



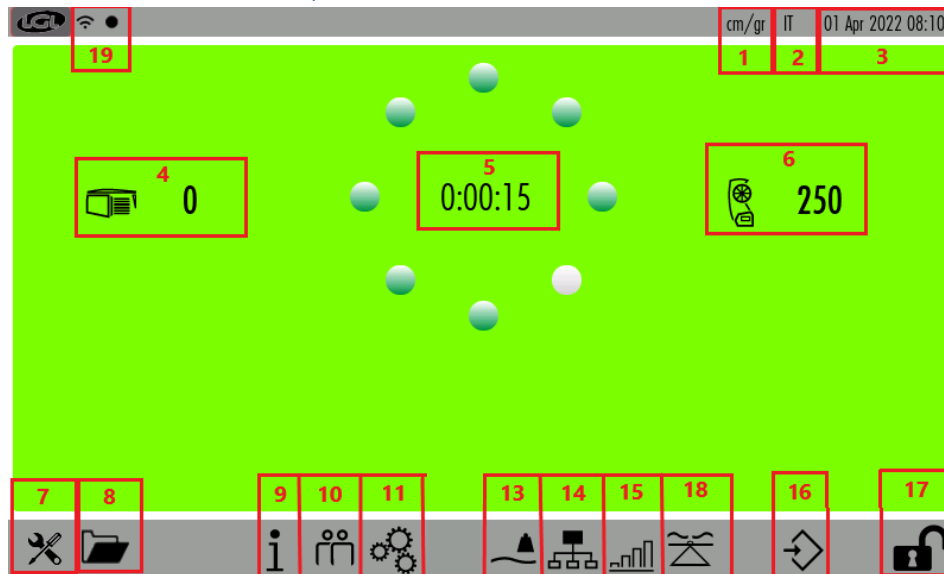
Author of manual: Walter Cuter

Summary

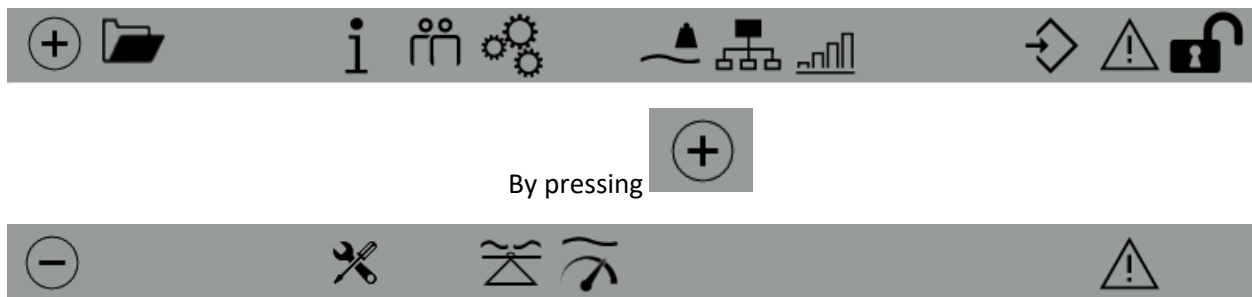
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1. MAIN SCREEN



1.1 MACHINE IN RUN STATE (MAIN SCREEN BACKGROUND COLOR IS GREEN)



Or



Pic. 1

- 1= Unit of measure (to modify press settings icon 11 )
- 2= Language (to modify press settings icon 11 )
- 3= Date
- 4= Number of LGL storage feeders connected
- 5= Timer (It tells from how long the machine is running or it is standing. It resets when the machine changes state RUN-STOP)
- 6= Number of LGL POSITIVE feeders (TWIN or SPIN) connected
- 7= Smart Utility function (see chapter 3)
- 8= Open stored configuration files
- 9= Information about device (see chapter 4)
- 10= Access level (see chapter 5)
- 11= General settings (see chapter 6)

12= None

13=YCM function (see dedicated chapter)

14= Groups and parameters (see chapter 8)

15= Parameter graph (see chapter 9)

16= Present configurations save

17= Press and hold to lock the screen (useful to clean the screen))

18=SYF function (see chapter 10)


19= Network status:



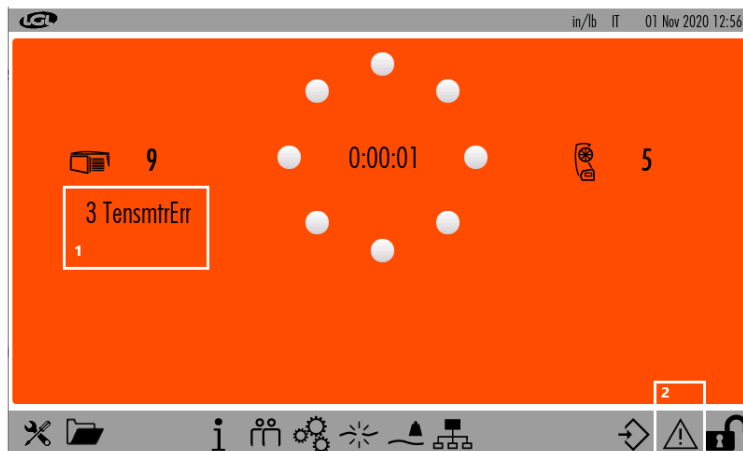
= LAN. The black dot blinks when the device is connected. If there is no connection, the black dot is not present.



=WIFI. The black dot blinks when the device is connected. If there is no connection, the black dot is not present.

Press and hold  (top left button) to take a screenshot (there must be an external USB key inserted). The image will be saved in the “Screenshot” folder.

1.2 MACHINE IN STOP STATE (MAIN SCREEN BACKGROUND COLOR IS RED)



Pic. 2

1= Feeder ID in alarm with short alarm string (in case of positive feeder alarm, the error will be reported on the right)




2= Alarm detail (see chapter 2)

