Diamant - Kernbohrmaschinen
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Kundenspezifische Elektrowerkzeuge

WEKA Elektrowerkzeuge KG · Auf der Höhe 20 · 75387 Neubulach

Operation manual

Frequency converter FU6D (Display)

dated 09.11.18

In the course of continuous improvement of our products, the existing frequency converter FU6U has been equipped with some new features. Both the user and the service technician hereby have significant advantages in operation and maintenance of the frequency converter.

Outstanding new features include the integration of a Bluetooth® interface for simple and secure execution of software updates (with the help of the "WEKA Service App"), as well as a display with membrane keyboard for changing settings and indication of operational state und error conditions.

Below, the individual menu items are described in more detail in their functionality and operation. The complete menu structure can be found in the attached diagram.

Navigating through the menu items is done by pressing the buttons ⌃ and ⌄.
The starting point is always the home screen ("MASCHINE" respectively "HOME") from where all the other menu items can be accessed. At all times the user can return to the home screen by pressing ESC.

By pressing ↵ sub menus can be entered or settings can be selected and changed. By long pressing ↵ changes will be saved. At the footer for each menu item the specific actions of the keys are explained, basically the complete menu is designed to be self-explanatory.
Once a connected machine has been started user inputs on the keypad will be ignored due to safety reasons.

menu item	Description
MACHINE respectively HOME	After the converter has been booted successfully it will show all compatible machines. Once a machine has been connected the screen will automatically switch to the illustration of the machine. The code „1~" respectively „1P" or „3~" respectively „3P" indicates whether the converter has recognized single phase or three phase operation. When starting the machine the screen will automatically switch to displaying the load conditions (working load of the machine). When disconnecting the machine the screen will automatically show all compatible machines again. By pressing ↵ the user can manually toggle between „HOME" and „MASCHINE" .
UPDATE	After initiating the update process by pressing ↵ an adequate time frame will be opened within which the user can connect to the converter utilizing the „WEKA Service App" (see additional information below) and if necessary apply a firmware update. The user will be guided through the process with information on the display of the converter as well as on the app. This part of the process can be aborted without risk at any time

