



Anytime. Anywhere.



## Technical & User manual



### **ABOUT MySafe COMM UNIT**

The MySafe COMM UNIT is connected between the safe lock and the entry unit and can eavesdrop on the communication between the two. It sends status information to a central server from where the information can be received using the MySafe App.



Depending on the settings, the device can block the opening of the safe and switch its outputs based on selectable lock events. The COMM UNIT is installed inside the security container and communicates with the outside world via Ethernet using an encrypted MQTTS connection. A single cable is sufficient for connection, as the device is powered via an Ethernet cable according to the PoE standard.

#### Default IP adress COMM UNIT: 192.168.1.254

### **COMM UNIT > Connections**

### **Using PoE injector ?**

By the use of a PoE injector, be carefull about the connection.

- LAN connector to network (Switch/Router)
- PoE connector to COMM UNIT



### Meaning of the two small LED:

- **STS:** The Status LED lights up after the device has been properly initialized.
- **COM:** The Communication LED stays lit up after establishing secure connection to the web server.
- It blinks if switch SW was pressed and configuration page is available (see section configuration, page 8).

### **COMM UNIT > Connections**

### Connectors 1 & 2

• Use provided connection cables (90 cm) with white pico-Spox connectors for connection to the safe lock (Lock connector 1 to COMM UNIT connector 1, 2 to 2).

#### Bolt

 Connect the two wires from the lock into the green push terminal (polarity irrelevant).

#### **KEY connector**

• Use connection cable (90 cm) with white Pico-Spox connector from the entry unit.

#### **DOOR connector**

- Used to connect a door sensor (polarity irrelevant). The logic (NO or NC) of the sensor can be reversed by the supplied jumper (section K13).
  - Default COMM UNIT setting: NO
  - By using door sensor "normaly closed (NC)" the jumper bridge is needed.



#### Door sensor: NO



Door sensor: NC



### **COMM UNIT > Connections**

#### **Inputs connector**

 Three universal switch inputs. The switch connects between contact G (ground, common) and contact 1, 2, or 3 (see also section setting, page 8).

#### **OUT1 and OUT2 connectors**

Universal relay outputs with changeover contact. The autonomous functions of the outputs are set via the web interface (see section settings, page 8).

#### **Ethernet and power**

- Connect the COMM UNIT to the LAN-switch with a regular patch cable for computer networks.
- For a switch that cannot power the device via PoE according to the IEEE 802.3af standard, use a proper PoE-Injector (sold separately).
- The connection of the LAN cable between the RJ45 connector on the outside of the safe and the connector inside is governed by TIA-568B (see ANSI/TIA 568 Wiki).



### Two lights in the Ethernet connector

• Yellow – LINK:

Lights up when the device is connected to a switch or PC by cable.

• Green – ACT:

Indicates communication with the network switch.

### **COMM UNIT > Dimensions and Installation**

**Install lock and entry unit** according to their installation instructions to maintain the lock certifications (EN1300 Class B and UL Type 1).

The only difference is that lock and entry unit are connected via the COMM UNIT



#### The lock will be powered through the connection to the COMM UNIT.

- Use the battery compartment in the entry unit only in case of power loss or to check the unit during installation.
- In case it is not wished that the COMM UNIT powers the lock it is possible to suppress this by removing jumper J2 inside the device. It connects 9V power for the entry unit and lock. The jumper is factory-connected.

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### **COMM UNIT > Dimensions and Installation**



Install the COMM UNIT with 4 screws inside the security container.

Install preferably with the connector side up (this puts the temperature sensor in the bottom and prevents the green connectors from falling out, should they ever come loose).

### COMM UNIT > SETTINGS/BASIC CONFIGURATION

While the lock is open, it is possible to access the configuration page of the COMM UNIT via a web browser. The PC or Laptop needs to be in the same Network.

In order to access the page, type the **current IP-Address (not identical with the default IP adress by using DHCP router or a specific static IP adress)** of the device in the browsers address line.

TIP: The IP-Address of the device (if already registered in the MySafe App) is shown in the status page of the MySafe App.



The factory default password is 123456

Password



After login, settings for the network, password and time synchronization are available.