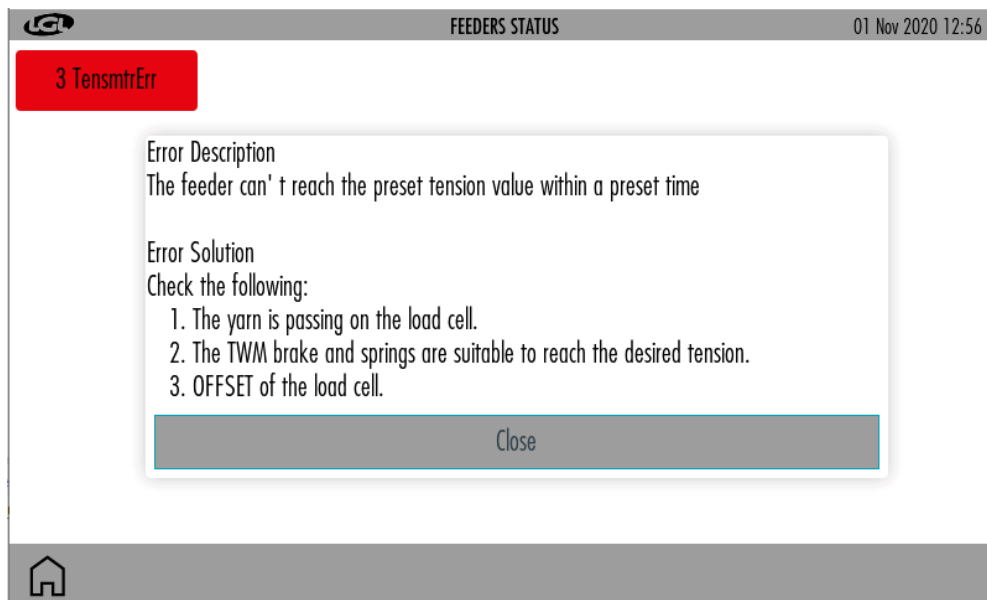
2. FEEDERS IN ALARM

The alarm comes out on the screen as in the following picture



Pic. 2a

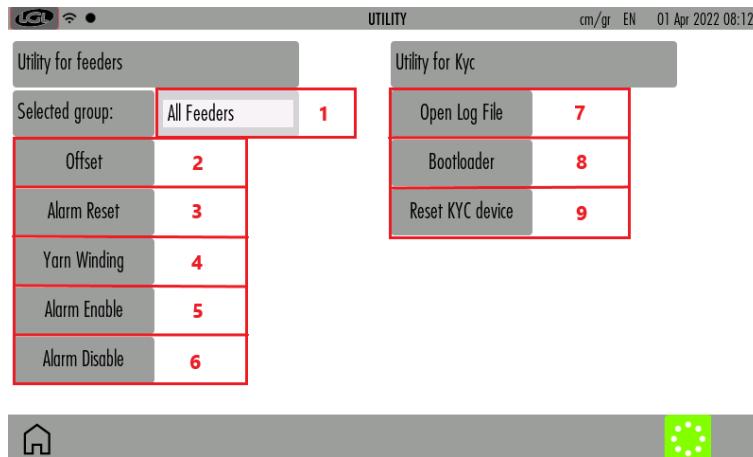
Pressing  and then  or , picture 3 appears. A list of all feeders in alarm shows up. Press each button to have more information (see picture 3)



Pic.3

3. SMART UTILITY FUNCTION

From main screen (picture 1) press  icon:

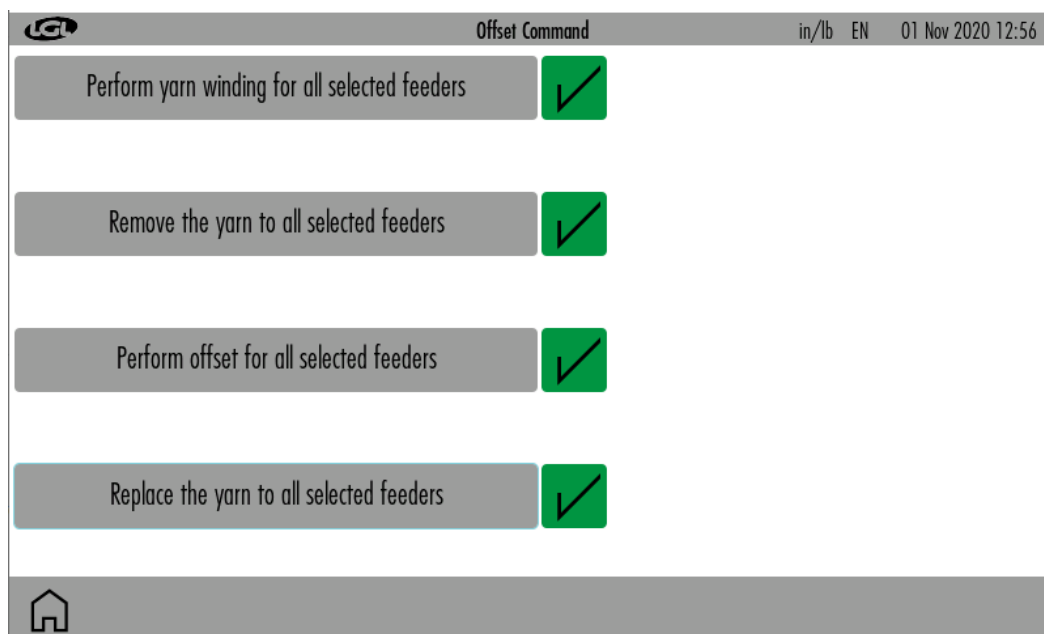


Pic. 4

- 1= Press to select the group of feeders to deal with
- 2= Offset command (see dedicated sub-chapter)
- 3= Alarm reset command: Reset alarm on selected devices
- 4= Yarn winding command: Send yarn winding on selected devices (only on POSITIVE feeders SPIN1 and TWIN)
- 5= Alarm enable command
- 6= Alarm disable command
- 7= Open a log file (located on the SD card)
- 8= Send KYC in bootloader mode (for advanced user only)
- 9= Restart KYC device (for advanced user only)

3.1 OFFSET

Press “Offset” button:



Pic. 5

There are 4 buttons, execute the command written in each button and then press ✓.

First button is valid only on positive feeders TWIN and SPIN. For storage feeders, press this button without any action and go to the second button.

