

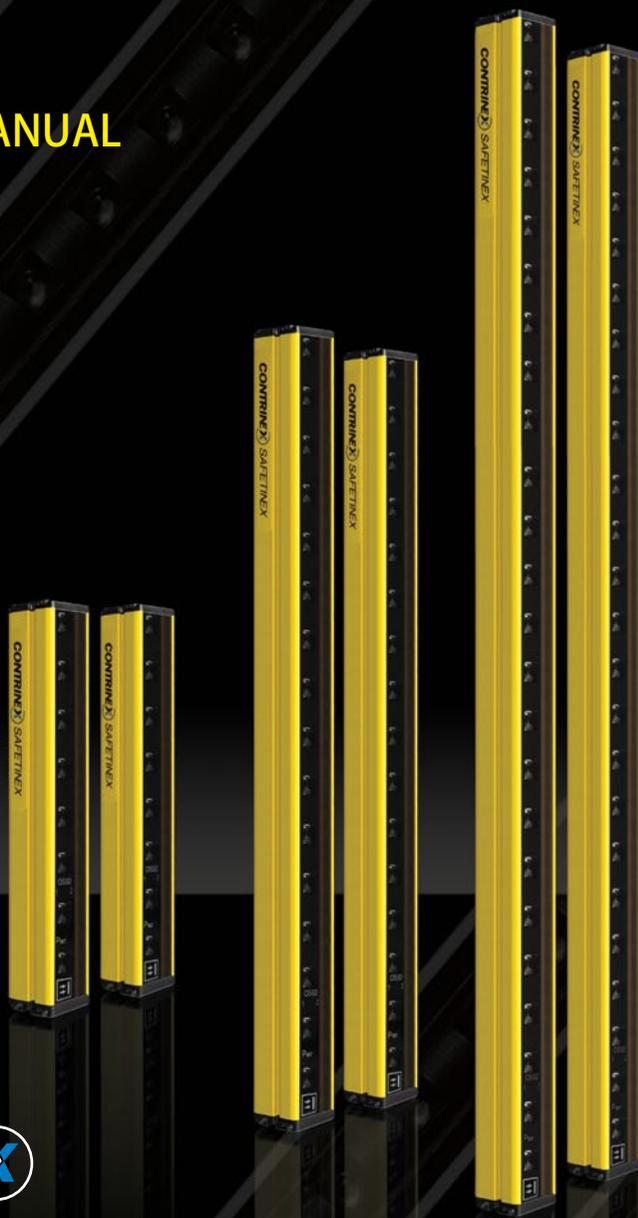
SAFETINEX

SAFETY LIGHT CURTAINS

TYPE 4

YBES SERIES

SOFTWARE MANUAL



ORIGINAL INSTRUCTIONS

EN – This manual is available to download from our website in many language versions, including **English**:

DE – Diese Bedienungsanleitung steht auf unserer Internetseite in vielen Sprachversionen, darunter **Deutsch**, zum Download bereit:

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1. PURPOSE OF THIS DOCUMENT

The purpose of this document is to explain the proper use of the ContriApp application to configure YBES series safety light curtains. It sets out the various steps required to configure all the light-curtain options and shows how data is displayed in the application. This manual does not explain the detailed specification and characteristics of the light curtain, nor its safety principles. If necessary, refer to the **Instruction Manual** for hardware information.

2. TARGET USERS AND REQUIREMENTS

This document is addressed to all users configuring or installing YBES series light curtains. Users should already have read the **Instruction Manual** and understand the functionalities of the light curtain.

Users must have a tablet or smartphone with either Android or iOS and a Bluetooth® 4.1 (or later) communication protocol.

3. SCOPE

This document explains how to configure YBES series light curtains. It is the original version of the **Software Manual**.

4. CONTRIAPP, THE CONFIGURATION APP

ContriApp is the name of the application used to configure YBES series light curtains. A wireless Bluetooth® connection is established between ContriApp and either the receiver or the sender of the light curtain in order to access to the functionalities and configure them.

ContriApp can be downloaded free-of-charge from Google Play (Android devices), Apple Store (iOS devices) and from the Contrinex website (www.contrinex.com).