### **COMM UNIT > SETTINGS/BASIC CONFIGURATION**

	Comm Unit Settings		Save	ult Refresh Logout	fresh Logout	
MySafe	Type: Firmware version: Serial number: MAC: Core version: Browser:	MySafe Comm Unit ETH 1.4/8 1571/0002 00-11-22-33-AA-FF MySafeCompact; v1571.01. Firefox 114	Unit date and time: Technical support: 01;	31.3.2023 07:27:23 UTC mysafe.world		
Network	Unit name		Sample safe		~	
Security	Language		English		v	
Other	Network DHCP					
	Device's IP address		192.168.1.254			
	Netmask		255.255.255.0			
	Gateway IP address DNS server's IP addre		192.168.1.1			
	WEB port	255	1.1.1.1		0	
	Security					
	Current password		Default			
	New password Confirm password					
	Other settings Synchronize device's f	time with this PC's time				
	Temperature moni	itoring				
	Upper limit		70			
	Lower limit		20			
	Other settings Synchronize device's t Update Firmware	ime with this PC's time				

#### Any changes to the settings become only valid after saving (and rebooting unit).

• Attention: Changing the IP address may make the unit inaccessible (also for the MySafe App) until a reset is performed by a service technician.

NOI		Comm Unit Settings	Save Default Refresh Logout
<b>GOMM UNIT</b> > SETTINGS/ <u>FULL</u> CONFIGURATION	MySafe	Type:         MySafe Comm Uni           Firmware version:         1.4/8           Serial number:         1571/0002           MAC:         00-11-22.33-AA-FI           Core version:         MySafeCompact; x           Browser:         Firefox 114	Technical support: mysafe.world
Ő	Network	Unit name	Sample safe
	Security	Language	English v
B	MQTT	Network DHCP	
ES/	Outputs	Device's IP address Netmask	192.168.1.254 255.255.255.0
N	Temperature	Gateway IP address DNS server's IP address	192.168.1.1 1.1.1.1
E	Other	WEB port	80
		Security Current password New password Confirm password	Default
		MQTT Broker	mqtt://srv1.example.com:8883 Not set
		Certificate	
		QoS	2 ~
		Publish to topic	smart/lock
		Subscribe to topic	smart/key
		Login name	unlock
		Login password	8
		Confirm password	
		Test MQTT settings	

#### Outputs - autonomous function

OUT 1		
Event to switch on	68 - Burglary warning (!)	~
Switch on duration [ms]	30	$\diamond$
Event to switch off	00 - Keypad/Lock activity	~
Switch off duration [ms]	2	$\hat{\mathbf{v}}$
OUT 2		
Event to switch on	32 - Restart - core	~
Switch on duration [ms]	3	\$
Event to switch off	14 - MySafe block active	~
Switch off duration [ms]	12	0

70

20

#### Temperature monitoring

Upper limit Lower limit

#### Other settings

Synchronize device's time with this PC's time Update Firmware

#### 

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### **COMM UNIT > SETTINGS/**FULL CONFIGURATION

#### Trained safe technicians can access the **full configuration page** as follows:

- 1. Open the lock
- 2. Press and hold the SW button on the device
- 3. Between about 3 and 5 seconds, the COM light flashes
- 4. While the indicator light is flashing, release the SW button
- 5. Complete settings are accessible after login

TIP: The IP-Address of the device is shown in the status page of the MySafe App.

### Configuring the outputs (e.g. alarm)

The COMM UNIT provides two output contacts. Each can be connected either to close or open an independent electric circuit. Examples could be sending an alarm or activating a separate device.

Innovative is the flexibility in how these outputs can be configured.



TIP: In the configuration page "switch on" means that the relay is activated thus switching the NC contact to open and the NO contact to close.

#### Event to switch on:

• The relay is triggered by any event of the lock that can be selected from the drop-down list.

#### Switch on duration [ms]:

- The time in milliseconds how long the relay is to stay on (1000 ms = 1 second).
- 0 = indefinitely ON
- Event to switch off: The relay goes back to normal if the selected event happens (this is optional).