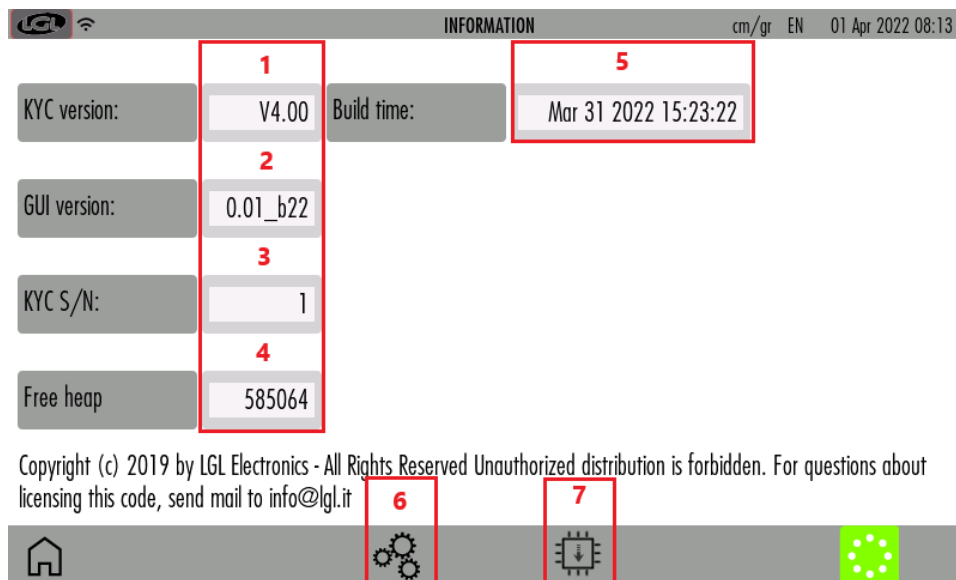
Second button requires to remove the yarn from all load cells. This is very important.

Third button to be pressed only when the action written in the second button has been performed. This button performs the OFFSET command.

Last button reminds to put the yarn back on the load cell.

4. INFORMATION


From main screen (picture 1) press  icon:

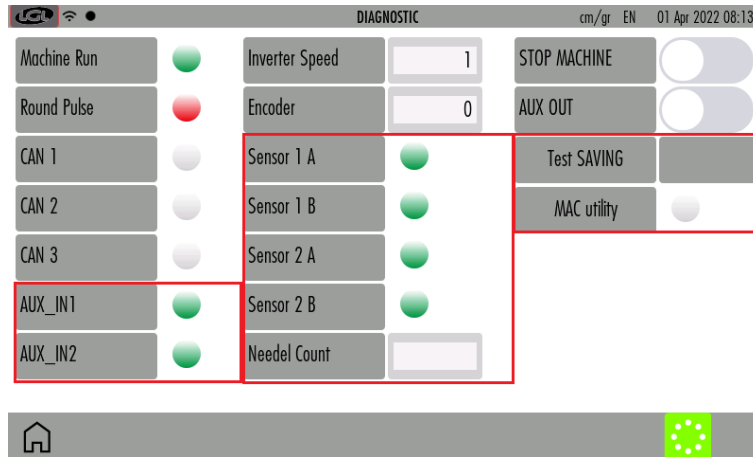


Pic.6

- 1= KYC firmware version
- 2= GUI software version
- 3= KYC serial number
- 4= Free memory available (for advanced user only)
- 5= KYC firmware version build time (point 1)
- 6= Diagnostic page (see dedicated sub-chapter)
- 7= KYC firmware update (see dedicated sub-chapter)

4.1 DIAGNOSTIC PAGE


From picture 6 press  icon:

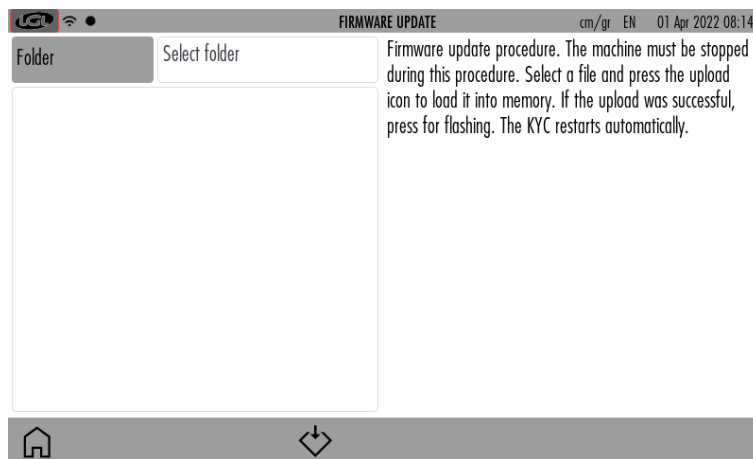


Pic.7

Utilities into red squares are available for advanced user only.


4.2 KYC FIRMWARE UPDATE

From picture 6, press on  icon:



Pic.8

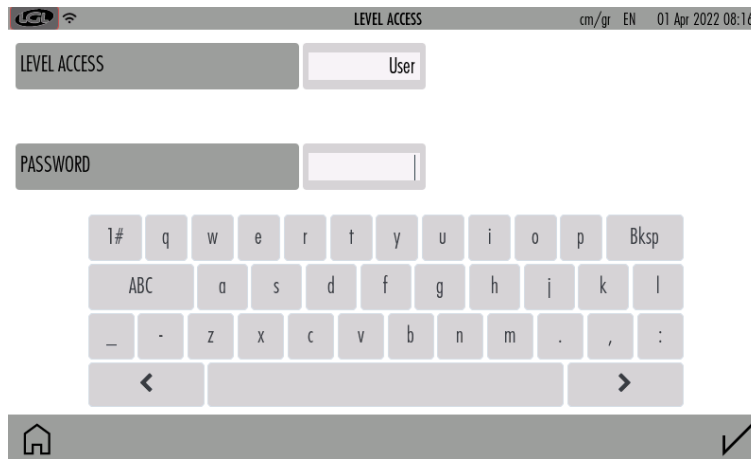
Insert the USB key with the software upgrade file into the KYC USB slot. Select folder and firmware file. The upgrade file must be located into the root folder of the USB key. The file is called “KYCTouch4.XX.src”.

Press  to load new firmware on KYC and follow the instructions.

NOTE: the USB pen file system must be FAT or FAT32.

5. ACCESS LEVEL (FOR LGL TECHNICIANS ONLY)

From main screen (picture 1) press  icon:



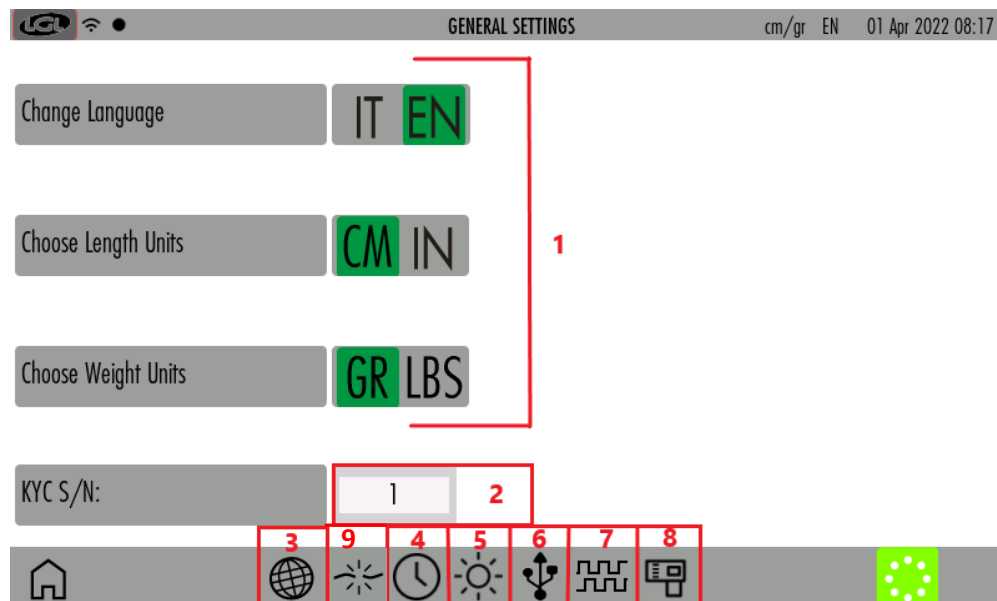
Pic.9

Insert password and press ✓ icon.

To go back to the standard user from advanced user, do not enter any password, just press ✓ icon.


6. GENERAL SETTINGS

From main screen (picture 1) press  icon:



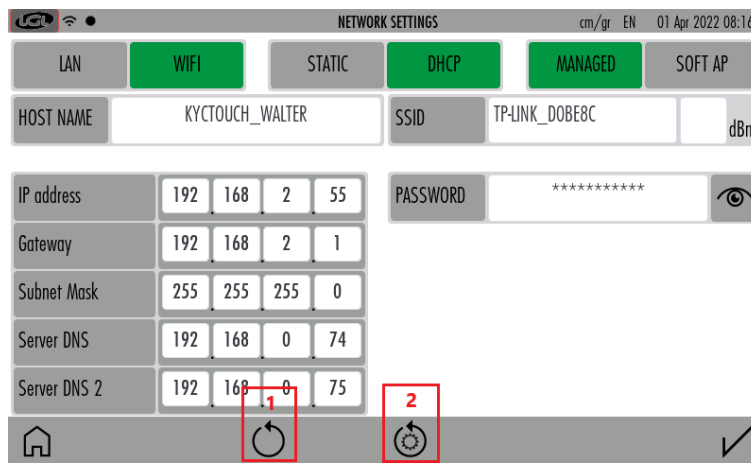
Pic. 10

- 1= Press to change unit of measure
- 2= KYC serial number.
- 3= Network settings (see dedicated sub-chapter)
- 4= Date and clock settings


- 5= Brightness and sleep time settings
- 6= Send file to USB external device. Select the file to send and press > to send it to a USB key device. If you want to delete a file in a SD card, select file and press 
- 7= Encoder settings for advanced user only (see dedicated sub-chapter)
- 8= Modbus settings for advanced user only (see dedicated sub-chapter)
- 9= KLS function (see dedicated sub-chapter)

6.1 NETWORK SETTINGS

Press  icon:




Pic. 11

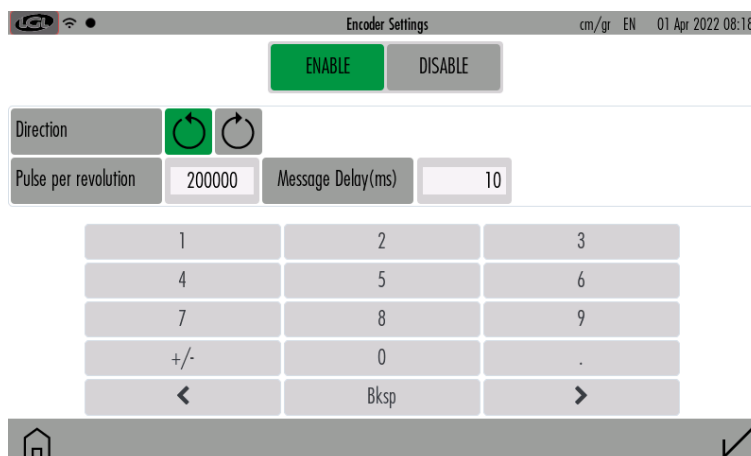
Modify settings and press  to confirm.

1= Press to scan available access points.

2= Press to reset to default network settings. Press  to confirm.

6.2 ENCODER SETTINGS

Press  icon:



Pic.12

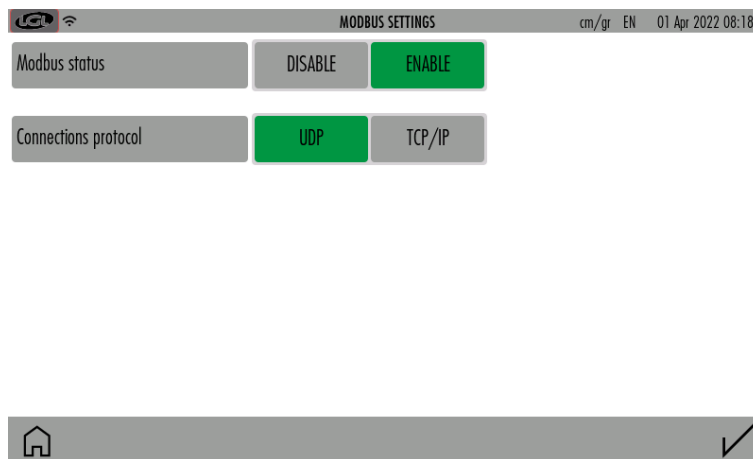
Modify settings and press ✓ to confirm. KYC reboot required.

The ENCODER settings are working only if an external ENCCODER is connected to the KYC device. At the moment the ENCODER is present only with TWIN feeders equipped with SYF function.

6.3 MODBUS SETTINGS

MOD BUS is a communication protocol that allows the LGL feeders system to bidirectionally communicate with an external system (for example an ERP). The protocol must be implemented in the external system to be able to get communication.