When ContriApp is installed on the tablet or smartphone, tap the button shown in figure 1 to open the application.



FIGURE 1:
CONTRIAPP BUTTON ON
MOBILE DEVICE

From here, light curtain parameters can be modified and saved. Note that there is no other way to configure the light curtain than through the application. If you wish to have a light curtain already pre-configured from the factory, please contact your local sales company or info@contrinex.com. Note that the light curtain and the device on which ContriApp is running can be separated by about 20 m maximum.

5. GETTING STARTED WITH CONTRIAPP

When you open the App for the first time, please make sure to validate the authorisation requested (Bluetooth® and Location) and read and accept our general terms and conditions. Also please make sure that your Bluetooth® and location signals are turned on on your smartphone. You will then access the "Home" screen of the application.

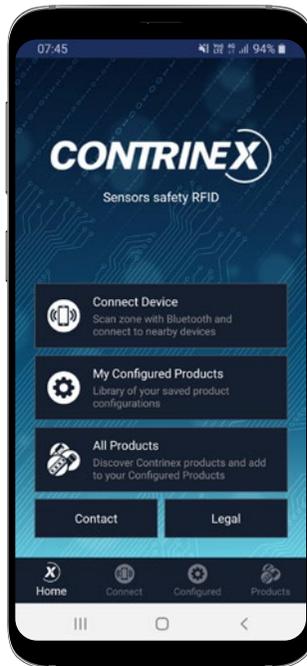


FIGURE 2:
HOME SCREEN ON ANDROID DEVICE



FIGURE 3:
HOME SCREEN ON IOS DEVICE

Five tab icons are displayed on the “Home” screen. Three of them can also be accessed through the bottom bar. Each tab is explained in details below.



PRODUCTS / ALL PRODUCTS MENU

In the Product Menu, the user can select Contrinex products that will work with ContriApp. Specific parameters can then be accessed and explored. In this menu the user can benefit from an offline access to the parameters of the product without having a sample in hand. It is great for simulation and product discovery. At this stage it is also possible to access the datasheet of the product via the Contrinex website or add a specific reference to the configuration menu. The configuration menu will later help to change the parameters of the product and save them.

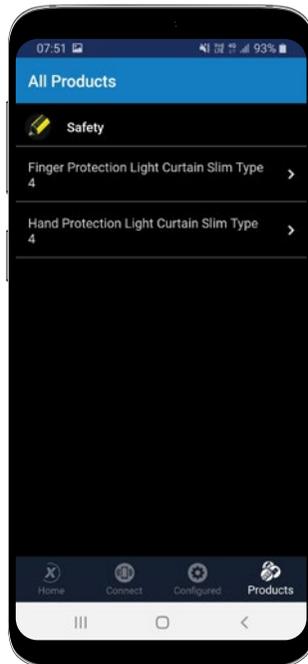


FIGURE 4:
“PRODUCTS” SCREEN ON
ANDROID APP



FIGURE 5:
“PRODUCTS” SCREEN ON iOS APP



MY CONFIGURED PRODUCTS / CONFIGURED MENU

This screen displays all the product that have been configured and saved by the user. It can be used to duplicate a configuration on several devices or to change the parameters offline without any risk of changing the real configuration into the product.

