Manual

EAG80

Dosing programs

Before switching on the device or installing components, please carefully read through the manual to avoid malfunctions by wrong or incorrect operation or installation.

Contents

Property rights

To avoid operating errors and to ensure a smooth operation of our products, the installation and operating instructions must always be accessible to operating personnel.

These installation and operating instructions shall be treated as confidential. They shall only be used by authorized persons. Transfer to third parties is permitted only with the written approval of T.E.L.L. Steuerungssysteme.

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As errors can be made despite all efforts, we would be grateful for any feedback concerning these instructions.

Important information

Please carefully read the manual before initial use of the program, so you will become familiar with your new T.E.L.L. product and know the details of the correct operation.

Deviating from the standard usage, the plant manufacturer may have changed the use of the computer. In this case T.E.L.L. Steuerungssysteme cannot permanently monitor whether the safety of you, your plant or other parts associated with the plant is still guaranteed after the change of the serial condition (e.g. by installation or extension of program variants). T.E.L.L. Steuerungssysteme does not assume any liability for damages caused by improper connection or incorrect operation of the product.

Attention!

This operating manual contains information about all program variants and special programs, regardless of whether your program has been supplied with standard or special equipment. For this reason you might also find explanations which do not apply to your program or computer.

The manufacturer is continually striving to improve the products and to keep up with the latest technical standards and reserves the right to make changes without entering into any obligations towards products previously delivered.

Warranty limitation

No warranty is given for the complete correctness of this manual.

1 Description of the device
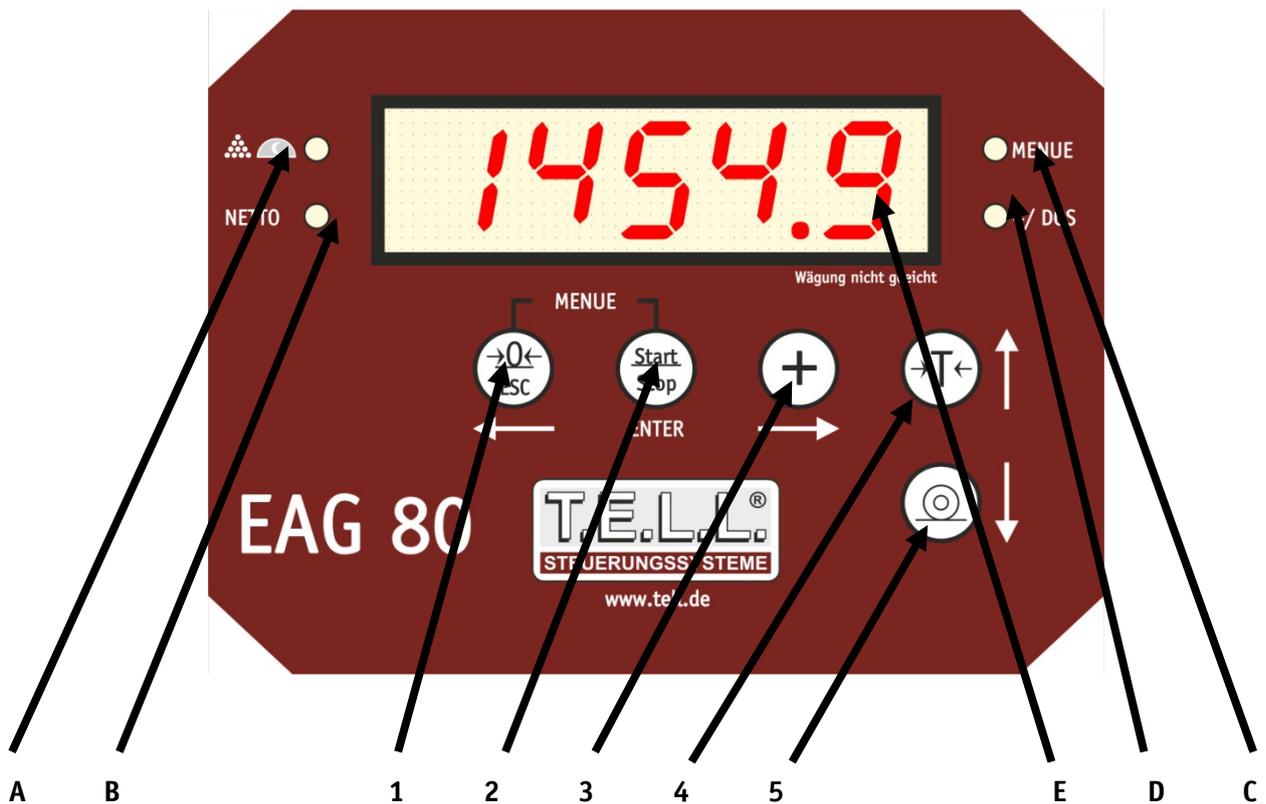
1.1 Description of buttons

1. Button 1   Button Zeroing / Button left arrow / Button ESC

2. Button 2   Button „Enter"

3. Button 3   Button for weight addition / Button right arrow

4. Button 4   Button tare / Button up arrow

5. Button 5   Button down arrow

1.2 Description of the display elements

A   LED for display "sleep"

