



CONTROL GSM

2 / 4 - CHANNEL GSM RECEIVER

manual

ver.2.0



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1. GENERAL INFORMATION

CONTROL GSM is a 2/4-channel receiver that enables remote control of automation using a telephone. The control is performed using a CLIP (Calling Line Identification Presentation) connection, sending an SMS with an appropriate command or via a dedicated Control GSM Widget application for Android devices.

Management of the receiver is performed using a MemoManager application (version 2.1a) and MEMO service programmer, or via SMS sent to the SIM number of the receiver. In order to simplify the configuration of the device, it is recommended to use the dedicated applications Control GSM (available on the manufacturer's website) and Control GSM Basic (available in the Google Play store). The applications allow you to configure and control the receiver in a simple and intuitive way without the need to manually enter commands.

The receiver has two relay outputs for connecting automation devices. Additionally, it is equipped with 3 information inputs for connecting automatic status sensors (e.g. limit switch).

It is possible to extend the functionality of the receiver with two additional radio transmitting channels, operating at 433MHz or 868MHz, by connecting an additional 2CS or 2CS868 radio module, available as an option from the manufacturer. The module works as a two-button radio transmitter, enabling control of the DTM433MHz or DTM868MHz series receivers from the phone.

2. TECHNICAL DATA

• power supply	12 ... 24V AC / DC \pm 10%
• current consumption	300mA
• memory capacity	4000 subscribers (including 1 super administrator)
• receiver relay outputs (type / quantity / maximum load)	NO or NC / 2 / 1A 24V AC or DC
• radio outputs	2, optional 433MHz radio module or 868MHz
• information inputs	3, programmable NO / NC type, minimum violation time 1s
• operation mode of outputs	bistabilny, monostabilny
• back-up time adjustment in monostable mode	1s to 65535s, with a resolution of 1s
• mobile network frequency	900/1800 MHz
• antenna	omnidirectional rod antenna with 3dBi gain, terminated with a male SMA plug; (GSM-3G, broken bar, 850/900/1800/1900/2100 MHz), the transition antenna cable terminated with a U.FL female plug and an SMA female socket.
• operating temperature	-20°C / +55°C
• installation	outdoor installation in splash-proof IP-54 plastic housing or in housings of other devices
• external dimensions of the housing / receiver plates (width x length x height)	72x132x41mm / 58x88x27mm

3. CONSTRUCTION, ASSEMBLY AND INSTALLATION

3.1 Construction of the receiver

The receiver consists of a splash-proof surface-mounted housing with a screw-in GSM antenna and a main board. The main board (Fig. 1) has an executive system based on two relays and screw connections for connecting the supply voltage, controlled devices and sensor outputs. There is a memory on the board on the socket. Placing the module on the socket makes it easier to transfer the memory to another receiver, for example in the event of a device failure. The memory contains receiver configuration data and a database of saved user numbers.

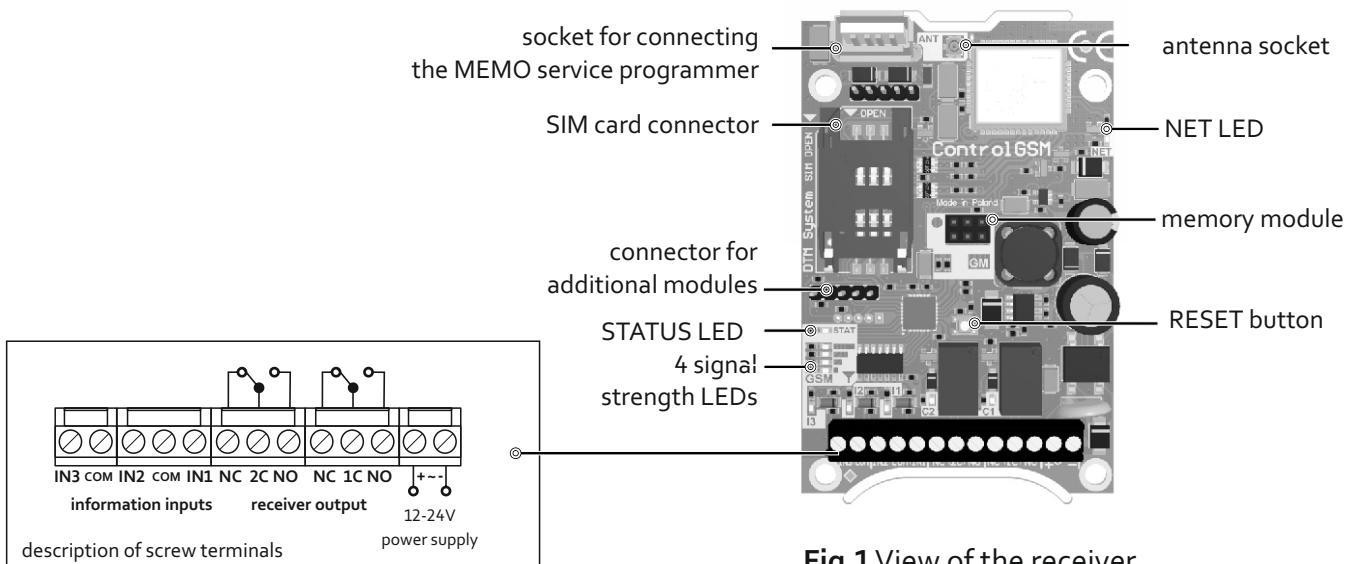


Fig.1 View of the receiver with the description of the pins

3.2 Assembly of the receiver

The receiver is delivered in a dedicated IP-54 surface-mounted housing intended for outdoor installation. Make sure that the device is installed in places where GSM coverage is reliable. Communication of the receiver with the GSM network is signaled by the blinking of the NET LED. The GSM network coverage is indicated by four signal strength LEDs on the receiver's board (Fig. 1). Operation at the edge of the range may have a negative impact on the correct operation of the device. The receiver is factory-equipped with a GSM antenna. In case of poor coverage of the GSM network, an external antenna should be used instead of the one supplied with the receiver. The receiver can also be mounted directly in the housing of another device.

Before mounting the receiver, mount the GSM antenna (Fig. 2).

Correct installation should be performed in accordance with the points below.