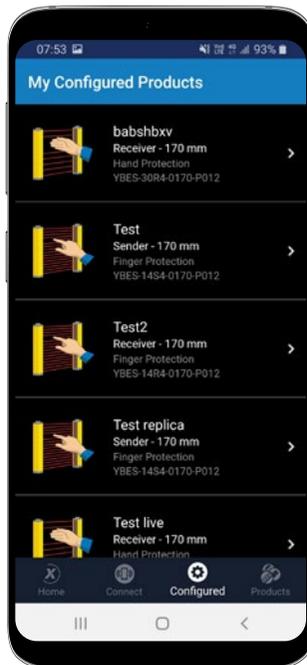


FIGURE 6:
CONFIGURED MENU ON ANDROID
DEVICE

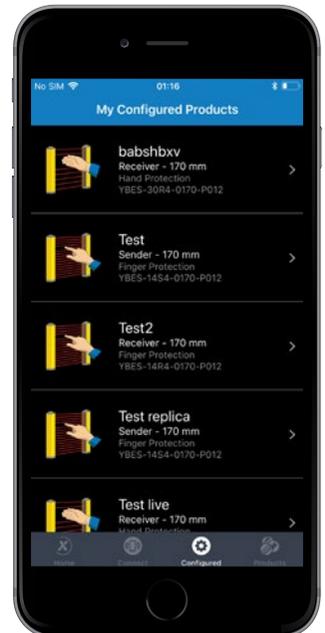


FIGURE 7:
CONFIGURED MENU ON iOS DEVICE



CONNECT MENU

This function allows the user to scan for nearby devices with an active Bluetooth® emitter. Any Contrinex device with a Bluetooth® emitter will therefore be listed here. (Note that Bluetooth® devices that are not Contrinex products will not be listed.) This is usually the easiest way to get connected to a device. Signal strength is indicated by a symbol next to each device. Nearby devices are sorted by signal strength.

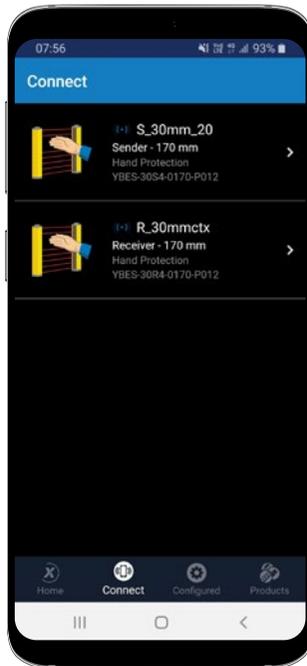
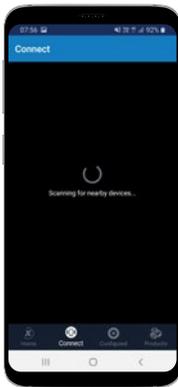


FIGURE 8:
CONNECT DEVICES MENU ON
ANDROID

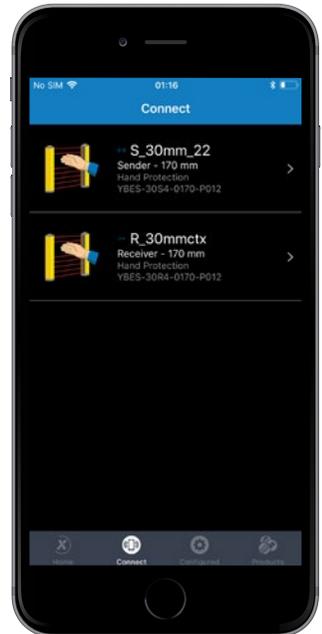


FIGURE 9:
CONNECT DEVICES MENU ON iOS

Contact

CONTACT MENU

This menu is accessible only through the home page and shows the contact details to be used in order to get in touch with Contrinex in case of problem.

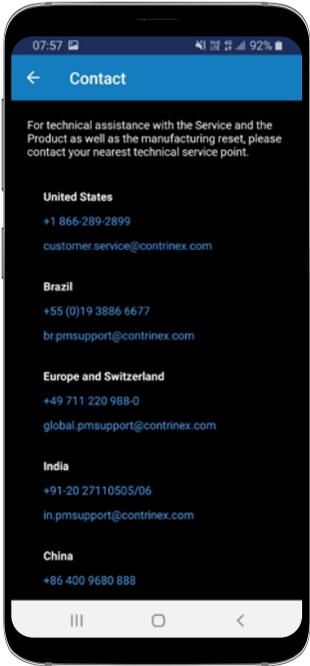


FIGURE 10:
CONTACT MENU ON ANDROID

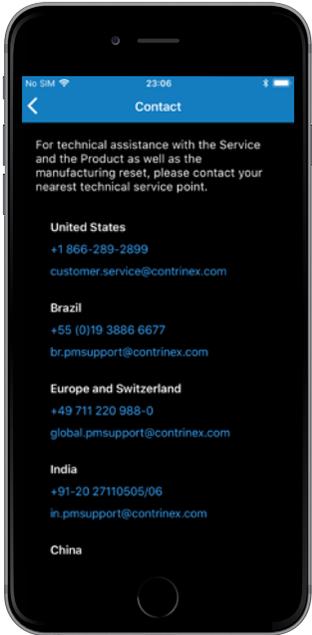


FIGURE 11:
CONTACT MENU ON iOS

Legal

LEGAL MENU

This menu is accessible only through the home page and shows the general terms and conditions of the application.