Press  icon:




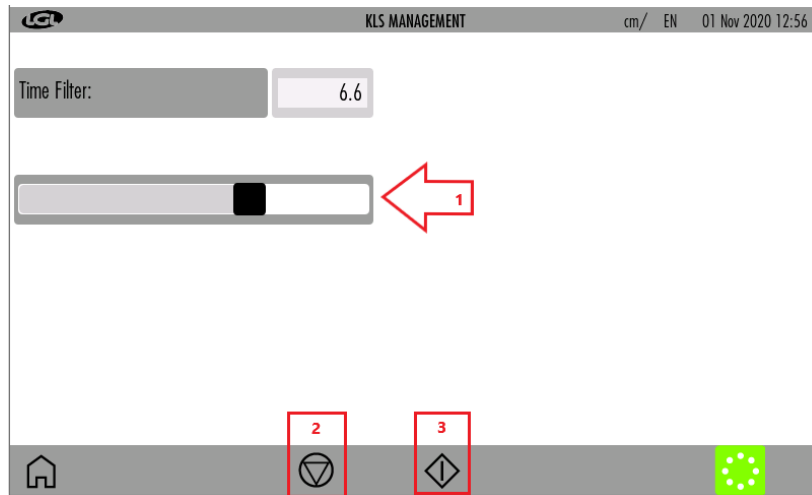
Pic.13

Modify settings and press ✓ to confirm. KYC reboot required.

6.4 KLS FUNCTION

KLS function allows feeders to stop the machine if the yarn gets broken between the feeder and the machine (For more information see feeders' manual). It is implemented on storage feeders.

Press on  icon:



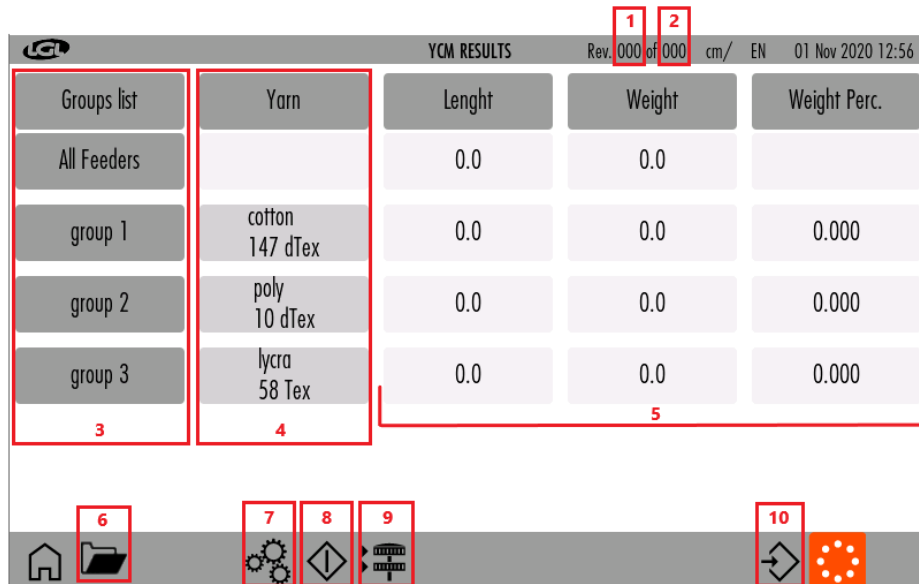
Pic. 14

- 1= Move slide to change KLS “Time filter” (default value=3seconds)
- 2= Stop KLS control (possible only with machine standing). Please pay attention: the machine won’t stop if the yarn is broken after the feeder.
- 3= Start KLS control (possible only with machine standing). This button starts KLS tuning. Start the machine and run it for minimum 10 seconds. Then stop it and start it again.

Time filter correct timing is 3 seconds which corresponds to the time the machine needs to get to production speed after a start.

7. YCM FUNCTION (YARN CONSUMPTION)

From main screen (picture 1) press  icon:



Pic. 15

1= Machine revolution Counter

- 2= Complete pattern revolutions.
- 3= List of feeders' groups. Press on each group button to view data for the feeders in each group (see sub-chapter 7.1)
- 4= Yarn settings for each group. Press "Yarn" to change settings (see dedicated sub-chapter)
- 5= Yarn consumption values
- 6= Open stored YCM settings
- 7= YCM general settings (see dedicated sub-chapter)
- 8= YCM Start/Stop
- 9= Belt feeder settings (see dedicated sub-chapter)
- 10= YCM report save

7.1 YCM: FEEDERS IN GROUP

Press one group button. For example, press "group1" in picture 15. Picture 16 appears:

| YCM RESULT PER GROUP | | | | |
|----------------------|--------------------|--------|--------|--------------------|
| group 1 | Yarn | Lenght | Weight | Lenght 100 needles |
| 2 EC0002 | cotton 147 dTex | 0 | 0 | 0 |
| 3 EC0003 | cotton 147 dTex | 0 | 0 | 0 |
| 4 EC0004 | cotton 147 dTex | 0 | 0 | 0 |
| 5 EC0005 | cotton 147 dTex | 0 | 0 | 0 |

Pic. 16

- 1= Insert a feeder number to view single feeder yarn consumption values.
- 2= YCM Start/Stop
- 3= Press to keep repeating YCM calculation.

7.2 YARN SETTINGS


Press "Yarn" button:

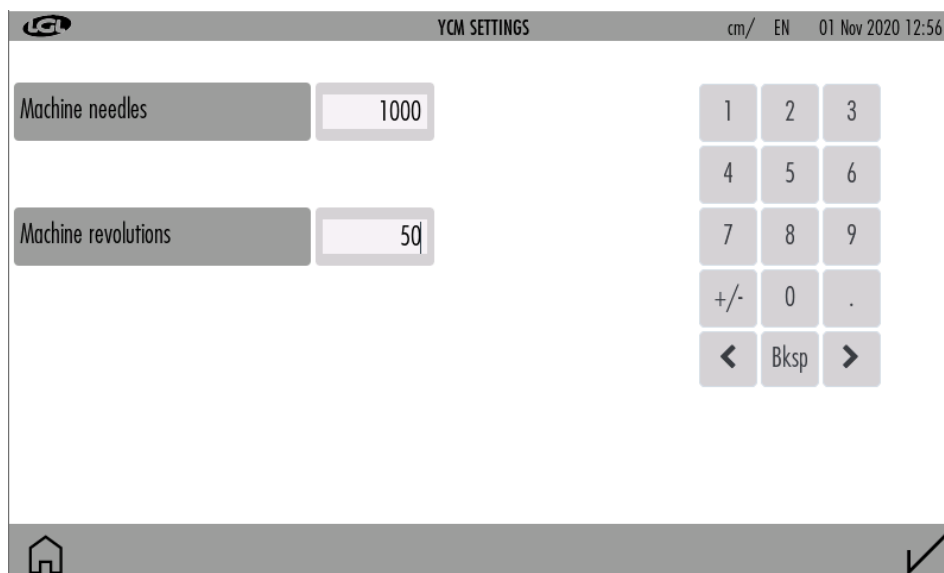


Pic. 17

Insert yarn setting for the feeders in the selected group (in this example “group 1”)