B   LED for display of net weight

C   LED for menu

D   LED for addition mode / dosing programs active

E   5-digit display screen

2 Function of buttons

2.1 In weighing mode

- Button 1 ← pushed briefly

    Selection of components and

    Discharge quantity presetting and

    Cancel program

- Button 1 ← pushed longer

    Zero the scales (can be deactivated)

- Button 2 Enter pushed longer

    Start program

- Button 2 Enter pushed briefly

    Cancel program (manual stop)

- Button 3 → pushed briefly

    Selection of components and

    Discharge quantity presetting

- Button 4 pushed briefly

    Tare the scales and

    Function "manual components" (can be deactivated)

- Button 4 pushed longer

    Back to total weight and

    Leave "manual components"

- Button 5 not active

2.2 In dosing menu / entry of components

- Button 1 $\xrightarrow{\rightarrow 0 \leftarrow \ ESC}$ pushed briefly
  Selection of components and
  Discharge quantity presetting left and
  Selection digit to the left

- Button 3 $\xrightarrow{+}$ pushed briefly
  Selection of components and
  Discharge quantity presetting right and
  Selection digit to the right

- Button 2 (Start/Stop) Enter pushed briefly
  Confirm selection and
  Confirm set value

- Button 4 $\rightarrow T \leftarrow \uparrow$ pushed briefly
  Increase selected value

- Button 5 $\circledcirc \downarrow$ pushed briefly
  Decrease selected value

2.3 In menu or during input

- Button 4 (→T←) pushed briefly
  Navigate to the top and
  Increase the selected value

- Button 5 (◎) pushed briefly
  Navigate downwards and
  Decrease the selected value

- Button 3 (+) pushed briefly
  Access to the submenu and
  Selection digit to the right

- Button 1 (→0← ESC) pushed briefly
  Back to the uper menu and
  Selection digit to the left

- Button 2 (Start Stop) Enter pushed briefly
  Confirm selection and
  Confim set value

3 Function of LEDs

LED A: no function

LED B: lights when tared

LED C: lights when you are in the menu

LED D: lights when a dosing program is active
              blinks when dosing programs report stop or alarm

4 Menu structure

To select the menu, simultaneously push button 1 ⟵ and button 2 for longer.

Then the menu items will appear.

All menu items are listed below.

You can navigate from one menu item to the next by pushing button 4 and button 5.

Menu items can be selected with button 3 ⟶.

AllGE	**General settings**
⇑ ⇓	
SChnt	**Interface settings**
⇑ ⇓	
FIltE	**Filter Settings**
⇑ ⇓	
UAAGE	**Settings scales / weighing system**
⇑ ⇓	
doS P	**Parameters dosing programs**
⇑ ⇓	
rAuS	**Leave the menu**

4.1 Menu General Settings (*ALLGE*)

ALL GE	→ ⇄	**ProG** — Program
		⇑ ⇓
		Uhr — Time
		⇑ ⇓
		dAt — Date
		⇑ ⇓
		JAhr — Year
		⇑ ⇓
		tAStE — Button
		⇑ ⇓
		E inGA — Input
		⇑ ⇓
		In it — Init
		⇑ ⇓
		C9999 — Software version
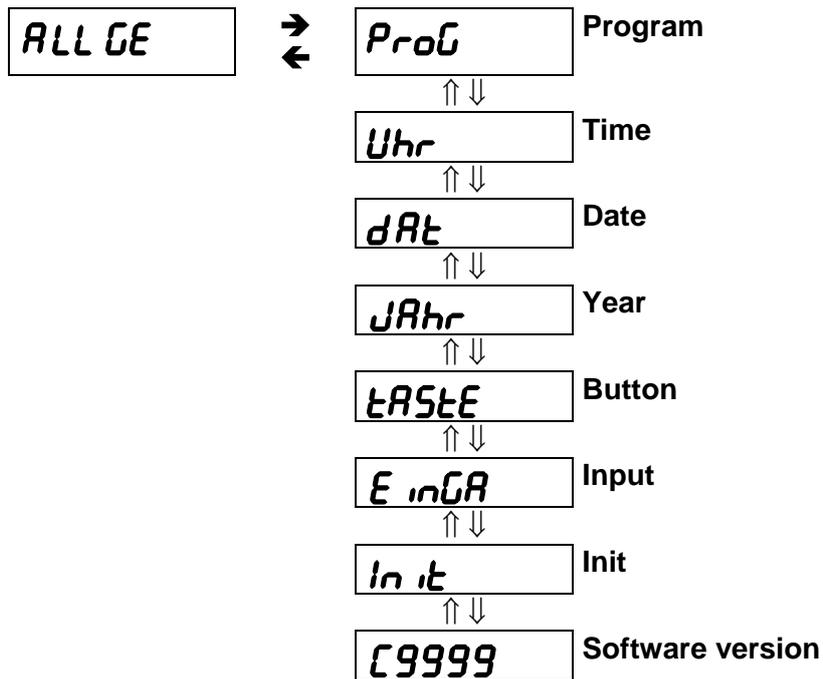
4.1.1 Program $ProG$