FIGURE 12:
LEGAL MENU ON ANDROID



FIGURE 13:
LEGAL MENU ON iOS

6. CONFIGURING THE YBES PRODUCT SERIES WITH CONTRIAPP

ContriApp allows the user to configure YBES series light curtains. Once a product has been detected, it is possible to connect to it with the Bluetooth® wireless communication protocol. From the “Connect Device” menu (see figures 8 and 9), a specific product can be selected and configured. Note that for a pair of light curtains, both the sender and the receiver have to be configured separately.

By tapping on one of the products in the “Connect Device” list, the light curtain parameters will be displayed on the screen. **The blue Bluetooth® LED on the light curtain in communication with ContriApp is then blinking**, thus indicating which product is currently connected. This is a useful feature to use in the field, to see which product is connected to the application.

Once connected to the product, the screen shown in figure 14 (Android) or 15 (iOS) is displayed.

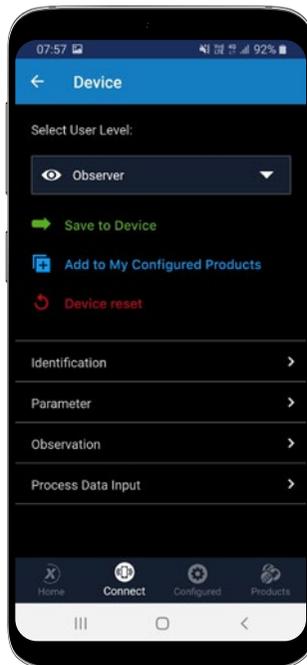


FIGURE 14:
DETAILS OF DEVICE CONNECTED
TO CONTRIAPP ON ANDROID



FIGURE 15:
DETAILS OF DEVICE CONNECTED
TO CONTRIAPP ON iOS

A list of parameters then appears, access is dependent on the assigned user rights. In this screen, the connection to the light curtain is active and the light curtain is still safe and running as planned. Since there is no modification in progress on the light curtain, no interruption of normal operation is shown. Also, the default user level is set to "Observer" which means that at this stage nothing can be modified, this is a default read-only mode.

Four menus are available: Identification, Parameters, Observation and Process Data Input. These menus then give access to sub-menus, the most important being the Parameters menu in which you can change the configuration of the device, see figures 16 and 17. The access to the parameters varies in function of the user level selected and each element of the various menus will be explained in the next chapter.