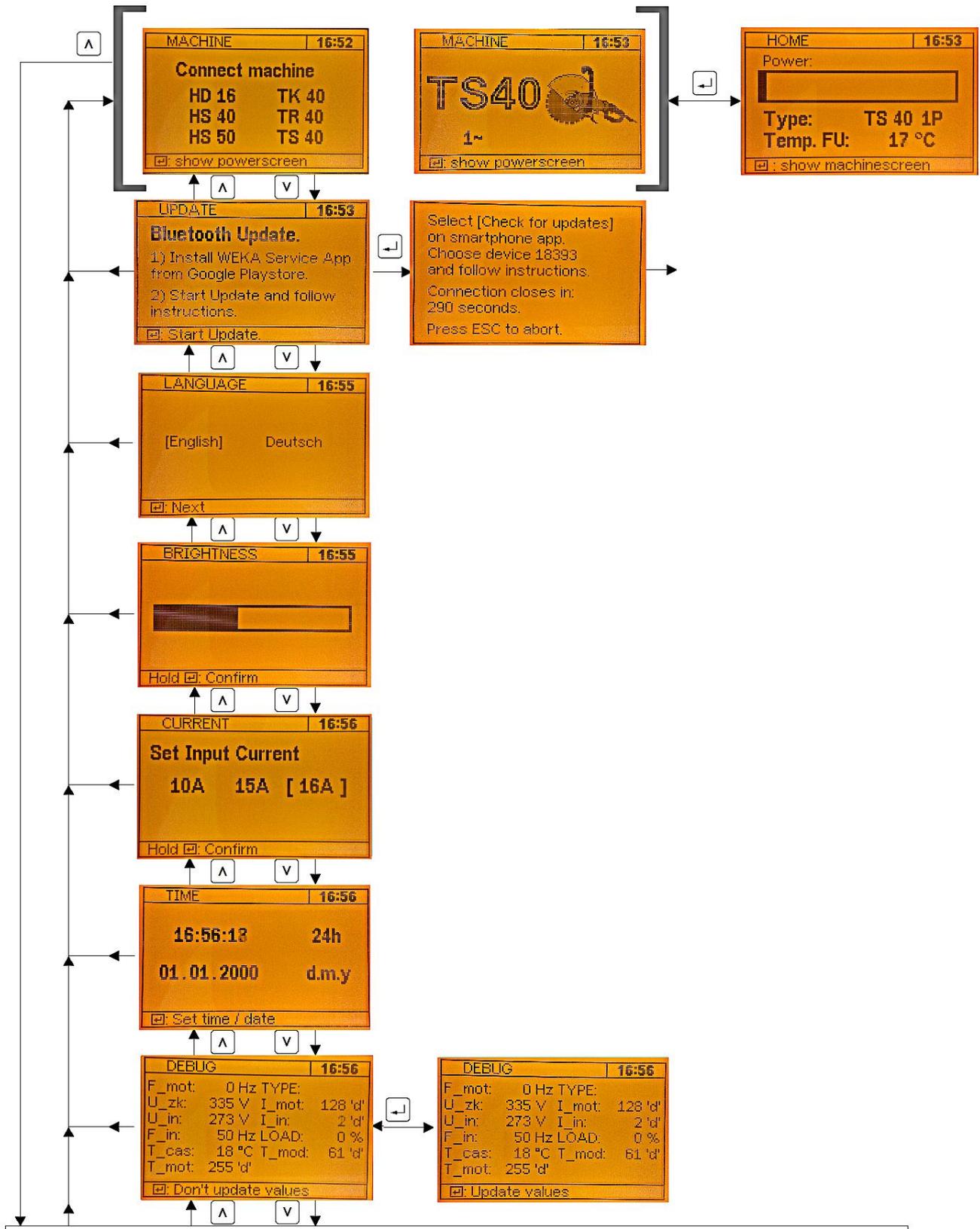|	
	by pressing $\boxed{ESC}$, already downloaded data will be refused and the process will start from the beginning once the user has initiated it again. In case the update process fails please contact WEKA, we can help you to restore the converters firmware.
LANGUAGE	All of the listed languages can be set as the default language of the converter. The list of available languages will be extended from time to time and can be updated using the update feature. By pressing $\boxed{\leftarrow}$ a language can be selected and by long pressing $\boxed{\leftarrow}$ it will be stored as default language.
BRIGHTNESS	By changing the backlight brightness the readability of the display can be adopted to many situations. Even in case of direct sunlight the display will remain its high contrast due to its ability to use the sun as light source. By pressing $\boxed{\leftarrow}$ the brightness level can be changed and by long pressing $\boxed{\leftarrow}$ it will be stored.
CURRENT	In single phase operation mode the maximum input current can be reduced to 15A or even 10A. By doing so it is possible to operate a machine even if the mains supply is weak or an inadequate generator is used. By pressing $\boxed{\leftarrow}$ the current setting can be changed and by long pressing $\boxed{\leftarrow}$ it will be saved. Once the converter is set to a reduced input current it will be indicated by the symbol **10** or **15** in the header of the display.
TIME	The integrated real time clock provides the possibility to keep track of the daily usage of the converter. The format of time and date can be adjusted according the specification of the country. By pressing $\boxed{\leftarrow}$ the individual values can be selected and by pressing $\boxed{\wedge}$ and $\boxed{\vee}$ they can be changed. Once the format of time or date has been changed it will be stored by long pressing $\boxed{\leftarrow}$.
DEBUG	The readout of real time data (for example motor frequency, mains frequency, intermediate voltage, motor current, …) provides additional information for troubleshooting in case of error or malfunction. This menu item is mainly dedicated to a service technician.
DEVICE INFO	An overview of device specific settings and version numbers helps to identify internal components and the overall condition of the converter. This is especially helpful for the service technician to evaluate if an update may be necessary.
ARCHIVE	Once an error message shows up simultaneously a copy of this error including the time stamp will be stored. By doing so it is possible to insight the history of the converter at a later time. By long pressing $\boxed{\leftarrow}$ the content of the error storage will be cleared.
COUNTER	The operational time of the converter is logged in different ways: - „OT total" shows the total amount of operational time since first start-up of the converter - „OT today" show the operational time of the current day - „OT user" can be reset by long pressing $\boxed{\leftarrow}$. This enables for example hire companies to keep track of the operational time within a certain time interval. - „STC" show the elapsed time since the converter has been at a service station for inspection last time.