7.3 YCM GENERAL SETTINGS

From YCM main screen (picture 15) press  icon:

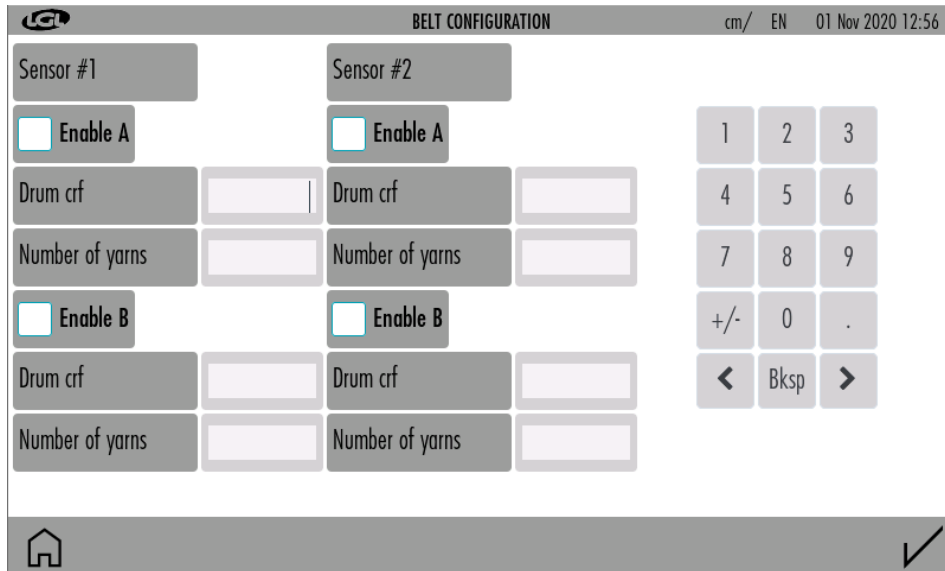


Pic. 18

Insert machine revolution and machine needles to calculate YCM

7.4 BELT FEEDER SETTINGS

From YCM main screen (picture 15) press  icon:



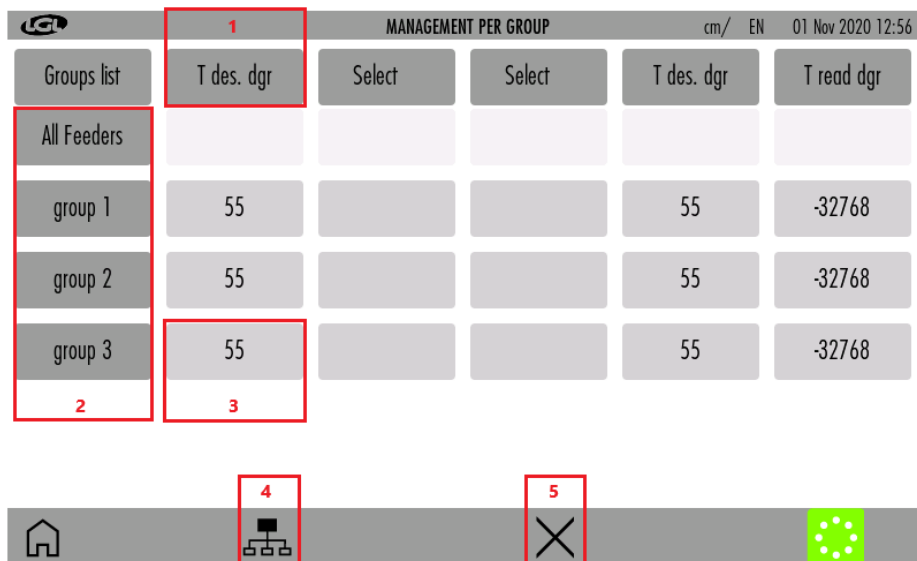
Pic. 19

Check on “Enable A” or “Enable B” to enable belt feeders. Two belts are available.

- Drum crf is the circumference of the belt feeder drum
- Number of feeds: how many feeds are supplying the same type of yarn. Two different types of yarn are possible (one per each belt)

8. READ/WRITE PARAMETERS

From main screen (picture 1) press  icon:



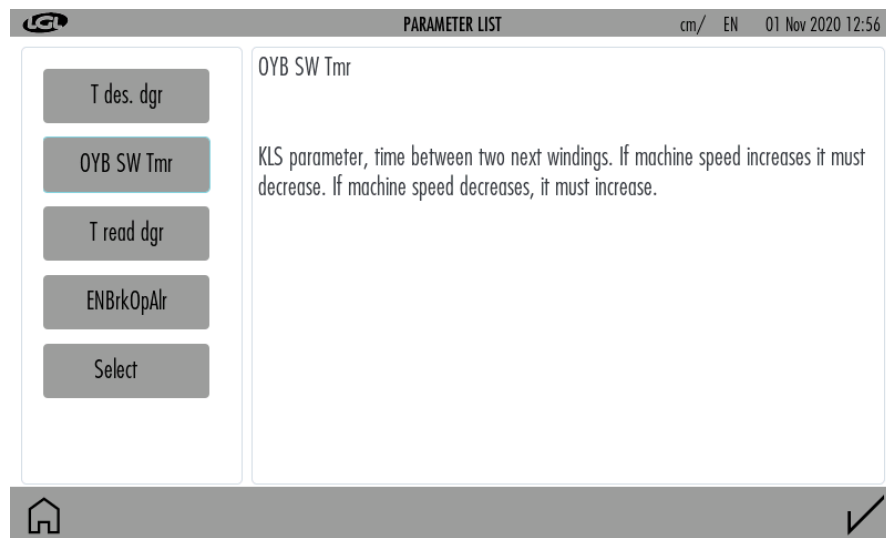
Pic.20

On this page you can see, for each group of feeders, 5 parameters. The reported value is the one read by the first feeder of each group.

- 1= Press the parameter's name or the "Select" button to change the viewed parameter (see dedicated sub-chapter 8.1)
- 2= Press group button to view information for each feeder of that group (see dedicated sub-chapter 8.2)
- 3= Press the button with the value to change the parameter value for all feeders in the group. If it is read-only, a message will appear (see dedicated sub-chapter 8.3)
- 4= Press to create/manage groups (see dedicated sub-chapter)
- 5= Press to delete this configuration

8.1 PARAMETER CHANGE

Press the parameter's name or "Select":



Pic. 21

All the parameters available in the group will appear.

Press on parameter button, right side a description of the parameter appears.