#### Switch off duration [ms]:

- The time in milliseconds how long the relay is to stay off (1000 ms = 1 second).
- 0 = indefinitely OFF

### COMM UNIT > SETTINGS/FULL CONFIGURATION

### **Temperature monitoring**

The COMM UNIT measures temperature and humidity continuously and sends this information to the web server every two minutes. It is shown in the safe status section of the MySafe App.

Additionally, events are triggered if the temperature rises above or drops below of values that are defined in the configuration page. The events are shown in the audit and can raise a message in the app.

Upper limit: (Default set to 70 degr Celsius)

Lower limit: (Default set to 35 degr Celsius)

### **COMM UNIT** > RESET (FACTORY SETTINGS)

- 1. Disconnect the PoE LAN cable from the COMM UNIT
- 2. Press and hold the SW button
- 3. While the SW button is pressed, connect the PoE LAN cable to the COMM UNIT
- 4. Within 3 seconds the LED starts to flash
- 5. Release the SW button while LED flashes
- 6. Your COMM UNIT will be reset to default IP address: 192.168.1.254

#### For security reasons

The complete configuration is only available to a trained service technician as it requires direct contact with the COMM UNIT itself. (The configuration page is accessed via an unencrypted http connection and therefore could be intercepted from a foreign device that is on the same network as the Comm Unit.)

### **SAFE LOCK** > SETUP FOR MYSAFE COMPATIBILITY



# Pulse **PRO**

High Security Lock - VdS Class 2 - EN 1300 Class B

# How the lock is set

Pulse PRO setup for MySafe:

- Basic configuration
  - 1 Master
  - 1 Manager
  - 1 ERC (Emergancy Rescue Code)
  - 49 Users
- Function "Hold up alarm" is activated:
- Remote override is activated





The following steps are required to make the status of the safe visible in the MySafe App.



### **MySafe App**

### Add new safe

- Connect your phone to Access Point/Router with IP address range set from 192.168.1.20 to .250
- Access Point/Router should support DHCP
- Press button Add Safe in the application
- Select Ethernet

16	:02 .11 🔶 🗖
	Safe registration
D	Information
	Choose connection type according to your smartpack version:
	Ethernet
	1. Connect the COMM unit to the network (PoE)
	2. Check your network settings according to the instructions $\underline{\text{here}}$
	3. Switch the safe to configuration mode (open the door and press the SW button for 3 seconds)
	4. If necessary, edit the IP address of the COMM unit and enter the password
	IP Address
	192.168.1.254
	1192.168.1.254
	( <u>****</u> 123456 <b>⊙</b>
	5. Press button Next
	Next
)	Network setup
	Safe setup
	Finish registration

### **MySafe App**

### Add new safe

- COMM UNIT at factory default configuration is accessible at IP 192.168.1.254
- Should you wish to pair the COMM UNIT with custom settings, you require the IP address of the COMM UNIT (can be scanned using some 3rd party IP scanner tool)
- Press Next
- Set required network settings (safe IP address or DHCP)
- Press Next
- Safe HW-Id should appear (it matches the MAC address of COMM UNIT)
- Press Save (this step will save the safe configuration to the COMM UNIT)
- Name your safe and press finish (this step wil save the safe to the MySafe database)
- Now you have your safe added into your app (you are automaticaly set as admin for the newly added safe)



### **MySafe App**

### **Potential problems:**

- Should the safe HW-Id not appear check network setup (IP address of the safe and your smartphone at the step 1)
- Error during finish step:
  - Reason 1: Another safe with same HW-Id is already registered
  - Reason 2: Network problem
     (your smartphone has some problem to access the internet)

#### **Recommended:**

If you add a safe to the MySafe App, we always recommend activating DHCP (see screenshot on page 16). In this case be sure, that Access Point/Router support DHCP.



www.mysafe.world/tips-and-tricks



### **Relay outputs**

Relay switching contact type	
Maximum switching voltage	AC: 60 V, DC 85 V
Maximum switching current	5 A
Protective varistor	UAC = 60 V; EMAX = 5 J; C = 0.64 nF
Lock control output (BOLT)	
Load capacity	max. 9 V / 100 mA
Relay inputs	
Contact connection type	
Current through closed contact	typ. 2.3 mA

#### Temperature and humidity measurement

Measured humidity range	0% to 100% RH (non-condensing)
Recommended measurement range	20 - 80%
Resolution	1% RH