Selection of dosing/junior program

Pro 1   Simple scales without dosing functions

do 1   Filling 2 components

do 2   2 dischargers

do 3   Filling 1 component (Out 1). 1_discharger (Out 2)

do 4   Filling 2 components, starting via input (In 1)

do 5   2 dischargers, starting via input (In 1)

do 6   Starting component 1 (Out 1) via input 1 (In 1)
                Starting component 2 (Out 2) via input 2 (In 2)

do 7   Starting discharger 1 (Out 1) via input 1 (In 1)
                Starting discharger 2 (Out 2) via input 2 (In 2)

do 8   Starting component (Out 1) via input 1 (In 1)
                Starting discharger (Out 2) via input 2 (In2)

do 9   Starting component (Out 1) via input 1 (In 1)
                and then discharge (Out 2)

do 10   Starting component 1 (Out 1) via input 1 (In 1)
                Output 2 (Out 2) switches at 0 kg

do 11   Starting component (Out 1) via input 1 (In 1)
                and then discharge (Out 2)
                Starting via input 2 (In 2) after alarm

do 12   1 discharger (Out 1) fast entry
                (if the quantities to be discharged always differ)
                with alarm contact (Out 2)

do 13   Filling 1 component (Out 1) fast entry
                (if the quantities to be filled always differ)
                with alarm contact (Out 2)

do 14   15 different quantities are filled via one component (Out 1)

do 15   Filling program
                Confirm start, input/query of target value appears. Change value or confirm old value.
                Confirm start, fills up to target value

                It is also possible to start via input function input 1 and to cancel via input 2

do 16   Starting component 1 (Out 1) via input 1 (In 1) or start button
                with alarm contact (Out 2)
                Stop process via input 2 (In 2)

do 17	Starting discharger 1 (Out 1) via input 1 (In 1) or start button
	with alarm contact (Out 2)
	Stop process via input 2 (In2)

do 17   Starting discharger 1 (Out 1) via input 1 (In 1) or start button
with alarm contact (Out 2)
Stop process via input 2 (In2)

do 18   Filling 1 component (Out 2) as soon as weight is less than minimum weight

do 19   Filling 1 component (Out 1) as soon as input 1 (In 1) is set

do 20   Currently no function

do 21   Filling program
Input: Start weight/minimum weight and target value
Starting via button Start or activating In 1, stopping via button Stop or activating In 2
Program continually runs until button Stop and then ESC are pushed.

Jun 1   Filling 2 components
Discharging with junior function

Jun 2   Filling 1 component (Out 1)
Discharging (Out 2) with junior function

Jun 3   Junior function without switch contacts

4.1.2 Time Uhr

Input of time

4.1.3 Date dAt

Input of date

4.1.4 Year JAhr

Input of year

4.1.5 Button tAStE

Select function of buttons

4.1.5.1 Zero button null

Aus =   Zero button deactivated

Ein =   Zero button activated
Zero button pushed longer - Scales are set to "0"

4.1.5.2 Tare button tArA

Aus =   tare button deactivated

Ein =   tare button activated
tare button pushed briefly - weight is tared to "0"
tare button pushed longer - total weight reappears

4.1.6 Function Inputs E inGA

Here the inputs' function can be determined
(only for Pro1 and Junior 1,2,3)

4.1.6.1 In 1 In 1

Activate / Function Input 1

AuS   Input 1 Function deactivated

rtArA   Input 1 resets tare (only if tare button is activated)

tArA   Input 1 tares (only if tare button is activated)

nuLL   Inupt 1 has function of zero button

In 2 *In 2*

Activating / function input 2

       AuS   Input 2 function deactivated

       rtArA   Input 2 resets tare (only if tare button is activated)

       tArA   Input 2 tares (only if tare button is activated)

       nuLL   Input 2 has function of zero button

4.1.7 InIt *In it*

Reset device to standard values

4.1.8 C2600 *C2600*

Show software version

4.2 Menu Interfaces (*Schnt*)

Schnt	⇄	*SE SC* — **Use of interface**
		⇑⇓
		GA tI — **Transmission speed RS232**
		⇑⇓
		GAInP — **Function impulse large-size display**
		⇑⇓
		PCCON — **Activate EAG Explorer for PC**
		⇑⇓
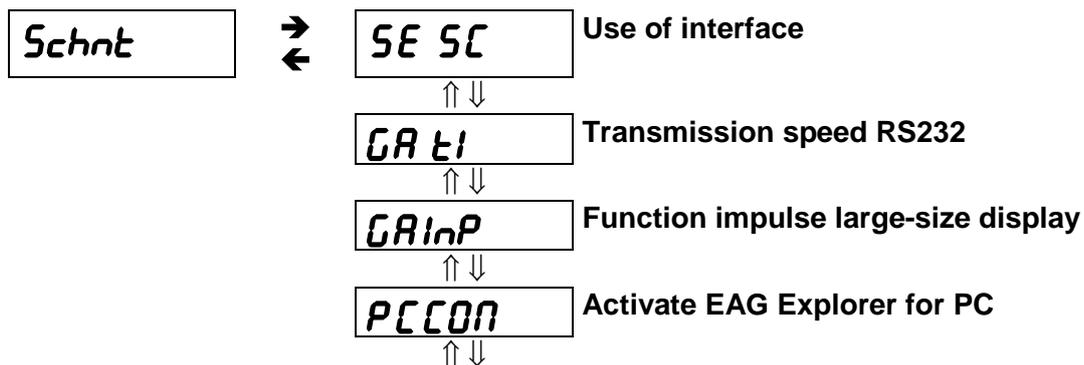
4.2.1 Use of serial interfaces *SE SC*