- Step 1: Remove the receiver board from the housing.
- Step 2: Prepare the opening in the housing. Break out (e.g. with a screwdriver) the weakening in the upper right corner (Fig. 2a).
- Step 3: Put the antenna cable through the hole with the washer and O-ring on (Fig. 2b-1).
- Step 4: Put the toothed washer and screw the nut onto the antenna socket protruding from the housing (Fig. 2b-2).
- Step 5: Direct the connector at the end of the antenna cable to the right (Fig. 2b-3).

- Step 6: Tighten the nut on the antenna socket with the power to guarantee stable positioning (Fig. 2c). Too weak tightening of the nut may cause leakage in the housing and incorrect positioning of the antenna cable.
- Step 7: Fix the receiver board in the housing.
- Step 8: Plug the end of the adapter cable into the antenna socket (Fig. 2-d) on the receiver board (Fig. 1). The antenna plug has the same potential as the neighboring elements, it is allowed to touch them.
- Step 9: Install the antenna (Fig. 2e).

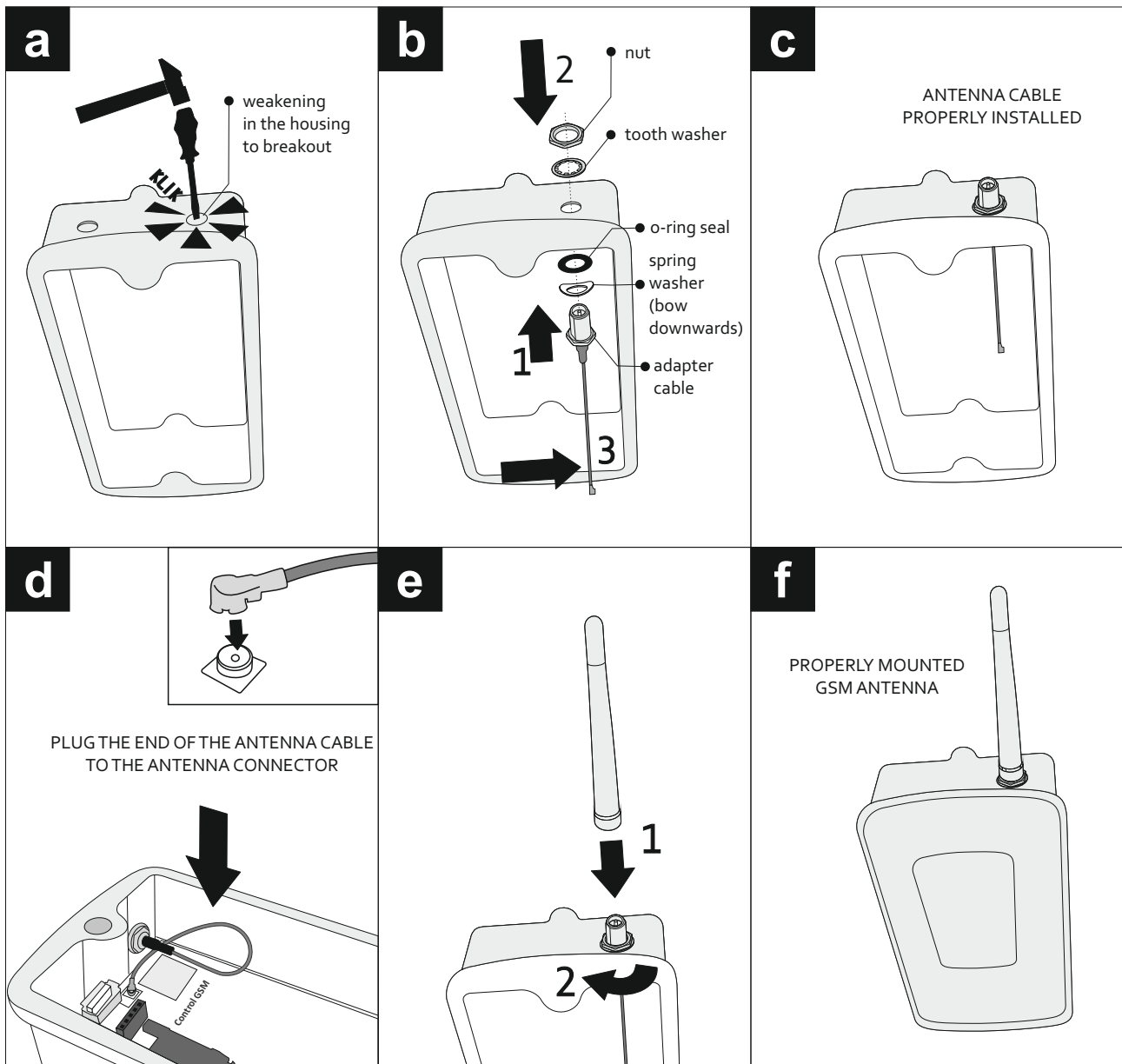


Fig.2 Installation of the GSM antenna in the receiver.

3.3 Connection of the receiver

The receiver has screw terminal blocks for connecting the power supply, controlled automation and sensor outputs.

The power cables should be connected to the terminals "+" and "-".

Connect the controlled devices to the OUT1 and OUT2 outputs of the receiver.

The sensor outputs (e.g. reed switches, limit switch) should be connected between the selected information input of the receiver and the common COM terminal.



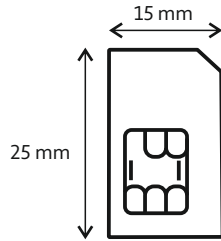
All work related to the connection, installation and removal of additional modules must be performed with the power supply disconnected.

3.4 Installing the SIM card



Before starting the device for the first time, insert an active SIM card into the receiver connector.

The receiver supports Mini SIM cards with standard dimensions of 25x15 mm.



Before inserting the card into the connector, clear the SMS memory and the telephone book. The card should have disabled PIN code and deactivated voicemail and additional services such as. notification that the number is in range. Preparation of the SIM card should be performed using a GSM telephone. The receiver works with prepaid SIM cards, but it is recommended to use subscription or telemetry cards. If you use a prepaid activation, you should take into account the possibility of blocking the card by the operator in the case of high frequency of sending SMS messages by the device. Such a situation may occur when manually adding a large number of subscribers or with high intensity of use of the receiver. In order to reduce the probability of blocking the SIM card by the operator, limit the frequency of sending SMS messages by the device (disabling the welcome SMS, disabling the confirmation function after the control SMS).