8.2 PARAMETER FOR FEEDERS IN THE SELECTED GROUP

Press group button:

| PARAMETERS MANAGEMENT | | | | | |
|-----------------------|------------|------------|------------|------------|--------|
| group 1 | T des. dgr | T read dgr | ENBrkOpAlr | OYB SW Tmr | Select |
| 2 ECO002 | 55 | -32768 | 284 | 299 | |
| 3 ECO003 | 55 | -32768 | 284 | 299 | |
| 4 ECO004 | 55 | -32768 | 284 | 299 | |
| 5 ECO005 | 55 | -32768 | 284 | 299 | |

| | |
|--------------|-----------|
| Go to feeder | Feeders 4 |
|--------------|-----------|

Pic. 22

- 1= Press to change group
- 2= Press the parameter name or “Select” to change the parameter to view
- 3= Press the button with the value to change the parameter value on the single feeder or all feeders in the group. If it is read-only, a message will appear (sub-chapter 8.3)
- 4= Press and insert feeder number to view single feeder values.
- 5= Amount of feeders in the group

8.3 CHANGE PARAMETER’S VALUE

Press the button with the value to change the parameter value to the single feeder or all feeders in the group:

| CHANGE PARAMETER VALUE | | |
|------------------------|-------------------------------------|-------|
| Feeder: | 5 | 1 |
| Release: | ECO005 | 1 2 3 |
| Parameter | T des. dgr | 4 5 6 |
| Actual Value: | 55 | 7 8 9 |
| Change to all feeders | <input checked="" type="checkbox"/> | 2 |
| Insert new value | | 3 |

Navigation buttons: +/-, 0, ., <, Bksp, >


Pic. 23

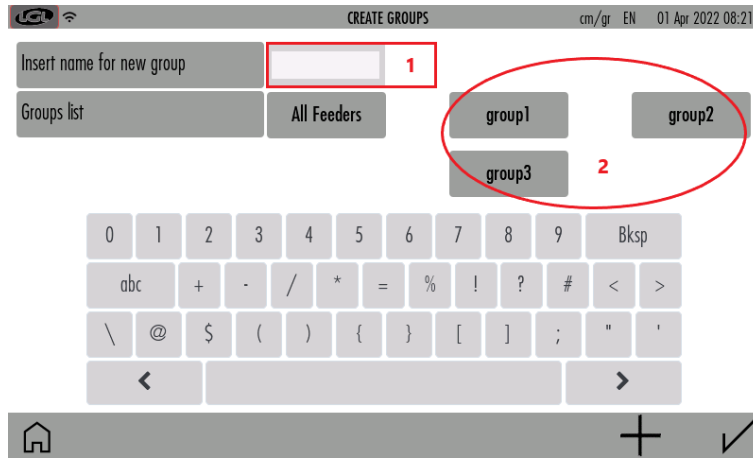
- 1= Feeder number, if you are viewing a specific group, otherwise group name.

2= It is visible only if you are viewing a specific group. If selected, the parameter value will change for all feeders in the group. Otherwise only for the selected feeder (in the example feeder number 5)


3= Insert new value and press ✓

8.4 CREATE/MANAGE GROUPS

From parameters screen (picture 20) press  icon:



Pic.24

- 1= Insert the name of the new group and press  to add it in the list (see dedicated sub-chapter)
2= List of created groups

as soon as all necessary groups have got their names, press ✓ to continue with the next step, which consists in associating each feeder with its group (8.4.1).

To delete or rename a created group, press, and hold the name of the group in the list.

8.4.1 GROUPS ASSOCIATIONS

Picture 25 appears:



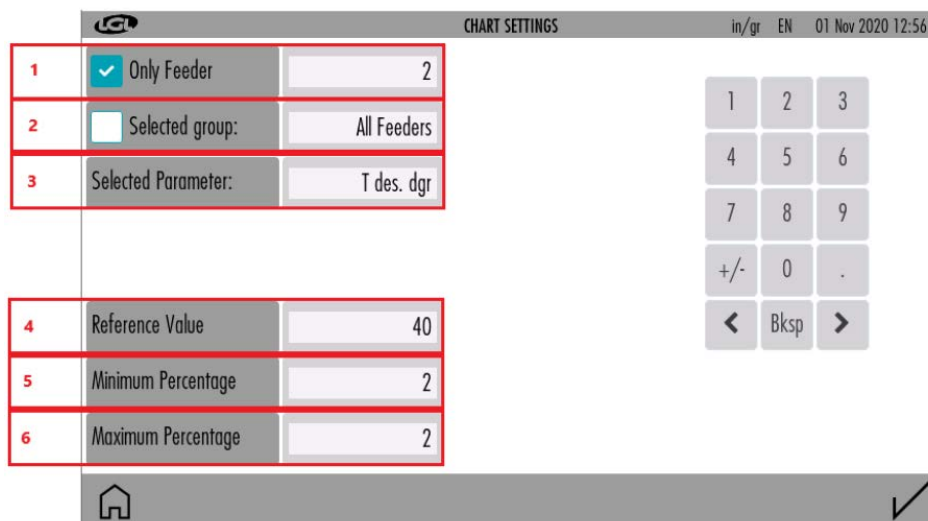
Pic.25

- 1= Group name ready for association. Tap on the feeder square to associate the feeder to the group.
- 2= Change group to associate. Move back and forth to modify.
- 3= Repeat the association to all remaining feeders. To be used in case the association repeats.
- 4= Delete the association

Press on ✓ to confirm association.

9. GRAPH OF PARAMETERS

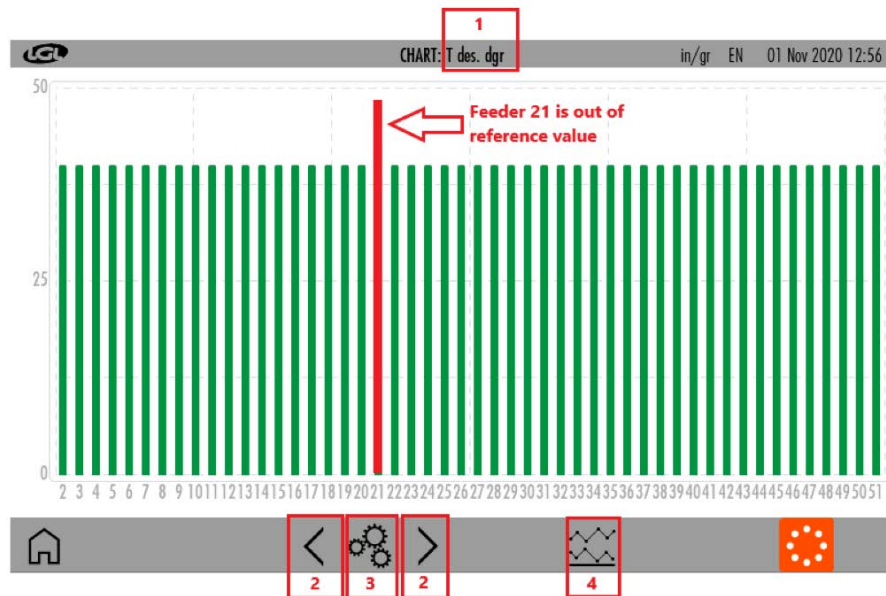
From main screen (picture 1) press  icon:



Pic. 26

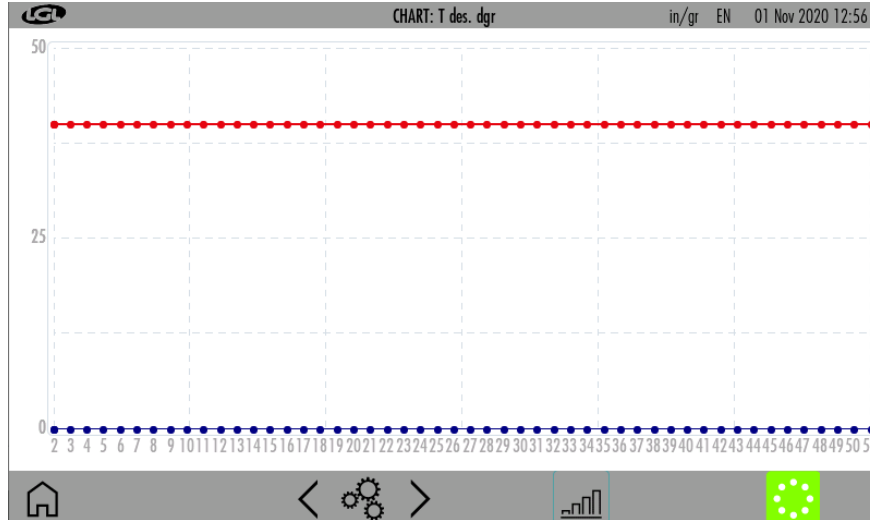
- 1= Select if you want to see the chart of one feeder only.
- 2= Select if you want to see the graph of all feeders in the selected group. To select a group, press on "All Feeders"
- 3= Select parameter.
- 4= It is possible enter a reference value with a control percentage. If the read value differs from the input information, the feeder's bar on the chart will turn red.
- 5= Minimum allowed value (%).
- 6= Maximum allowed value (%).

Press ✓ icon:



Pic. 27

- 1= Parameter shown
- 2= If there are more feeders than the maximum amount the screen allows to show, press to view the others.
- 3= Press to modify chart info (Pic. 26)
- 4= Press to view chart of minimum and maximum read value (Pic. 28)



Pic. 28

10. SYNCHRONOUS YARN FEEDING FUNCTION (SYF)


This function is available only on TWIN feeder equipped with board LGL272. It is not available on any other LGL product.

From main screen (picture 1) press  icon:

| SYF FUNCTION | | | | |
|--------------|----------------|-----------------|---------------|-------------|
| Groups list | Status | Coherence T.des | Desired Value | T.des value |
| All Feeders | Not consistent | Not consistent | 0 | 45 |
| group1 | DISABLE | Not consistent | 0 | 45 |
| group2 | ENABLE | Consistent | 40 | 40 |
| group3 | ENABLE | Consistent | 40 | 40 |
| 1 | 2 | 3 | 4 | 5 |

Pic.29

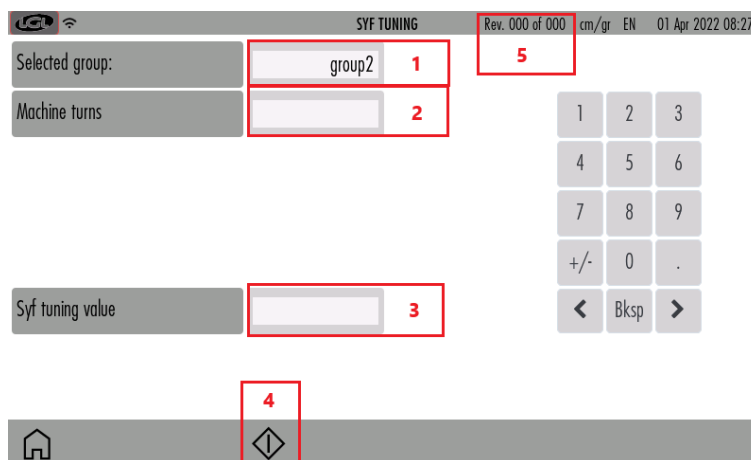
- 1= Groups list. Press on each group tab to perform tuning (see dedicated sub-chapter 11.1)
- 2= Status of synchronous yarn feeding per each group (read only):
 - ENABLED: All feeders in each group provide the same amount of yarn (one value per each group).
 - DISABLED: All feeders in each group work with the tension sensor.
 - Not consistent: The feeders in the group have different SYF values from one another. The calibration procedure must be repeated.

- 3= Coherence of the desired tension value during tuning procedure. All feeders in one group must have the same desired tension during the calibration procedure.
Consistent: All feeders in group have the same tension value
Not consistent: All feeders in the group have different desired tension values. The desired tension values must be modified to be all same for the same group.
- 4= Desired yarn consumption value in cm/revolution. Press to change value. The value can be set through the tuning procedure or it can be written directly in this position.
- NOTE: After pressing on the value, in the next screen by pushing , the SYF function for the group will be disabled and each feeder will work in tension mode.
- 5= Desired tension. Press to change value.

10.1 SYF TUNING

The SYF tuning is necessary to set a constant yarn consumption for each group of feeders.

Press a group tab in picture 29 to perform SYF tuning. See Pic.30:



Pic.30

- 1= Selected group
2= Duration of the SYF tuning procedure expressed in number of machine revolutions.
3= When the tuning procedure is over, the yarn consumption value will be shown here.
4= Press to start/stop tuning procedure
5= The number of machine revolutions will increase from 0 to the preset value during tuning.

When the tuning procedure is over, the yarn consumption value is shown and the symbol  appears.

Press  to send the value to all feeders and to enable the SYF function.

11. MANUAL REVISION

- 00. First revision
- 01. Add new features

12. GUI VERSIONS

- 00. First version of GUI
- 01. Porting to littlevgl 7.7.1
- 0.01_b22. Insert Encoder, Modbus, Network, Syf and other features