Function of 1st serial interface (or of 2nd interface, if available)

4.2.1.1 CON 1

Function of 1st serial interface

AuS	Interface 1 deactivated
GAZ t	Output format for T.E.L.L. large-size displays with messages Start/Stop
druck	Output format for T.E.L.L. printer, data logger or Telog Software (only for protocol printing function!)
GAJun	Output format for T.E.L.L. large-size display (only for Jun 1, Jun 2, Jun 3, Jun 4)
GAZ	Output format for T.E.L.L. large-size display, only weight values

4.2.1.2 CON 2

Function of 2nd serial interface (optional)

AuS	Interface 1 deactivated
GAZ t	Output format for T.E.L.L. large-size displays with messages Start/Stop
druck	Output format for T.E.L.L. printer, data logger or Telog Software (only for protocol printing function!)
GAJun	Output format for T.E.L.L. large-size display (only for Jun 1, Jun 2, Jun 3, Jun 4)
GAZ	Output format for T.E.L.L. large-size display, only weight values

4.2.1.3 bAud

Input of baud rate of serial interfaces (1 and 2)

4.2.1.4 PArIt

Input of parity of serial interfaces (1 and 2)

4.2.1.5 bIt L

Setting bit length of serial interfaces (1 and 2)

4.2.2 GA ti ᴳᴬ ᵗᴵ

Setting of changing time of large-size display (only for junior programs)

4.2.3 GAInP ᴳᴬᴵⁿᴾ

Function for impulse large-size display

> AuS Function deactivated
>
> InP 1 Impulse large-size display variant 1
>
> InP 2 Impulse large-size display variant 2

4.2.4 PCCon ᴾᶜ ᶜᴼⁿ

Activate EAG80 Explorer for PC connection

4.3 Menu filter settings (FILtE)

| FILtE | ⇄ | FIL | **Filter selection** |

⇧⇩

| SF | **Filter speed** |

⇧⇩

| FIL A | **Filter number of values** |

⇧⇩

| SPrun | **Weight difference** |
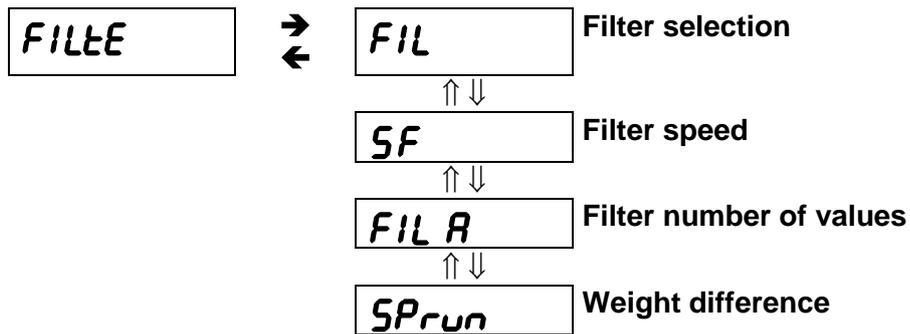
4.3.1 Filter selection FIL

Here the weight slowdown can be activated

AuS   Slowdown of scales deactivated (SF, FIL A and SPrun will be ignored)

EIn   Slowdown of scales activated (Setting via SF, FIL A and SPrun)

4.3.2 Filter speed SF

Here you determine the speed of the weight measuring.

Values from 1 – 255 can be entered.

Value 1= quick measurement

Value 255 = slow measurement

4.3.3 FIL A FIL A

Number of mean values

4.3.4 Weight difference SPrun

Weight difference from which the scales quickly update the weight (without mean value/filter)