The SIM card should be placed in the card connector on the receiver board (Fig. 3).

Step 1: Slide the card holder down towards the receiver screw terminals to unlock the holder.

Step 2: Lift the unlocked holder up.

Step 3: Slide the card into the holder. Pay attention to the correct insertion of the card. The card should be placed with the cut corner on the left side with the contacts facing the receiver board.

Step 4: Place the holder with the inserted card horizontally on the receiver's board.

Step 5: Lock the holder with the card by pressing it against the receiver board and sliding it upwards towards the USB connector.

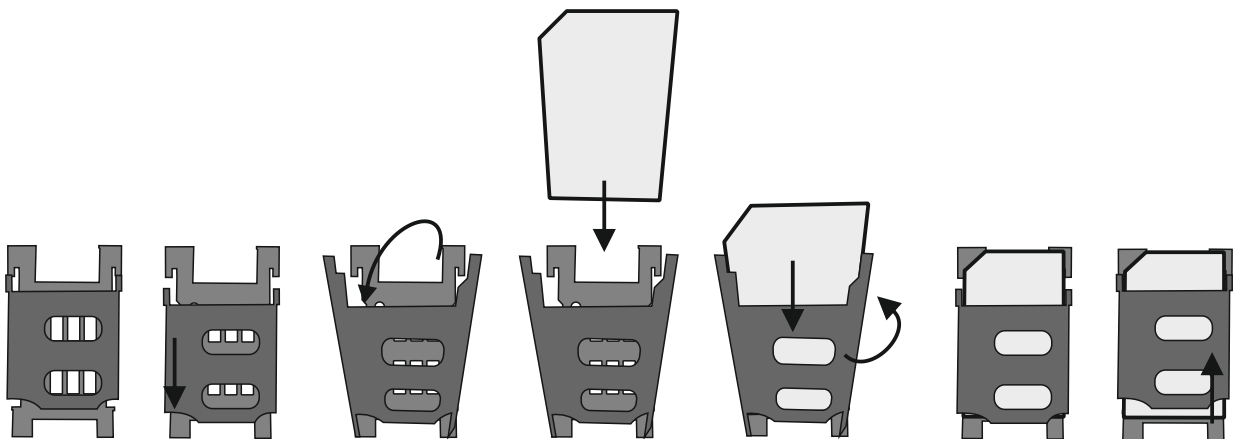
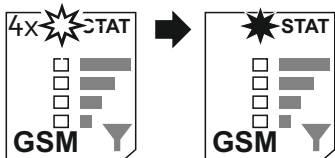


Fig.3 Installing the Mini SIM card in the receiver connector.

A lit STATUS diode signals that the receiver is logged in to the GSM network. The signal strength is displayed on the range LEDs.

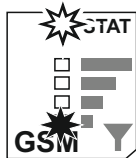
In case of any problems with logging into the GSM or other networks, errors are displayed by the STATUS LED and the signal strength LEDs.

Error signaling:



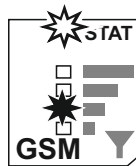
STATUS diode flashes 4 times, then lights up (and we do not receive SMS from the device)

- **the network rejects the sent SMSes.**
Probably no funds on the card or the validity of the account have expired.



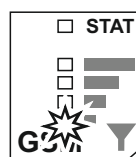
the STATUS LED is flashing and the lowest LED of the signal indicator is on

- **no SIM card or a problem with its initialization**



the STATUS LED is flashing and the second signal indicator LED from the bottom is on

- **SIM card blocked (requests PUK, PUK2 code, or another lock is on (e.g. Antitheft))**



the lowest LED of the signal indicator flashes

- **memory problem (out of memory or memory damaged)**

4. RECEIVER MANAGEMENT

4.1 Receiver settings

4.1.1 Receiver output settings

The receiver has two relay outputs - channels 1 and 2, for connecting devices. In addition, the functionality of the receiver can be extended with two radio transmitting channels: channels 3 and 4 by installing a 2CS or 2CS868 module available as an option from the manufacturer.

The following parameters for the receiver outputs can be set:

- enable or disable channel operation
- setting a user-friendly name of the channel (e.g. Entrance Gate)
- setting the operating mode of channels 1 and 2 in monostable or bistable mode



In the monostable mode, the channel activation time can be set from 1s to 65535s, with a resolution of 1s. The transmission channels 3 and 4 of the optional radio module are permanently set in monostable 1s.

4.1.2 Receiver input settings

The receiver is equipped with three information inputs for connecting sensors, e.g. a limit switch.

The following parameters of the receiver information inputs can be set:

- the user-friendly name of input n
- NO or NC input type
- setting the receipt of an SMS notifying and the content of the notification about the transition of the input from the inactive state to the active state and SMS notifying about the transition of the input from active to inactive state (option available only for users with Super Administrator and Administrator status).

4.1.3 Settings of receiver control methods

The receiver is controlled by a telephone. The control is done by making a CLIP connection or sending an SMS.

You can set the following ways to control the receiver:

- receiver control by all users (guests and subscribers) or only users added to the memory (subscribers)
- CLIP control for "guest" with or without password for outputs 1... 4
- SMS control for "guest" with or without password for outputs 1... 4
- setting to receive notification about delivered control SMS
- setting the receipt of a return SMS with the current status of outputs and inputs

4.1.4 Factory settings. Format the receiver



Formatting the receiver restores the receiver to its factory settings and removes all subscribers from the receiver list.

The receiver can be formatted using the RESET button on the receiver's board. To format the receiver, press and hold the RESET button for 8 seconds. Release the button when the "running line" effect starts (signal strength LEDs).

Formatting of the receiver can also be performed via the Control GSM and Control GSM Basic applications and via SMS command sent to the receiver's SIM number.

Receiver factory settings:

- all receiver channels set in monostable mode with a switching time of 1 second
- all inputs of NO type
- receiver control only by users added to memory (channel control disabled for "guest" users)
- no user-friendly names for output and input channels
- Enabled SMS confirmation presenting the current statuses of outputs and inputs for users added to the receiver's memory
- no users and administrators saved in memory
- the ability to configure the receiver from any number by entering the password in the configuration SMSes: #admin

4.2 Receiver configuration

The receiver is configured using the MEMO service programmer and a dedicated program to operate the MEMO MANAGER programmer, from version 2.1.a, available on the manufacturer's website www.dtm.pl.