For humidity measurement accuracy

Measuring element

see fig. 6

polymer sensor

Mechanical design of the sensor under the plastic mesh from above on the device



Range of measured temperatures

Resolution

Measuring element

-40.0 °C to +125 °C 0.1 °C

semiconductor sensor

### **Ehternet**

BOLT, DOOR

OUT1, OUT2

INPUTS

Ethernet	TBase 10/100 Ethernet
PoE power supply	according to IEEE 802.3af
Communication method with server	MQTTS (TLS 1.2)
Maximum length of SSL certificate	4 KB
communication format	JSON
Default Ethernet settings	
IP address	192.168.1.254
Netmask	255.255.255.0 (8 bits; C mask)
IP address of the gateway (Gateway)	0.0.00
Types of connectors	
Ethernet	RJ45
1, 2 and BAT	Molex 87438-0443

15EDGRC-2.5-02P-14-00A 15EDGRC-2.5-03P-14-00A 15EDGRC-2.5-04P-14-00A

### Other

- Device tamper detection
- Consumption
- Degree of protection
- Working temperature range
- Maximum working humidity
- Dimensions

yes, shock and tilt detecting accelerometer typ. 1.2 W (at rest, without lock attached)

IP 20

-20 to +60 °C

90% RH, non-condensing

145 x 68 x 28 mm



### **Troubleshoot/Reset**

If IP address was changed to a static IP (DHCP unchecked) and the configuration page is not accessible, the following procedure can restore activation of DHCP:

- 1) Keep the SW button on the device pressed for 15 seconds until the red COM LED starts blinking for the <u>second</u> time.
- 2) Release the button. The device will receive (and store) a new IP-Address from the DHCP server. Other settings remain unchanged.

To reset the device to default settings use the following procedure:

- 1) Unplug the power connection (PoE).
- 2) Keep the SW button pressed while you re-connect power.
- 3) Keep the SW button pressed until the red COM LED starts blinking.
- 4) The blinking indicates the unit is set to default.

### **COM LED states**

Power	SW button	COM LED
ON	not pressed	Continuously ON when secure connection to WebServer is established.
Connect	pressed	Blinks to indicate reset.
ON	pressed and hold 3 seconds	Blinks for 5 seconds. If button released during this time (and lock open) full configuration page is available.
ON	pressed and hold 15 seconds	Blinks for 5 seconds. If button released during this time DHCP is activated.
ON	pressed and hold 60 seconds	Blinks for 5 seconds. If button released during this time device allows firmware update (procedure for firmware update is not part of this instruction).



### Your MySafe package contents

Quantity

MySafe COMM UNIT	– Ethernet	1	
	– WiFi	1	
Tecnosicurezza Pulse PR		1	
<ul> <li>Pulse PRO entry unit mo</li> </ul>	<i>,</i>	1	
Tecnosicurezza Pulse PRO	51	I	
Techosiculezza Pulse Pro	3	1	
	– Motor lock	1	
Bag of screws – Lock & El	,	1	_
	x 34 mm for motorbolt lock		
<ul> <li>3 pcs. screws M6</li> </ul>	x 25 mm for swingbolt lock		
<ul> <li>2 pcs. screws M4</li> </ul>	x 16 mm for entry unit		
<ul> <li>2 pcs. screws M4</li> </ul>	x 10 mm for mounting plate		
Tecnosicurezza cable to	connect COMM UNIT with lock	2	
• LAN cable 2,5 m		1	
LAN socket		1	
Door sensor		1	
• Cable transition (incl. 2 e	nd caps)	1	
• Bag of screws (3,5 x 16 m	ım)	1	
• 4 pcs. screws for	COMM UNIT		
• 4 pcs. screws for	cable transition end caps		
• 2 pcs. screws for	LAN socket		
Optional:			
υρτισπαι.			
Tecnosicurezza Pulse PRO	D entry unit with Dallas terminal	1	
LAN socket holder (for sin	ngle-wall safes)	1	
MySafe PoE injector		1	
according to the IEEE 802	2.3af standard		_
Cable transition for multi	ple cable (incl. 2 end caps)	1	



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