4.4 WAAGE *HAAGE*

HAAGE	→ ⇄	*AUFLo* — **Display steps**
		⇑ ⇓
		StAbE — **Weighing elements basic settings**
		⇑ ⇓
		nuLLP — **Set scales to zero**
		⇑ ⇓
		FACtO — **Weight factor**
		⇑ ⇓
		0-JUS — **Zero point adjustment**
		⇑ ⇓
		JUSt — **Scales adjustment with weights**
		⇑ ⇓
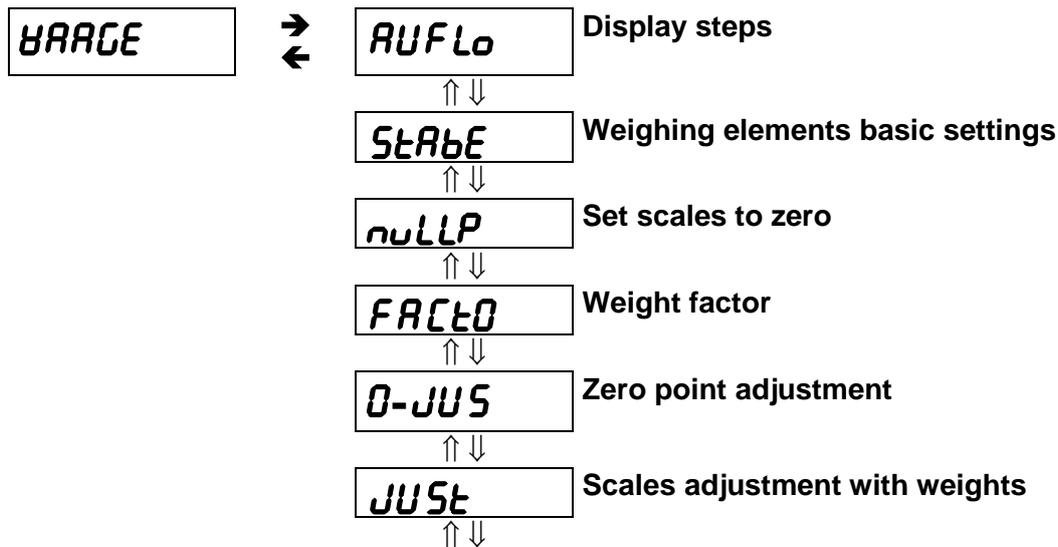
4.4.1 AuFLo *AuFlo*

Selection of display steps 0,01; 0,02; 0,05; 0,1; 0,2; 0,5; 1; 2; 5; 10; 20; 50

4.4.2 StAbE *StAbE*

Basic settings of weighing elements , adjustment via key data (quantity / max load / mV/V)

StAbA   quantity of connected weighing elements
LASt   maximum load of connected weighing elements (see type plate of weighing element)
StAbS   mV/V value of connected weighing element (see type plate of weighing element)

4.4.3 nuLLP *nULLP*

Set scales to 0 when zero button is activated

4.4.4 Facto *FACtO*

Input of weight factor

4.4.5 0-JUS *0-JUS*

0-point adjustment for better readjustment with high dead load

4.4.6 JUSt *JUSt*

Scales adjustment with weights

0-JuS   0-point adjustment
G-JuS   Weight entry for adjustment

4.5 doS P

4.5.1 FASS

Input of maximum container weight

0 = off

4.5.2 rESt

Input of tolerance in kg for residue alarm

0 = off

4.5.3 AZEIt

Input of time in sec for leakage/filling alarm

0 = off

4.5.4 nZEIt

Input of after-flow time for automatic after-flow measurement

0 = off

4.5.5 n Co1

Input of after-flow quantity component 1 changes automatically

4.5.6 n Co2

Input of after-flow quantity component 2 changes automatically

4.5.7 Jun G

Input of junior total weight time (only for junior programs)

4.5.8 Jun 0

Input of junior zero setting time (only for junior programs)

4.5.9 toLEr

Input of junior tolerance (only for junior programs)

4.6 rAUS

end

5 Operating the device

5.1 Switching on the device

5.1.1 Switching on with mains power supply

To switch on the device with mains power supply, it is sufficient to insert the plug into a normal 230V / 50 Hz socket.

After starting up, the program version number appears and then the device is ready to use.

5.2 Switching off the device

5.2.1 Switching off when running with mains power supply

Pull the plug to switch off the device when running with normal mains power supply. There is no special switch.

5.3 Normal weighing operation

5.3.1 Set the scales to "0"

By pushing button 1 (→0← ESC) ⟵ for longer, the weight value is set to "0".

Attention! For this function the button has to be activated in the parameters.

5.3.2 Taring the scales

5.3.2.1 "Tare away" a weight on the scales.

Attention! The button has to be activated in the parameters for this function.

Briefly pushing button (→T←) is the simple tare function. That means if you briefly press this button when the scales are loaded, the weight value is set to "0".

Pushing the tare button for longer sets the scales back to the original weight value.

This function can e.g. be used for filling. For example: You fill a container with a certain weight. Briefly push the tare button (→T←), the weight is set to 0kg. Now the next quantity can be added and the weight can again be set to 0kg by briefly pushing the tare button (→T←). When all quantities have been filled, push the tare button (→T←) for longer and your total weight will be displayed. At the same time the "interim tare values" are deleted.

6 Error messages:

6.1 Fele1 *FELE 1*

Invalid program entry

6.2 Residual quantity *ArESt*

The quantity in the mixing tank before the new mixing process is bigger than the programmed quantity.

6.3 Maximum capacity *AFASS*

The quantity to be mixed would be bigger than the entered maximum capacity of the mixer.

6.4 Power supply alarm *A nEt*

Power failure during the filling process.

6.5 Inlet alarm *A EIn*

For the time programmed, no weight change could be registered during filling.
To correct this, the alarm time could be increased.

6.6 Discharging alarm *A AuS*

For the time programmed, no weight change could be registered during discharging.
To correct this, the alarm time could be increased.

6.7 Discharging quantity too big *AGroS*

The quantity calculated for discharging is bigger than the quantity in the mixer. This can be the case when e.g. the total quantity from the mixer is to be discharged in several partial quantities. If the display unit finds the quantity in the mixer to be smaller than the quantity to be discharged, the alarm is triggered.