Configuration can also be done using SMS messages sent to the receiver's number.

In order to simplify the configuration of the device, it is recommended to use the dedicated applications Control GSM (available on the manufacturer's website) and Control GSM Basic (available in the Google Play store). The applications allow you to configure and control the receiver in a simple and intuitive way without having to manually enter the commands in the phone's SMS outbox.

4.2.1 Configuration using the MEMO service programmer and MEMO MANAGER software

The fastest way to configure the receiver parameters and to add subscribers to the memory is to use the DTM System MEMO service programmer and the MEMO MANAGER software, from version 2.1a, available for download on the manufacturer's website www.dtm.pl.

Configuration consists in creating, using the MEMO MANAGER program, a file with receiver settings and then uploading it to the receiver's memory. Saving (uploading) the settings file consists in connecting the MEMO programmer to the Control GSM receiver with the USB cable and pressing the WRITE button.

The clear interface of the MEMO MANAGER program allows for an intuitive configuration of the receiver.

From the "Receiver settings" tab it is possible to:

- configure of receiver inputs,
- configure receiver outputs,
- setting passwords and receiver control methods for guest users,
- SMS notification setting,
- setting friendly names.

There is also the "Subscribers" tab, which allows you to enter subscriber data in a convenient and fast way manually or from a .CSV file.

4.2.2 Configuration using the Control GSM and Control GSM Basic applications

The receiver can be configured by means of SMS commands sent to the receiver's number. In order to simplify the device configuration using SMS commands, it is recommended to use the dedicated applications Control GSM (available for download on the manufacturer's website www.controlgsm.dtm.pl) or Control GSM Basic (available in the Google Play store).

The applications allow you to configure and control the receiver in a simple and intuitive way without having to manually enter the commands in the phone's outbox.

When you start the Control GSM and Control GSM Basic applications for the first time, enter your phone number on the first screen.

When adding a new receiver to the list in the application, enter the telephone number of the Control GSM receiver.

When using the application for the first time, you should add your number to the receiver's memory, granting administrator rights and setting a new access password.

The default password on the first use of the application is "admin".

4.2.3 Configuration via SMS commands sent to the receiver number

The receiver can be configured via SMS commands sent to the receiver number.

The configuration SMS must always start with the # character and contain the password ending with a comma: #HASLO, then enter the two-part commands <parameter> = <value> separated by a comma.

The size of the characters does not matter for commands and parameters.

Data Format:

```
#PASSWORD,<parameter1>=<value>,<parameter2>=<value>,<parameterN>=<value>
```

Example: #password,sms1=1,clip1=0,time1=30



If no user with administrator status has been added yet, the password is "#admin". In this case, anyone can modify the settings using this password. From the moment you add a user with administrator privileges, only this number can be used to configure the receiver.



It is recommended to start working with the receiver by adding your own number with administrator rights.

- adding a phone number of a user with administrator privileges

ADD=iser_number,VIP="password"

password - up to 16 characters, without diacritics and special signs

Example: # admin, ADD = 48123456789, VIP = "stefek70

From this point, the user number 48123456789 has administrator privileges.

To configure the receiver from its number it is necessary to enter the password # stefek70 before the commands. The password is case sensitive. The administrator can add another 4 administrators using the above command.

- removing administrator rights

MOD=administrator_numer,VIP=""

Example: #stefek70,MOD=48987654321,VIP=""

The configuration commands with description, notes and examples are presented in table 1.

PARAMETER	COMMAND	COMMENTS	EXAMPLE
SETTING THE RECEIVER OUTPUTS			
setting the operating mode of channel n in monostable mode	TIME_n=time	time - from 0 to 65535 seconds n - channels 1 and 2 ! The transmission channels 3 and 4 of the optional radio module are permanently set in monostable 1s	#password,TIME1=20
setting the operation of channel n in bistable mode	TIME_n=0	n - channels 1 and 2	#password,TIME1=0
setting friendly name of output n	NameOUT_n="name"	n - channels 1 ... 4 name - up to 20 characters (without diacritics and special signs)	#password,NameOUT1="Entrance gate"
disabling of channel n	STOP_n=1	n - channels 1 ... 4	#password,STOP1=1
enabling of channel n	STOP_n=0	n - channels 1 ... 4	#password,STOP1=0
SETTING THE RECEIVER INPUTS			
setting the idle state of input n as normally open NO	TYPE_n=NO	n - information inputs 1 ... 3	#password,TYPE1=NO
setting the idle state of input n as normally closed NC	TYPE_n=NC	n - information inputs 1 ... 3	#password,TYPE1=NC

setting a user-friendly name for input n	NameINn="name"	n - information inputs 1 ... 3 name - up to 20 characters (without diacritics and special signs)	#password,NameIN1="Stan bramy"
setting the content of the SMS notification with information about the transition of input n from the inactive state to the active state*	SmsONn="content"	n - information inputs 1 ... 3 content - up to 60 characters (without diacritics and special signs)	#password,SmsON1="Gate open"
restoration of the default content (INn = ON) of the SMS notification with information about the transition of input n from the inactive state to the active state*	SmsONn=""	n - information inputs 1 ... 3	#password,SmsON1=""
setting the content of SMS notification with information about the transition of input n from active to inactive state*	SmsOFFn="content"	n - information inputs 1 ... 3 content - up to 60 characters (without diacritics and special signs)	#password,SmsOFF1="Gate closed"
restoration of the default content (INn = OFF) of the SMS notification with information about the transition of input n from active to inactive state*	SmsOFFn=""	n - information inputs 1 ... 3	#password,SmsOFF1=""
<p>* Receiving SMS notifications about changes in the status of information inputs is available only to users with the Administrator status.</p>			

