITAL

## FRABA

OVER 50 YEARS EXPERIENCE  
WITH POSITION SENSORS



### FRABA Group

FRABA is a group of enterprises focused on providing advanced products for the motion control and industrial automation markets. POSITAL has been a leading manufacturer of absolute rotary encoders for over 50 years and recently has expanded its business to to include tilt and linear motion sensors. Other FRABA Group subsidiaries include VITECTOR which focuses on protection sensors to guard doors and production machine covers.

### Service

Absolute rotary encoders are sophisticated devices that can help solve a wide range of technical problems. However, realizing the full potential of these products may require specialized knowledge when selecting the device configuration and programming the

operating parameters. To ensure that customers get what they need, POSITAL's development engineers in Europe, North America and Asia have direct responsibility for customer support. In addition, a growing global network of sales partners is providing expert guidance with knowledge about the local requirements.

### Production

POSITAL products are manufactured in advanced production facilities. The computer-guided semi-automated production system tracks each device from order, through assembly and testing, to final delivery. Even with thousands of unique configurations available, standard products are ready to ship within five working days of receiving an order.

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