7 Connecting the device

7.1 General Information

The device is delivered either with plug connectors or with screw connections.

For devices with plug connectors: The weighing elements can be connected in any order to the sockets at the lower edge of the housing.

For devices with screw connections: The weighing elements' cables have to be inserted into the housing and be connected inside.

Mainboard
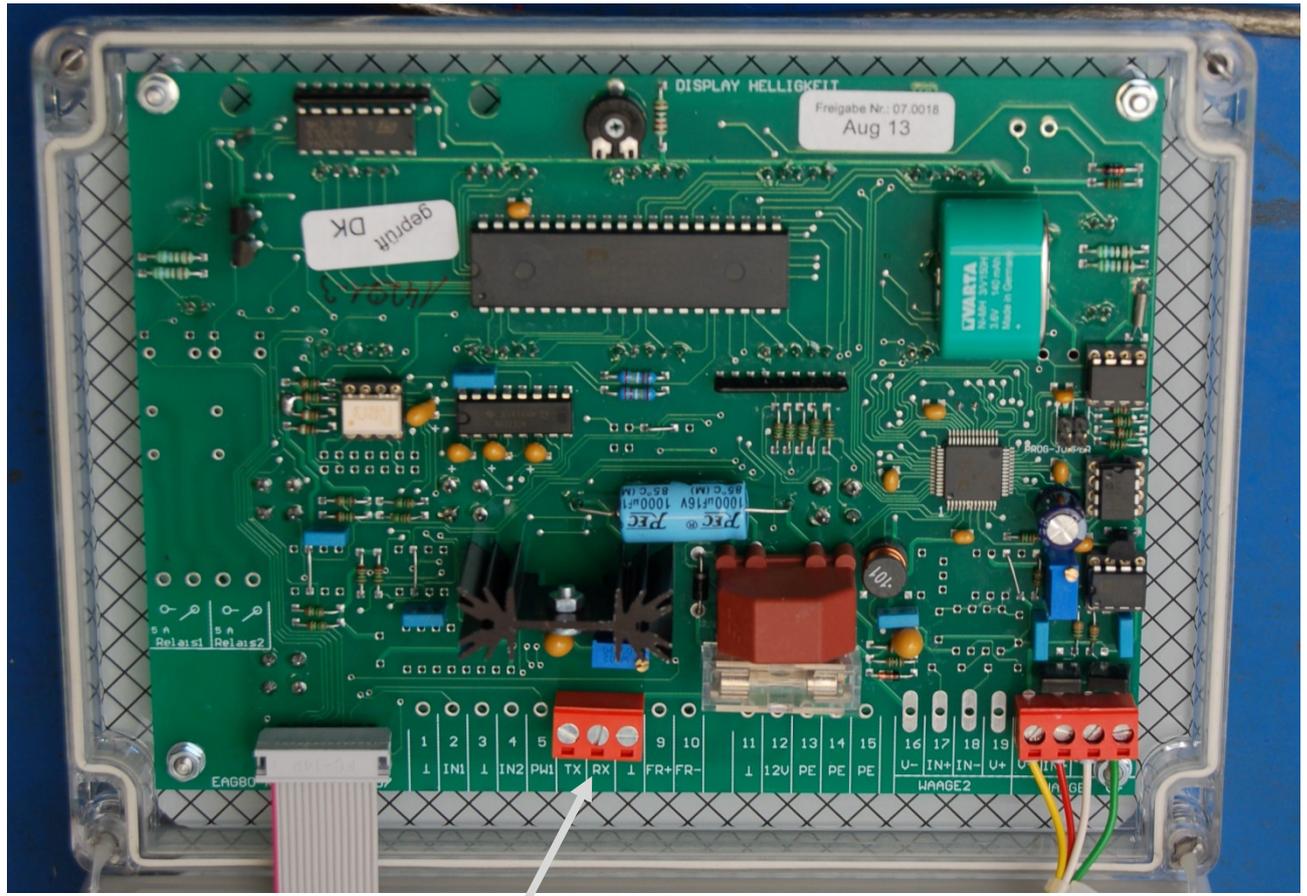
Serial interface

7.1.1 Serial Interface

Here you can connect e.g. a large-size display.

TX (terminal 6)   = transmit line
RX (terminal 7)   = receive line
Gnd (terminal 8)   = ground line

7.3 Connection board

1 = Connection to main board

2 = Connection weighing elements

3 = Connection input 1 and 2

4 = Fuse (1A fast)

5 = Relay

6 = Output

7.3.1 Connection of weighing elements

Up to four weighing elements can be connected to devices without prewired plugs. The terminal block (1) has been prewired to the mainboard.