switching on the response received via SMS informing about the current status of inputs and outputs of the receiver, after each control SMS	AutoStatus=1		#password,AutoStatus=1
switching off the response received via SMS informing about the current status of inputs and outputs of the receiver, after each control SMS	AutoStatus=0		#password,AutoStatus=0
switching on the OK or ERROR response, received via SMS, informing about successful or unsuccessful channel activation, after each control SMS	AutoAck=1		#password,AutoAck=1
switching off the OK or ERROR response, received via SMS, informing about successful or unsuccessful channel activation, after each control SMS	AutoAck=0		#password,AutoAck=0
setting the language of the notification SMS sent to the subscriber after adding him to the receiver	LANG=PL/EN/DE	PL - Polish, EN - English, DE - German	#password,LANG=EN

enabling SMS sending to the subscriber with information about adding to the receiver and available control methods	UserNotify=1	By default, SMS sending information about adding is enabled.	#password,UserNotify=1
disabling SMS sending to the subscriber with information about adding to the receiver and available control methods (the disable function is available only for manual adding)	UserNotify=0		#password,UserNotify=0
SETTINGS OF THE CONTROL WAYS			
enabling control of channel n using CLIP for "guest" type users	CLIPn=1	n - channels 1 ... 4 among the channels 3 and 4 of the optional radio module, only one can be triggered by CLIP assigning channels 3 and 4 will cause only channel 3 to be triggered	#password,CLIP1=1
disabling control of channel n using CLIP for "guest" type users	CLIPn=0	n - channels 1 ... 4	#password,CLIP1=0
enabling control of channel n using SMS for "guest" type users	SMSn=1	n - channels 1 ... 4	#password,SMS1=1
disabling control of channel n using SMS for "guest" type users	SMSn=0	n - channels 1 ... 4	#password,SMS1=0

setting a password for the guest when controlling CLIP	ClipPass="content"	content - only digits 0 ... 9, maximum 16 digits	#password,ClipPass="123"
disabling the guest password when controlling CLIP	ClipPass=""		#password,ClipPass=""
setting a password for the guest when controlling SMS	SmsPass="content"	content - numbers and letters without diacritics and special signs, up to 16 characters	#password,SmsPass="abc123"
disabling the password for the guest when controlling SMS	SmsPass=""		#password,SmsPass=""
PREVIEW OF RECEIVER SETTINGS			
receiver configuration parameters (methods of channel control, channel operation mode settings, setting the idle state of information inputs, settings for receiving return SMS from the device after control SMS, number of subscribers and administrators added)	GET		#password,GET
user-friendly names of receiver inputs and outputs	GETNAMES		#password,GETNAMES

FORMATING THE RECEIVER			
formatting the receiver, restoring factory settings	Format=0417	Formatting the receiver restores the receiver to its factory settings and removes all subscribers from the receiver list.	#password,Format=0417
CONFIGURING PARAMETERS OF USERS ADDED TO THE RECEIVER'S MEMORY (ADMINISTRATOR, SUBSCRIBER)			
<p>The following phone number formats can be used when adding or modifying users: + CCAAAAAAAAAA (e.g. +48123456789) 00CCAAAAAAAAAA (e.g. 0048123456789) CCAAAAAAAAAA (e.g. 48123456789)</p> <p>It is not allowed to use numbers without a country prefix (e.g. 123456789). A number entered without a national prefix will be accepted by the device but will not be recognized by it.</p> <p>When entering individual settings, it is necessary to enter the subscriber's telephone number in the configuration SMS</p> <p>If, when adding a user to the receiver's memory, a given parameter is not given, the given function will be disabled. If a given parameter is not given when modifying a user from the receiver's memory, the given function will remain unchanged.</p>			
COMMANDS			
adding a user to the receiver's memory	ADD=telephone_number,<parameter1>=<value>,<parameter2>=<value>,<parameter N>=<value>		#password,ADD=4812345678,CLIP1=1,SMS2=1,STATUS1=1
modifying the settings of a user added to memory	MOD=telephone_number,<parameter1>=<value>,<parameter2>=<value>,<parameterN>=<value>		#password,MOD=48123456789,clip1=0,sms1=1

removing the user from the receiver's memory	DEL=telephone number		#password,DEL=48123456789
removing administrators from memory CAN ONLY BE PERFORMED BY A SUPER-ADMINISTRATOR	DELADMINS		#password,DELADMINS
user number change	REP=sold number,new number		#password,REP=48123456789,48987654321
removing all users from the receiver's memory	DELALL		#password,DELALL
PARAMETERS			
giving the user administrator rights	VIP="password"	password - up to 16 characters, without diacritics and special signs	#password,MOD=48123456789,VIP="stefek70"
removing administrator rights	VIP=""		#password,MOD=48123456789,VIP=""
enabling the subscriber to control the n channel using CLIP	CLIPn=1	n - channels 1 ... 4 of the channels 3 and 4 of the optional radio module, only one can be triggered CLIP, assigning channels 3 and 4 will cause that only channel 3 will be triggered	#password,MOD=48123456789,CLIP1=1

disabling control of the n channel for the subscriber using CLIP	CLIPn=0	n - channels 1 ... 4	#password,MOD=481 23456789,CLIP1=0
enabling the subscriber to control the n channel using SMS	SMSn=1	n - channels 1 ... 4	#password,MOD=481 23456789,SMS2=1
disabling the subscriber to control the n channel using SMS	SMSn=0	n - channels 1 ... 4	#password,MOD=481 23456789,SMS2=0
enabling the right to use the function of viewing the status of information input n on request	STATUSn=1	n - information inputs 1 ... 3	#password,MOD=481 23456789,STATUS1=1
disabling the right to use the function of viewing the status of information input n on request	STATUSn=0	n - information inputs 1 ... 3	#password,MOD=481 23456789,STATUS1=0
enabling the receipt of SMS notifications about the transition of the information input n from the inactive state to the active state (ONLY FOR ADMINISTRATORS)	INnACT=1	n - information inputs 1 ... 3	#password,MOD=481 23456789,IN1ACT=1
disabling the receipt of SMS notifications about the transition of the information input n from the inactive state to the active state (ONLY FOR ADMINISTRATORS)	INnACT=0	n - information inputs 1 ... 3	#password,MOD=481 23456789,IN1ACT=0

enabling the receipt of SMS notifications about the transition of the information input n from active to inactive state (ONLY FOR ADMINISTRATORS)	INnDEACT=1	n - information inputs 1 ... 3	#password,MOD=4812 3456789,IN1DEACT=1
disabling the receipt of SMS notifications about the transition of the information input n from active to inactive state (ONLY FOR ADMINISTRATORS)	INnDEACT=0	n - information inputs 1 ... 3	#password,MOD=4812 3456789,IN1DEACT=0
AUTOMATIC ADDING OF SUBSCRIBERS TO THE RECEIVER'S MEMORY			
switching on the automatic adding subscribers mode	AUTOADD=PIN,TIME =czas,parametry_opc jonalne	PIN - 4 digits, range 0 ... 9 time - function activation time, given in hours, maximum 48 optional_parameters (subscriber parameters)	#password,AUTOADD =1234,time=12,clip1=1, sms1=1,status1=1
switching off the automatic adding subscribers mode	AUTOADD=0		#password,AUTOADD=0
downloading of the automatic adding subscribers' mode settings	GETAUTO		#password,GETAUTO

Table.1 SMS configuration commands.