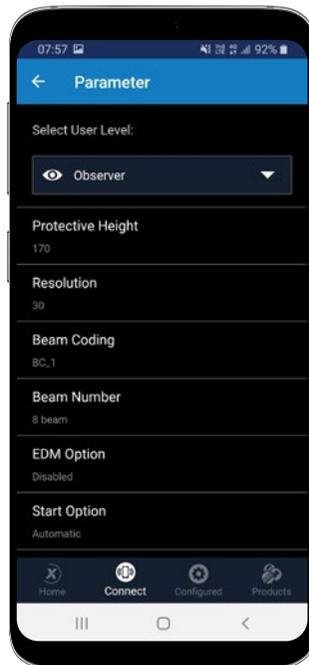


FIGURE 16:
PARAMETERS OF DEVICE CONNECTED
TO CONTRIAPP ON ANDROID

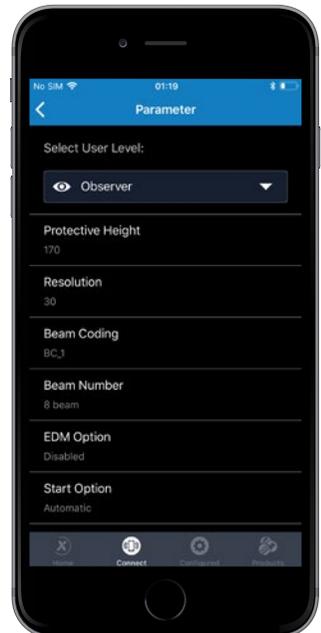


FIGURE 17:
PARAMETERS OF DEVICE CONNECTED
TO CONTRIAPP ON IOS

6.1. SETTING THE RIGHT USER LEVEL

When the product configuration menu is accessed, the default user level is set to “Observer”. This means that the current configuration can be viewed, but parameters cannot be modified. To modify parameters, either “Maintenance” or “Specialist” level access is required. The “Manufacturer” level is reserved to Contrinex SA.

Tap on “Select User Level” to access the selection list shown in figures 18 and 19. Four levels are displayed:

- Observer: read only, default mode, no password required
- Maintenance: read and write non-critical parameters (no access to EDM, start and restart), password required
- Specialist: read and write all parameters (total access to light curtain), password required
- Manufacturer: reserved for Contrinex, password required

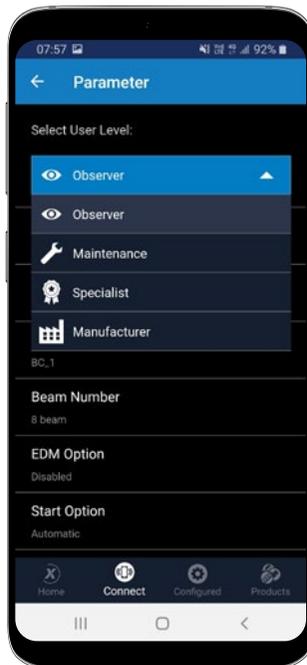


FIGURE 18:
SELECTION OF USER LEVEL
IN ANDROID

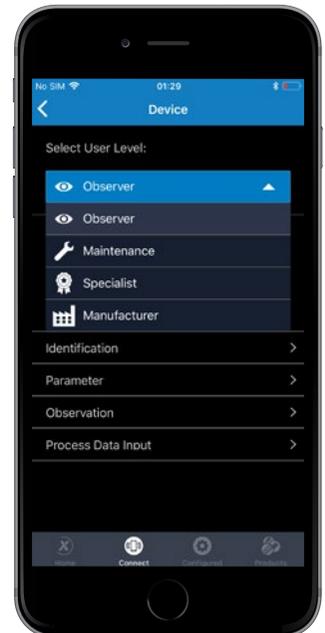


FIGURE 19:
SELECTION OF USER LEVEL IN IOS

To modify a light curtain parameter, the user must select a password-protected user level, either “Maintenance” or “Specialist”. For initial access to the light curtain, these levels have the following default passwords, which must be modified:

- “Maintenance” default password: 123456789ABCDEFO
- “Specialist” default password: 0123456789ABCDEFO

After entering the default password, you will be asked to set a new one. This is to prevent a second, unauthorized user from adding the same light curtain to their mobile device and controlling it.

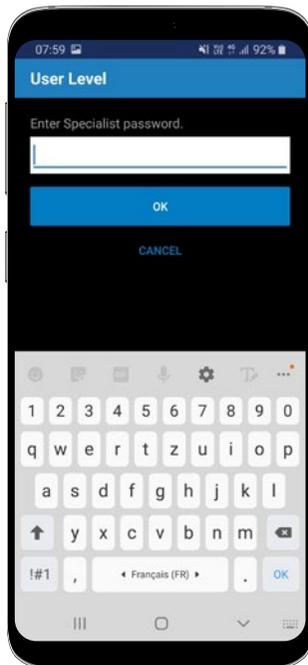


FIGURE 20:
PASSWORD ENTRY TO CHANGE USER
LEVEL ON ANDROID



FIGURE 21:
PASSWORD ENTRY TO CHANGE USER
LEVEL ON iOS

The new password should be personal and accessible only to a dedicated group of users. Choose one that is not easy to guess and manage it securely. If you forget your password, contact Contrinex to reset it. The password must contain at least eight characters, among which two have to be numerical.