Weighing elements T.E.L.L. TWE-1/1,5t/ 3t/ 3,4t/ 5t/ 10t/ 15t /VBB14/ VBB18
(4-wire connection cable, transparent):

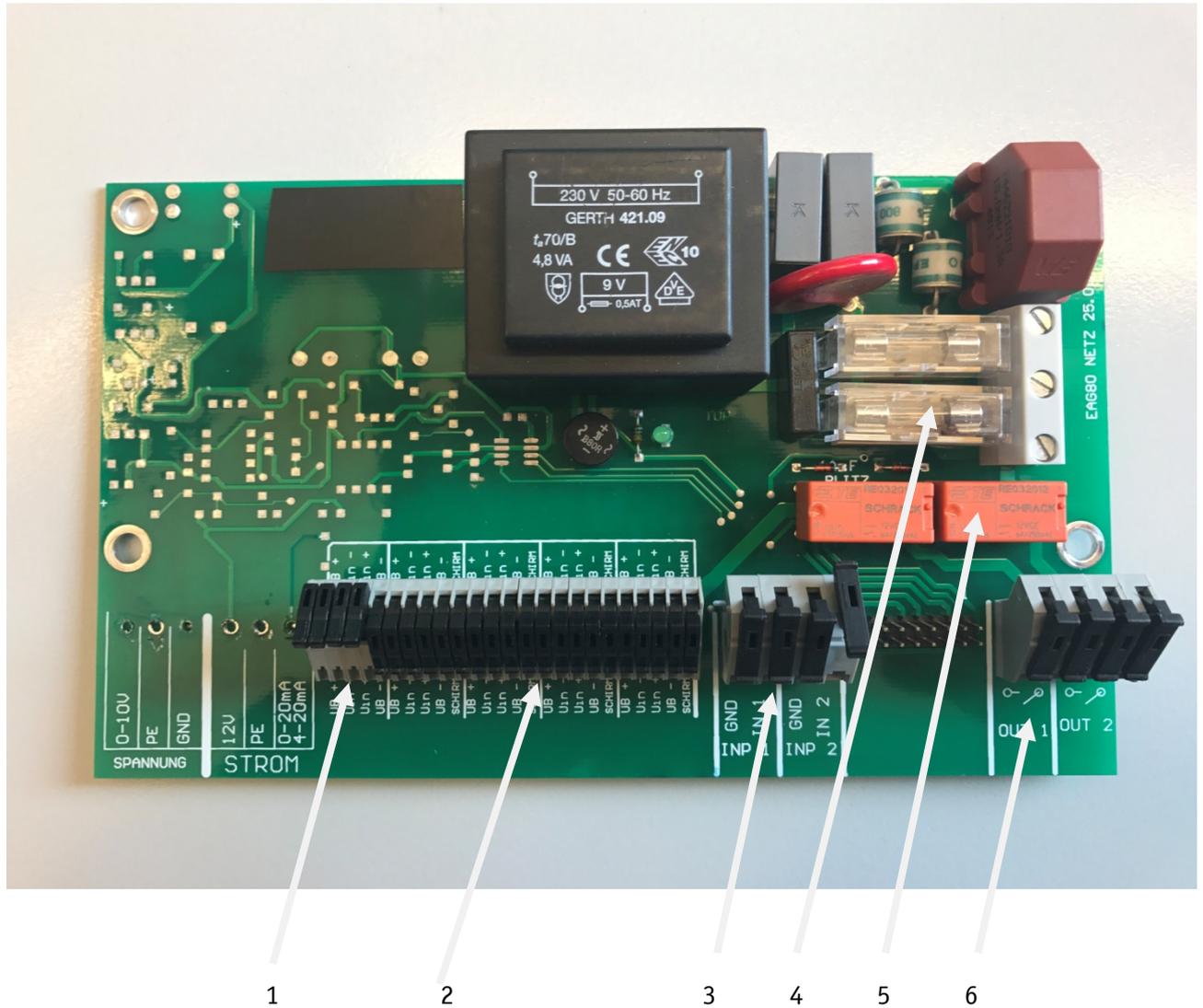|			
UB+	= Supply weighing element plus	<->	Weighing element green
UB-	= Supply weighing element minus	<->	Weighing element yellow
U In+	= Measurement signal plus	<->	Weighing element brown
U In-	= Measurement signal minus	<->	Weighing element white

Weighing elements TWEH 550kg/ 1100kg/ 1760kg (6-wire connection cable, transparent):

UB+	= Supply weighing element plus	<->	Weighing element green + blue
UB-	= Supply weighing element minus	<->	Weighing element black + grey
U In+	= Measurement signal plus	<->	Weighing element white
U In-	= Measurement signal minus	<->	Weighing element red

Weighing elements CO/FX/TA (4-wire connection cable, black):

UB+	= Supply weighing element plus	<->	Weighing element red
UB-	= Supply weighing element minus	<->	Weighing element black
U In+	= Measurement signal plus	<->	Weighing element green
U In-	= Measurement signal minus	<->	Weighing element white

7.3.2 Connection of inputs

Connection of inputs (Attention! Solely connect potential-free contacts!)
GND/In1 = input 1
GND/In2 = input 2

7.3.3 Connection of outputs

Connection of outputs (24V DC max. 5A, normally open) for dosing and sorting programs.

8 Commissioning EAG80

Steps 1 to 4 are normally already set.

8.1 Theoretical adjustment of scales

Settings under 4.4.1 AuFLo *AuFlo* and 4.4.2 StAbE *StAbE*

Press and hold 0/ESC and Start/Stop simultaneously until ALLGE appears in the display.