Additional information about the Bluetooth update:

- To perform an update a Bluetooth compatible smartphone or tablet running android 4.4.2 or higher is necessary. Apple products are not supported at this moment.

- A connection to the internet is necessary. The update consumes about 500kB of data traffic. Therefore make sure to have enough data traffic available. The data connection speed should be at least EDGE or faster. WiFi connections will also work.

- The WEKA Service App can be downloaded from the Google Playstore (search term „WEKA Service App") or simply use following QR-code or direct link to navigate directly to the Google Playstore:

https://play.google.com/store/apps/details?id=de.wekaelektrowerkzeuge.wekaserviceapp

- When installing the WEKA Service App it is necessary to allow access to the location. Without permission the App will not be able to communicate with the converter.

- While establishing a connection depending on the operational system of the smartphone there might be a pairing request. It is important to accept the pairing request otherwise no communication will be possible.

- The internal serial number will not match the serial number of the type plate. If a search for available converters lists more than one converter and the desired converter cannot be identified please take the converter to a place with no other converters nearby and execute the update again. Also you can contact WEKA to request the internal serial number that matches the serial number on the type plate.

- Don't try working with the converter during an update process. This may interrupt the process and cause it to abort.

- Stay as close as possible to the converter during the update process. This way you will gain maximum transfer speed and signal strength. If you notice the transfer is stuttering or slowing down you might be too far away from the converter or something is jamming the connection.

- Downloading the update file to the converter will take approximately one minute. During this time period the process can be aborted without any risk. Once the download is finished the converter will start installing the update. This process will take about another minute. **Don't disconnect the converter from the mains supply during this time!** If the process gets interrupted by a mains voltage dropout the converter will try to install the update two more times. If these tries fail the display will show „invalid firmware". In this case please contact WEKA, we can help you to restore the converters firmware.

MACHINE — 16:52

Connect machine

HD 16	TK 40
HS 40	TR 40
HS 50	TS 40

↵: show powerscreen

MACHINE — 16:53

TS 40

1~

↵: show powerscreen

HOME — 16:53

Power:

Type:	TS 40 1P
Temp. FU:	17 °C

↵ : show machinescreen

UPDATE — 16:53

Bluetooth Update.

1) Install WEKA Service App from Google Playstore.

2) Start Update and follow instructions.

↵: Start Update.

Select [Check for updates] on smartphone app. Choose device 18393 and follow instructions.

Connection closes in: 290 seconds.

Press ESC to abort.

LANGUAGE — 16:55

[English]   Deutsch

↵: Next

BRIGHTNESS — 16:55

Hold ↵: Confirm

CURRENT — 16:56

Set Input Current

10A   15A   [16A]

Hold ↵: Confirm

TIME — 16:56

16:56:13   24h

01.01.2000   d.m.y

↵: Set time / date

DEBUG — 16:56

F_mot:	0 Hz	TYPE:	
U_zk:	335 V	I_mot:	128 'd'
U_in:	273 V	I_in:	2 'd'
F_in:	50 Hz	LOAD:	0 %
T_cas:	18 °C	T_mod:	61 'd'
T_mot:	255 'd'		

↵: Don't update values

DEBUG — 16:56

F_mot:	0 Hz	TYPE:	
U_zk:	335 V	I_mot:	128 'd'
U_in:	273 V	I_in:	2 'd'
F_in:	50 Hz	LOAD:	0 %
T_cas:	18 °C	T_mod:	61 'd'
T_mot:	255 'd'		

↵: Update values

continues on next page

DEVICE INFO 1/2 | 16:56

Inverter Serial Number: 18393
Inverter Firmware: 004
Inverter Parameter: 004
Inverter Hardware: 000

Display Firmware: 000
Display Hardware: 000

DEVICE INFO 2/2 | 16:57

Overtemp. Cntr. Module: 000
Overtemp. Cntr. Case: 000
Overtemp. Cntr. Motor: 000

Overcurrent Cntr.: 00000
Cntr. FO Module: 00001

ARCHIVE | 16:57

Archive is empty.

Hold ⏎: reset archive

COUNTER | 16:57

OT total: 0,0 h
OT today: 0,0 h
OT user: 0,0 h

STC: 0,0 h

Hold ⏎: Reset operation time