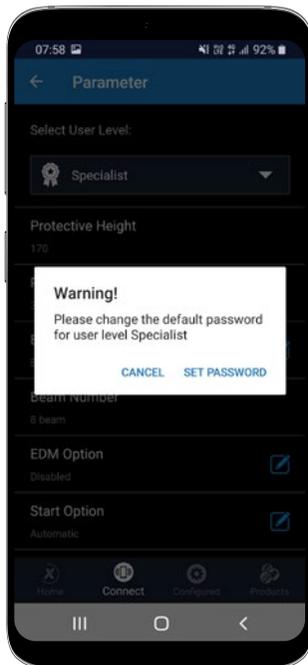


FIGURE 22:
PASSWORD CHANGE REQUIRED
ON ANDROID



FIGURE 23:
PASSWORD CHANGE REQUIRED
ON IOS

If necessary, a user can change an existing password. In the product configuration, select “Passwords” from the list of parameters. Figures 24 and 25 show a “Specialist” level user changing the “Specialist” password. A “Specialist” level user can also change the “Maintenance” password in a similar way. After any change, manage the new password securely. If you forgot your password, please contact your point of contact at Contrinex or refer to the last chapter of this document where contact details are given. You will also find relevant contact details directly in the App under the “Contact” menu.

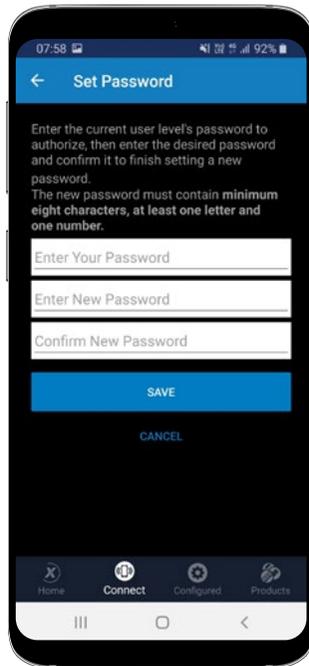


FIGURE 24:
CHANGING THE “SPECIALIST”
PASSWORD IN ANDROID

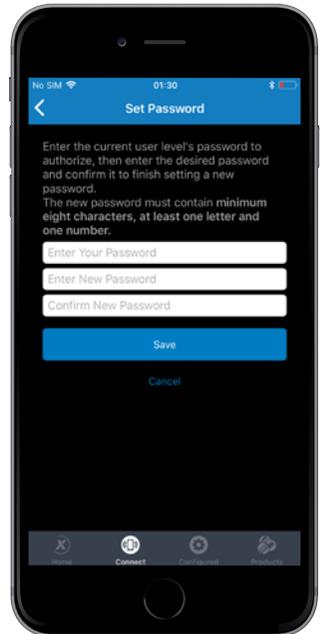


FIGURE 25:
CHANGING THE “SPECIALIST”
PASSWORD IN IOS

6.2. MODIFYING THE PARAMETERS

When a product is accessed in user level “Maintenance” or “Specialist”, the list of parameters displayed includes those which the user can modify.

Individual parameters are explained below. Note that, depending on the user level selected, the parameters displayed on your mobile device may differ from the ones described.

Default values are indicated between brackets () when applicable.

After each and every saved modification of the parameters, the device reboots with its new configuration. It is then up to the user to verify that the situation is safe. Please refer to the hardware manual of the device to ensure that the safety conditions are respected.

6.2.1. USER LEVEL

Choose a different user level to access user-modifiable light curtain parameters. See “6.1. Setting the right user level”.

6.2.2. SAVE TO DEVICE

This option compiles the modified configuration and downloads it to the light curtain. Note that, when you tap on “Save to Device”, the light curtain will become inactive for a short time (less than 2 seconds) and the OSSD will turn off. The light curtain will then restart automatically with the new configuration. During the inactive interval, the light curtain cannot ensure the safety of the environment. Tapping the “Save to Device” button stores parameters in the light curtain and closes the connection.