4.3 Users

The receiver can be controlled by users added to the receiver's memory (super administrator, administrators and subscribers) and / or users who know the receiver's number and the control password, if it is set, but their numbers are not added to the memory ("guest" users)..

User permissions

Super administrator

The super administrator's phone number is added to the receiver first. Super administrator has the same rights as Administrators, but additionally:

- cannot be deleted by the administrator,
- removing a super administrator is possible only after removing all administrators.

Administrator

The administrator's phone number must be added to the receiver's memory. The maximum of administrator rights can have 4 users.

The administrator has the right to:

- configure receiver settings,
- adding / removing administrators,
- adding / removing / modifying subscriber settings,
- receiving notification of activation and / or deactivation of information inputs,
- control the receiver.

Administrators cannot delete and modify their own numbers, other administrators can do it.

Subscriber

The subscriber's telephone number must be added to the receiver's memory. The receiver's memory allows for the addition of 4000 subscribers.

The subscriber has individual settings entitling him to:

- control the receiver according to the settings configured by the administrator,
- receiving a response about the success or failure of the delivery of the control SMS,
- receiving the current status of inputs and outputs of the receiver after a control SMS or on request.

Guest

Guest is a user whose number has not been added to the receiver's memory. He knows the receiver's telephone number and the password necessary to control the receiver, if set.

In order for the guest to be able to control the receiver, the administrator must enable the control for the guest.

The guest does not receive any return SMS.

The ability to control the receiver by guest users requires that channel control be enabled for guest users. By default, guest control of the receiver is disabled.

4.4 Adding subscribers

Subscribers can be added to the receiver using the MEMO service programmer and the MEMO MANAGER program and via SMS commands entered directly into the phone's outbox or through dedicated applications Control GSM and Control GSM Basic. When using SMS commands, there are two methods of adding subscribers to the receiver - manual and automatic.

4.4.1 Adding subscribers using the MEMO service programmer and the MEMO MANAGER program

This is the fastest method of adding subscribers to the receiver. It consists in creating a file with the list of subscribers and the configuration of the receiver in the MEMO MANAGER program and then saving the file in the receiver's memory. The file is saved by connecting the programmer to the receiver with the USB cable and pressing the WRITE button.

Please note that this operation will not only replace the users in the receiver's memory, but also replace the receiver's settings with the settings from the uploaded file.

You can add, edit and delete subscribers from the "Subscribers" tab of MEMO MANAGER.

You can add manually by entering the data of each subscriber or use the CSV file import option.

To import a CSV file, create a new file and enter the edit option or edit an existing file. In the "Subscribers" tab, press "import subscribers from CSV file". A window will open in which you should select in turn: separator, column with description, column with telephone number and prefix number, and then press "Import". The numbers will be imported into the file.

The CSV file must contain in one line the user's telephone number and, if necessary, the subscriber's identification data. The information must be on one line, separated by a separator. The separators are: ; , . :

The .CSV file can be prepared in a spreadsheet, notebook, or other programs that allow you to save the file with such an extension.

4.4.2 Manual adding of subscribers using SMS commands, Control GSM and Control GSM Basic applications

It allows you to keep full control over the numbers that will be in the memory and will be able to control the receiver. Requires adding each subscriber number manually.

From the Control GSM or Control GSM Basic application, in the Subscribers - Manual tab, enter the subscriber's number and select the methods of channel control by marking the appropriate checkboxes.

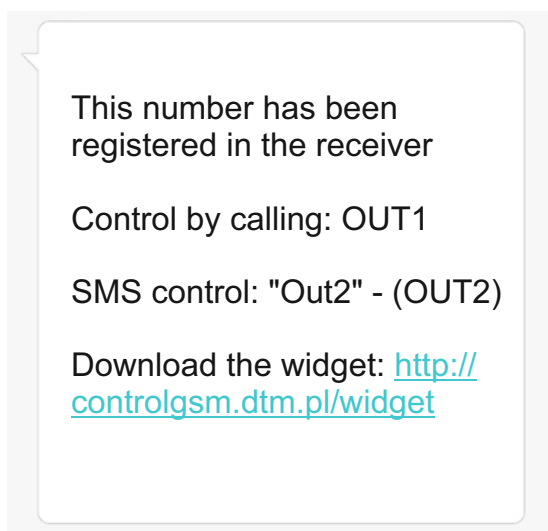
Manual adding of subscribers is also possible via SMS commands sent from the telephone's outbox to the receiver's number.

The order of tasks in the procedure of manual adding of subscribers:

- set your own number as administrative
- configure the receiver parameters (setting the operating modes of channels, passwords, etc.)
- collecting users' phone numbers
- adding each of the numbers using the application or SMS command
- informing users about activities that they must perform to control the device via telephone (e.g. by posting an advertisement).

Each added subscriber will receive an SMS from the receiver number with information in Polish, English, or German about the successful adding of the number to the receiver's memory, available control options, and a link to download the Control GSM Widget application, available for Android devices. In the case of manual adding of subscribers to the receiver, the administrator can disable the function of notifying the subscribers about adding to the receiver.

Example SMS:



The above example shows an SMS received by a manually added subscriber, for whom it is possible to control the OUT1 output with a free CLIP connection and control the OUT2 output by sending an ordinary SMS, payable according to the operator's rates.