WAAGE

AuFLo		Selection of display steps
StAbE		Basic settings weighing elements (Number / Max Load / mV/V)
	StAbA	Number of connected weighing elements
	LASt	Maximum load of connected weighing elements (see type plate of weighing element)
	StAbS	mV/V value of connected weighing elements (see type plate of weighing element)

StAbE   Adjustment completed

8.2 Input of time and date

Settings under 4.1.2 Time *Uhr*, 4.1.3 Date *dAt* and 4.1.4 Year *JAhr*

ALLGE

Uhr	Input of time
dAt	Input of date
JAhr	Input of year

8.3 Settings for printers or large-size displays

Settings under 4.2 Menu Interfaces (*Schnt*)

Schnt

CON 1	Function of 1st serial interface
AuS	Interface 1 deactivated
GAZ	Output format for T.E.L.L. large-size display
druck	Output format for T.E.L.L. printer, data logger or Telog software
GAJun	Output format for T.E.L.L. large-size display (only for Jun 1, 2, 3, 4)
CON 2	Function of 2nd serial interface (optional)
AuS	Interface 2 deactivated
GAZ	Output format for T.E.L.L. large-size display
druck	Output format for T.E.L.L. printer, data logger or Telog software
GAJun	Output format for T.E.L.L. large-size display (only for Jun 1, 2, 3, 4)
bAud	Entry of baud rate of serial interfaces (1 and 2)
PArIt	Entry of parity of serial interfaces (1 and 2)
bIt L	Entry of bit length of serial interfaces (1 and 2)

8.4 Settings for scales settling time

Settings under 4.3 Menu filter settings ($FILtE$)

FILtE

      FIL   Activating scales settling time
          AuS   Scales settling time deactivated (SF, FIL A and SPrun will be ignored)
          EIn   Scales settling time activated (settings via SF, FIL A and SPrun)

8.5 Test scales with highest possible weight

Settings under 4.4.6 JUSt $JUSt$

If the weight value shown does not correspond to the weight on the scales, the scales should be adjusted with weights.

Press and hold 0/ESC and Start/Stop Stop simultaneously until ALLGE appears in the display.

WAAGE

      JUSt   Scales adjustment with weights
          0-JuS   Empty platform and press Start/Stop
          G-JuS   Place weight and press Start/Stop

00000   Enter weight value and press Start/Stop

      JUSt   Adjustment completed

8.6 Entry of required functions

Settings under 4.1.1 Program $\mathcal{P_{ro}G}$

Press and hold 0/ESC and Start/Stop simultaneously until ALLGE appears in the display

ALLGE

ProG		Selection of dosing/junior program
	Pro 1	Simple scales without dosing functions
	do 1	Filling 2 components
	do 2	2 dischargers
	do 3	Filling 1 component (Out 1). 1 discharger (Out 2)
	do 4	Filling 2 components. Start via input (In 1)
	do 5	2 dischargers. Starting via input (In 1)
	do 6	Starting component 1 (Out 1) via input 1 (In 1)
		Starting component 2 (Out 2) via input 2 (In 2)
	do 7	Starting discharger 1 (Out 1) via input 1 (In 1)
		Starting discharger 2 (Out 2) via input 2 (In 2)
	do 8	Starting component (Out 1) via input 1 (In 1)
		Starting discharger (Out 2) via input 2 (In 2)
	do 9	Starting component (Out 1) via input 1 (In 1)
		and then discharge (Out 2)
	do 10	Starting component 1 (Out 1) via input 1 (In 1)
		Output 2 (Out 2) switches at 0 kg
	do 11	Starting component (Out 1) via input 1 (In 1)
		and then discharge (Out 2)
		After alarm starting via input 2(In 2)
	do 12	1 discharger (Out 1) fast entry
		(if the quantities to be discharged always differ)
		with alarm contact (Out 2)
	do 13	Filling 1 component (Out 1) fast entry
		(if the quantities to be filled always differ)
		with alarm contact (Out 2)
	do 14	15 different quantities are filled via one component (Out 1)
	do 15	Currently no function
	do 16	Starting component 1 (Out 1) via input 1 (In 1) or start button
		with alarm contact (Out 2)
		Stop process via input 2 (In 2)
	do 17	Starting discharger 1 (Out 1) via input 1 (In 1) or start button
		with alarm contact (Out 2)
		Stop process via input 2 (In2)
	do 18	Filling 1 component (Out 2) as soon as weight is less than minimum weight
	do 19	Filling 1 component (Out 1) as soon as input 1 (In 1) is set
	Jun 1	Filling 2 components
		Discharging with junior function
	Jun 2	Filling 1 component (Out 1)
		Discharging (Out 2) with junior function
	Jun 3	Junior function without switching contacts
	Jun 4	Currently no function

9 Input of quantities for components and dischargers

12345	(+) →	CO 1	(+) →	CO 2	(+) →	GES 12345
		Start/Stop Enter		Start/Stop Enter		
		00000		00000		
		Start/Stop Enter		Start/Stop Enter		
		CO 1		CO 2		
		→0← ESC ←		→0← ESC ←		

e.g.:

Display *12345*

then button (+) →

CO 1 appears

then button Start/Stop Enter

00000 appears

enter a value via the arrow buttons, then press Start/Stop Enter

CO 1 appears

then button →0← ESC ←