6.2.3. LOAD FROM MY CONFIGURED PRODUCTS

Tap here to load a previous configuration that has been stored in the application. This saves time when several light curtains must be configured in the same way.

6.2.4. ADD TO MY CONFIGURED PRODUCTS

Once configuration is complete, configuration data can be saved as a model for use on other devices. This is useful when several devices are to be configured in the same way.

6.2.5. PASSWORDS

Tap here to manage the passwords of the maintenance and specialist levels. Depending on access rights, either one or both passwords can be changed.

6.2.6. DEVICE RESET

Tap here to disconnect the product and initiate a hardware reboot on the device side.

6.2.7. RESTORE FACTORY SETTINGS

Tap here to disconnect the product and restore its factory default configuration. Any change saved in the meantime will be lost.

6.3. IDENTIFICATION

6.3.1. DIRECT PARAMETERS

Under this menu, the various device IDs and Vendor IDs of the product can be found. The length of the data (in bits) can also be obtained. This is an informative menu and no parameter can be changed.

6.3.2. VENDOR NAME

The vendor name is the one of the light curtain manufacturer and cannot be changed.

6.3.3. PRODUCT NAME

The product name is assigned by the manufacturer and cannot be changed.

6.3.4. SERIAL NUMBER

This is the unique ID of the product. It is assigned by the manufacturer and cannot be changed.

Note that the serial number of the light curtain is displayed in the format XXXXXXXX_XXX while on the label of the light curtain it is displayed as XXXXXXXX XXX X. This is totally normal, the “_” is not relevant but needed in the App to avoid misinterpretation as the space character is very often not well perceived in IT. The last digit, that is always a letter, is printed on the label of the light curtain but not in the App and this is also not relevant. The most important is that both series of number match between the App and the light curtain, and this is the serial number that is needed to proceed any tracking of the light curtain production.

6.3.5. HARDWARE VERSION

The current version of the hardware used in the product is displayed in this menu. This parameter cannot be changed.

6.3.6. FIRMWARE VERSION

The current version of the firmware used in the product is displayed in this menu. This parameter cannot be changed.

6.3.7. DEVICE NAME

Each product can be assigned a specific name. This can be useful when sorting the full list of products within the application. (e.g. YBES-30K4-0170-P012)

6.3.8. DEVICE ADDRESS

This is the unique software address of the product. It is assigned by the manufacturer and cannot be changed.

6.3.9. RADIO'S TRANSMIT POWER

It is possible in this section to modify the power of the Bluetooth® signal. This has a direct impact on the distance at which the product can be detected and on its power consumption. (4 dbm)

6.3.10. ADVERTISING TIMEOUT

It is possible to set a timer after which the light curtain will stop emitting a Bluetooth® signal. (unlimited)

6.3.11. LAST UPDATE BY

The name and the date of the last saved configuration can be found in this section. This parameter cannot be changed.

6.3.12. BLUETOOTH® PLATFORM CRC

The CRC of the Bluetooth® chip can be obtained in this section. This parameter cannot be changed.

6.3.13. STATUS OF BLUETOOTH®

The firmware version of the Bluetooth® chip can be obtained on this section. This parameter cannot be changed.

6.4. PARAMETER

6.4.1. PROTECTIVE HEIGHT

The value displayed under this field is the protective height of the light curtain currently under configuration. This parameter cannot be changed.

6.4.2. RESOLUTION

This field displays the resolution of the light curtain. This parameter cannot be changed.

6.4.3. BEAM CODING

Beam coding can be used to prevent cross talk between one pair of light curtains and another mounted in close proximity. It is important to set the same beam code for the sender and the receiver. An LED indicator on each light curtain shows which beam code is selected. Three different codes can be selected through the application. (BC_1)

6.4.4. BEAM NUMBER

This field displays the number of light beams in the light curtain. This parameter cannot be changed.