EXAMPLE ANNOUNCEMENT MANUAL METHOD

Dear Sir or Madam

from August 20, 2019, it will be possible to open the gate at Brzeska Street and the gate at Lidzbarska Street using a smartphone.

What to do:

- you will receive an SMS from the number + 48xxxxxxxxxx
- add the number to the contacts on your smartphone

For users with **Android smartphones:**

- download and install the widget from the link of the received SMS
- in the widget configuration window, enter the number of the SMS sender and click "Next" (do not enter the PIN!)
- select an available gate and validate
- choose the color of the icon, you can also change its description
- use the widget to open the gate at Lidzbarska Street *
- make a call to the number given above to open the gate at Brzeska Street **

For users with **smartphones other than Android system:**

- send an SMS with the text **OUT2** to the number given above to open the gate at Lidzbarska Street *
- make a call to the number given above to open the gate at Brzeska Street **

* regular SMS will be sent, payable according to the operator's price list

** free call

Dear employees

From June 20, 2019, it will be possible to open the gate and wicket from Brzeska Street and the gate from Lidzbarska Street using a smartphone.

What to do:

- you will receive an SMS with the information that your telephone number has been registered in the receiver. The sender of the message will be the number **+48123456789**.
- Add the sender's number **+48123456789** to the phone book on your phone,
- You can **open the gate at ul. Brzeska, sending SMS** to the above mentioned number* with the text "**out1**"
- You can **open the gate at ul. Brzeska by calling** the above-mentioned number **
- You can **open the gate at ul. Lidzbarska, sending SMS** to the above mentioned number * with the text "**out2**"

* regular SMS will be sent, payable according to the operator's price list

** free call

4.4.3 Automatic adding of subscribers using SMS commands, Control GSM and Control GSM Basic applications

It allows to minimize the time that the installer has to spend on adding a large number of subscribers to the receiver's memory. It consists in starting the automatic mode of adding subscribers.

After activating the mode, for the time specified by the installer, each new user who sends an SMS with the PIN number set by the installer will be automatically added to the receiver's memory with the settings specified when activating the mode.

The automatic adding mode can be started in the Control GSM and Control GSM Basic applications in the Subscribers - Automatically tab. In the application window, enter the PIN that the users will send in the SMS message to the receiver number, the mode activation time in hours, and define the parameters for the users (methods of channel control, information input numbers, the status of which is to be visible to the subscriber after sending the control SMS).

The mode can also be started by SMS commands sent from the telephone's outbox to the receiver's number.

- switching on the automatic adding subscribers mode

AUTOADD=PIN,TIME=time,optional_parameters

PIN - 4 digits, range 0...9

time - function activation time, given in hours, maximum 48

optional_parameters

Example: #password,AUTOADD=1234,time=12,clip1=1,sms1=1,status1=1

- switching off the automatic adding subscribers mode

AUTOADD=0

Example: #password,AUTOADD=0

- downloading the settings of automatic adding subscribers mode

GETAUTO

Example: #password,GETAUTO

The order of tasks in the procedure of automatic adding of subscribers:

- setting your own number as administrative
- configuration of receiver parameters
- enabling automatic adding of subscribers from the application level or via SMS command
- informing users about activities that they must perform to control the device over the phone (e.g. by posting an advertisement).

Each subscriber who sends a PIN to the receiver's number will receive an SMS with information in Polish, English or German about the successful addition of the number to the memory, available control options and a link to download the Control GSM Widget application, available for Android devices.

Example SMS:



The above example shows the SMS received by the subscriber who sent the correct PIN code to the receiver number. For this subscriber, it is possible to control the OUT1 output with a free CLIP connection and control the OUT2 output by sending an SMS, payable according to the operator's rates.

SAMPLE ANNOUNCEMENT AUTOMATIC METHOD

Dear Sir or Madam

from August 20, 2019, it will be possible to open the gate at Brzeska Street and the gate at Lidzbarska Street using a smartphone..

What to do:

- add the number + **48xxxxxxxxxx** to the contacts on your smartphone

For users with **Android smartphones**:

- download and install the Control GSM Widget application



**CONTROL
GSM Widget**



- in the widget configuration window, enter the above number and PIN: **1234** and click "Next"
- select an available gate and validate
- choose the color of the icon, you can also change its description
- use the widget to open the gate at Lidzbarska Street *
- make a call to the number given above to open the gate at Brzeska Street **

For users with **smartphones other than Android system**:

- send an SMS with the content **1234** to the number given above, you will receive an SMS confirming adding to the device's memory, from that moment you can open the gates
- send an SMS with the text **OUT2** to open the gate at Lidzbarska Street *
- make a call to the number given above to open the gate at Brzeska Street **

* regular SMS will be sent, payable according to the operator's price list

** free call

Dear employees

From June 20, 2019, it will be possible to open the gate and wicket from Brzeska Street and the gate from Lidzbarska Street using a smartphone.

What to do:

- Add the number **+48123456789** to the phone book on your phone,
- In the above mentioned number send SMS * with the text "**1234**"
- you will receive an SMS with the information that your telephone number has been registered in the receiver.
- You can **open the gate at ul. Brzeska, sending SMS** to the above mentioned number * with the text "**out1**"
- You can **open the gate at ul. Brzeska by calling** the above-mentioned number
**
- You can **open the gate at ul. Lidzbarska, sending SMS** to the above mentioned number * with the text "**out2**"

* regular SMS will be sent, payable according to the operator's price list

** free call

5. RECEIVER CONTROL

The receiver is controlled by a telephone. Depending on the settings, the control can be done by CLIP connection with the receiver number, sending an SMS control command to the receiver number, or through a dedicated application for mobile devices with Android - ControlGSMWidget.

Calls and SMS costs by network operator rates.

Depending on the receiver settings, the control can be performed by the users added to the receiver's memory and the "guest" type users, who know the receiver number. Depending on the settings of the "guest", it may be necessary to enter a password.

5.1 CLIP connections

The receiver is controlled by making a connection to the receiver's number.

For **subscribers** making a CLIP connection, the receiver disconnects the connection after the first call and the channel is activated. This connection is free.

For **"guest" users**, in the event that no password is set, the receiver disconnects the connection after the first call and the channel is activated. This connection is free.