6.4.5. EDM (EXTERNAL DEVICE MONITORING)

EDM is the abbreviation of External Device Monitoring. This function allows the user to enable or disable EDM functionalities on the light curtain. (disabled)

6.4.6. START OPTION

Tap here to select a manual or automatic start for the light curtain. (automatic)

6.4.7. RESTART OPTION

Tap here to select the manual or automatic restart interlock. The restart interlock is either enabled (manual mode) or disabled (automatic mode). (automatic)

6.4.8. DEVICE PARAMETER CRC

The CRC code of the device can be obtained in this section. Use this information only if requested by the manufacturer. This parameter cannot be changed.

6.5. OBSERVATION

6.5.1. DEVICE STATUS

This field displays device status according to the possibilities listed below:

- Device is operating properly
- Failure

6.5.2. USER LEVEL STATUS

Provide the information on which user level the product is being used. Use this menu only if it is requested from the manufacturer.

6.5.3. PARAMETER OF OBSERVATION

Tap here to select beams for observation. Selected beams will then be displayed with the status of each beam set as either ON or OFF. **IMPORTANT:** this parameter can also be changed in observer mode and once a change has been done, it is not necessary to click on “Save to device”, the new setting in this case is automatically saved and displayed in the menu “Process data input”. If you click on “Save to device”, you might see an error code popping up as this is not considered as a change of configuration and the light curtain will return an error message saying that nothing was modified. So once you have selected the beams or beam block you would like to display, just move to the “Process data input” menu to see the result. (observe beam bloc #1)

6.5.4. STATUS OF SYSTEM CORE

Use this menu to obtain the various CRC values of the product and get more details on potential error code. Use this menu only if it is requested from the manufacturer.

6.6. PROCESS DATA INPUT

This part of the application is only informative. It displays various parameters that were changed before hand and provides some further information like for example the status of each beam within the bloc that was

selected under “Parameter of Observation”. It is very useful during the alignment procedure of the sender and the receiver element of a light curtain. The status of the OSSDs are also displayed in this section. The entire list of parameters cannot be changed.

The unique feature in that section relies in the fact that all data are live data and react immediately to any change on the product. Again, this is very useful during the alignment process or to understand which beam is currently interrupted. Note that such data are more interesting for the receiver light curtain. On the sender light curtain there is not much to see.

7. IN CASE OF PROBLEMS

If you have problems operating the software or changing the parameters of the light curtain, please contact your sales office or one of the following addresses:

COUNTRY	PHONE	E-MAIL
USA	+1 866-289-2899	customer.service@contrinex.com
Brazil	+55 (0)19 3886 6677	br.pmsupport@contrinex.com
Mexico	+52 55 56 110 110	mx.pmsupport@contrinex.com
Europe	+49 711 220 988-0	global.pmsupport@contrinex.com
India	+91-20 27110505/06	in.pmsupport@contrinex.com
China	+86 400 9680 888	cn.pmsupport@contrinexsensor.cn
Rest of the World	+49 711 220 988-0	global.pmsupport@contrinex.com

TROUBLESHOOTING

MESSAGE	POTENTIAL CAUSE	MEASURES TO CLEAR ERROR
Maintenance Required	The light curtain is in lock out mode	Power off and power on again the light curtains
Service temporarily not available	The initialisation of the light curtain is not finished and ContriApp sent a request too early	Close ContriApp and open again
An unexpected error occurred	Bluetooth connection with the light curtain failed	Close ContriApp and open again
No parameter to save!	No data were changed before pushing a new configuration file into the light curtain	Disconnect the light curtain from ContriApp and reconnect again, do not attempt to save parameters to the device if none were changed
Impossible to save parameters!	Bluetooth connection is not stable	Disconnect the light curtain from ContriApp and reconnect again
Error System Command!	ContriApp is not working properly	Close and restart ContriApp



CONTRINEX

ALL OVER THE WORLD

EUROPE

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Austria
Belgium*
Croatia
Czech Republic
Denmark
Estonia
Finland
France*
Germany*
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Hungary
Ireland
Italy*
Luxembourg
Netherlands
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Australia

MIDDLE EAST

Israel
United Arab Emirates

*Contrinex subsidiary

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