If the **password is set**, after making the connection, the "guest" type user will hear a sound signal (modulated, intermittent signal), after which the code must be entered from the telephone numeric keypad, ended with the # sign.

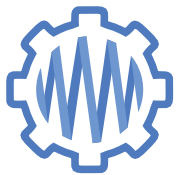
The user has 15 seconds from hearing the signal to enter the password.

A suitable sound signal will confirm the correctness of the operation:

- password accepted - intermittent signal,
- wrong password - continuous signal.

In case of a mistake in entering the password, press * and start entering the password from the beginning.

5.2. ControlGSMWidget application for Android mobile devices



**CONTROL
GSM Widget**



The application is available for download from the manufacturer's website www.controlgsm.dtm.pl

The application is a convenient add-on for sending control SMSes. Thanks to the application installation, the user will not have to enter control commands manually in the phone's outbox.

The application allows for convenient and intuitive control of devices from the button on the phone screen. From the application level it is also possible to check the status of the receiver inputs and outputs. By clicking on a properly configured widget, the device will be activated or the user will receive information about the status of a given input or output in graphic form and in an SMS message.



Administrators are informed on an ongoing basis about any change in the state of inputs. Subscribers receive information on request by clicking on the appropriate widget. The guest cannot receive feedback from the receiver.

5.3 SMS control commands

The receiver is controlled by sending an SMS message to the receiver's number.

- switching on the n channel working in monostable mode

OUTn

n - channels 1...4

Example: OUT1

- switching on the n channel working in bistable mode

OUTnON

n - only for channels 1 and 2

Example: OUT1ON

- switching off the n channel working in bistable mode

OUTnOFF

n - only for channels 1 and 2

Example: OUT1OFF

- download status of the inputs and outputs of the receiver
(displayed statuses according to the rights of the subscriber)

STATUS

Example: STATUS

- downloading information on the available control options, according to the rights held by the subscriber

GETCONFIG

Example: GETCONFIG



If the password request is enabled for SMS control, the control command should be preceded by a password ending with a dot, „."

password.command

Example: abc123.out1

6. SMS MESSAGES FROM THE RECEIVER

The receiver sends back SMS messages.

Each configuration SMS is confirmed.

Control SMSes are confirmed only when the AutoAck option is enabled (OK or ERROR response after the control SMS) and / or the AutoStatus option is enabled (response with the current status of inputs and outputs after the control SMS).

The confirmation SMS may contain information about an error or about the success of the operation. In the case of confirming the configuration SMS, the number of parameters is given.

The content of the SMS with information about the change of the input state may be preceded by the '#' character. The last SMS related to a given input, marked with this sign, should be treated as the most recent.

In the case of multiple and quick changes of input states, messages can be grouped within a given input.

They will then contain information about the number of state changes, e.g.

"# (4x) Lobby Door Open (IN1= ON)"

„(4x) Lobby Door Closed (IN1= OFF)"

The above example shows that the receiver registered 4-fold opening and 4-closing of the lobby door, with the door finally opened (the last SMS with the '#' sign indicates the current state of the input).

SMS messages from the device:

OK - response to the activation of the channel / channels when the AutoAck confirmation function is on. If the "AutoStatus" function is on, information on the current states of inputs and outputs is sent instead of OK.

OK (n params) - response to the configuration SMS, containing the number of correctly decoded parameters.

ERROR: Command not available - functional error, e.g. an attempt to disable a monostable channel, an attempt to control the channel without permission. The SMS can be a response to the control SMS (if the AutoAck option is enabled) or to the configuration SMS.

ERROR: Wrong syntax or password - incorrect syntax or password. The SMS is a response to the control SMS (if the AutoAck option is enabled) or to the configuration SMS. The SMS may also appear in the case of the notification service on the receiver card that the number is already in range.

DATA CLEANED - message after formatting the receiver using the SMS command.

SUCCESSFULLY ADDED - message after successfully adding the subscriber to the list.

ERROR: Memory full - an attempt to add a subscriber when the memory is full.

ERROR: Already exists - an attempt to add the same number to the list of subscribers again.

ERROR: Does not exist - attempt to modify a number that does not exist on the list.

SUCCESSFULLY MODIFIED - message after successful modification of the subscriber's settings.

ALL SUBSCRIBERS DELETED - message after deleting the list with the DELALL command.

SUBSCRIBER DELETED - after successfully removing the subscriber from the list.

ERROR: No more VIP available - trying to add 6th administrator user.

AUTOADD ON - when the automatic adding function is enabled (additional information is also attached to the message).

AUTOADDOFF - when automatic adding is turned off or is finished due to time or device restart.

ERROR: Set yourself as an admin first - when you try to add a non-own number as the first administrator.

ERROR: Currently, you can not delete / modify yourself. Try from another admin - response when the command could deprive access to the receiver (e.g. there are 2 administrators and one of them tries to remove himself).

ALL ADMINS DELETED EXCEPT YOU - Reply to the DELADMINS command sent by the super administrator to remove all administrators from the receiver.

ERROR: You can not delete / modify super admin - response to an attempt to modify or delete a super admin.

ERROR: You have to delete all other admins first - response to an attempt to delete a super administrator, when other administrators are set on the device.

DISPOSAL

Electrical and electronic devices must not be disposed of with household waste. The correct disposal of the device enables the preservation of the Earth's natural resources for longer and prevents the degradation of the natural environment.

WARRANTY

The manufacturer of DTM System provides the devices that are operational and ready for use. The manufacturer provides a warranty for a period of 24 months from the date of purchase by the end customer. The warranty period is determined on the basis of the manufacturer's warranty seals placed on each product. The manufacturer undertakes to repair the device free of charge if during the warranty period there are defects due to the manufacturer's fault. The defective device must be delivered to the place of purchase at your own expense, including copies of the proof of purchase and a brief, unambiguous description of the damage. The cost of disassembly and assembly of the device is borne by the user. The warranty does not cover batteries in the remote controls, any damage resulting from improper use, unauthorized adjustments, alterations and repairs as well as damage caused by lightning, overvoltage or short circuit of the power supply network. The detailed terms and conditions of granting a guarantee are regulated by relevant legal acts.



DTM System hereby declares that the receiver complies with Directive 2014/53 / EU. The full text of the EU declaration of conformity is available at the Internet address: www.dtm.pl