Talion

Manual

Content

Specifications
About the device

- Description
- Package Contents
- Features
- Components and Controls

Power supply

- Precautions
- Recommendations for Battery Use
- Battery Charging
- Battery Installation
- External Power Supply

Getting Started

- Mounting on the Rifle
- Powering on and Image Settings
- Button Operation

Zeroing

- How to zero
- Add New Distance
- Zeroing Parameters Settings
- Windage/Elevation
- Magnification (when Zeroing)
- Freeze
- Name Distance
- Change Primary Distance
- Delete Distance

Interface

- Status Bar
- Quick Menu
- Main Menu
  - Enter the Main Menu

- Reticle & Zeroing
  - Zeroing Profile
  - Reticle Type
  - Reticle Colour
  - Reticle Brightness
- Smoothing Filter
- Colour Modes
- User Mode
- Icon Brightness
- Wi-Fi Activation
- Wi-Fi Settings
- Microphone
- Calibration Mode
- General Settings
- Accelerometer
  - Auto Shutdown
  - Side Incline
- Defective Pixel Repair
  - Defective Pixel Repair
  - Restore Default Pixel Map
- Device Information

Functions

- Amplification Level
- Video Recording and Photography
- Discrete Digital Zoom
- PiP Function
- Display-Off Function
- Wi-Fi Function
- Scalable Reticles
- Stadiametric Rangefinder
- USB Connection

Software

- Stream Vision 2
- Firmware Update

Maintenance

Technical Inspection
Technical Maintenance

Troubleshooting
Legal Compliances and Disclaimers

Specifications

You can learn more about the main parameters **here**.

XQ38

	Model	XQ38
	SKU (without mount)	76561
	SKU (with Weaver U mount)	76561U
	SKU (with Weaver USQD mount)	76561S
	SKU (with Weaver LQD mount)	76561L
	Microbolometer	
	Type	uncooled
	Resolution, pixels	384x288
	Pixel Pitch, µm	17
	NETD, mK	< 40
	Frame refresh rate, Hz	50
	Optical Specifications	
	Lens, mm	F38 F/1.2
	Magnification, x	2.5-10
	Eye relief, mm/inch	50/1.96
	Field of view (H), °/m@100	9.8/17.2
	Diopter adjustment, D	-3/+4
	Detection distance (Object of "deer" type), m/y	1350 / 1476

Aiming Reticle	
Click value, mm@100 m – when magnifying, x	17 mm – 2.5x 8.5 mm – 5x 4.25 mm – 10x
Click range (H/V), mm@100 m	3400/3400
Display	
Type	AMOLED
Resolution, pixels	1024x768
Operating Features	
Power Supply, V	3–4.2
Battery type / Capacity / Rated Output Voltage	Li-Ion Battery Pack APS 5T / 4900 mAh / DC 3.7 V (removable)
External Power Supply	5 V, 9 V (USB Type-C Power Delivery)
Battery Pack operating time at temp. = 22 °C, hrs**	9
Max. recoil power on rifled weapon, Joules	6000
Max. recoil power on smoothbore weapon, caliber	12
Compatible Pulsar mounts	Weaver U Mount Weaver USQD Mount Weaver LQD Mount
Degree of protection IP code (IEC60529)	IPX7
Operating temperature, °C / °F	-25 – +50 / -13 – +122
Dimensions with an eyecup, mm/inch	330x57x67 / 12.99x2.24x2.64

Weight (with removable battery, without mount), kg/oz	0.82 / 28.92
Video Recorder	
Photo / video resolution, pixels	1024x768
Video / photo format	.mp4 / .jpg
Built-in memory	16 GB
Wi-FiChannel* **	
Frequency	2.4/5 GHz
Standard	IEEE 802.11 b/g/n/ac

* Purchased separately.

** Actual battery life may vary depending on the use of Wi-Fi and the built-in video recorder.

*** The reception range may vary depending on various factors: obstacles, other Wi-Fi networks.

XG35

Model	XG35
SKU (without mount)	76563
SKU (with Weaver U mount)	76563U
SKU (with Weaver USQD mount)	76563S
SKU (with Weaver LQD mount)	76563L
Microbolometer	
Type	uncooled
Resolution, pixels	640x480
Pixel Pitch, µm	12
NETD, mK	< 40
Frame refresh rate, Hz	50
Optical Specifications	
Lens, mm	F35 F/1.0
Magnification, x	2-16
Eye relief, mm/inch	50/1.96
Field of view (H), °/m@100	12.5 / 21.9
Diopter adjustment, D	-3/+4
Detection distance (Object of "deer" type), m/y	1750 / 1914
Aiming Reticle	
Click value, mm@100 m – when magnifying, x	21 mm – 2x 10.5 mm – 4x 5.25 mm – 8x 2.6 mm – 16x
Click range (H/V), mm@100 m	4200/4200
Display	

Type	AMOLED
Resolution, pixels	1024x768
Operating Features	
Power Supply, V	3–4.2
Battery type / Capacity / Rated Output Voltage	Li-Ion Battery Pack APS 5T / 4900 mAh / DC 3.7 V (removable)
External Power Supply	5 V, 9 V (USB Type-C Power Delivery)
Battery Pack operating time at temp. = 22 °C, hrs**	7
Max. recoil power on rifled weapon, Joules	6000
Max. recoil power on smoothbore weapon, caliber	12
Compatible Pulsar mounts	Weaver U Mount Weaver USQD Mount Weaver LQD Mount
Degree of protection IP code (IEC60529)	IPX7
Operating temperature, °C / °F	-25 – +50 / -13 – +122
Dimensions with an eyecup, mm/inch	330x57x67 / 12.99x2.24x2.64
Weight (with removable battery, without mount), kg/oz	0.82 / 28.92
Video Recorder	
Photo / video resolution, pixels	1024x768
Video / photo format	.mp4 / .jpg
Built-in memory	16 GB
Wi-FiChannel* **	

Frequency	2.4/5 GHz
Standard	IEEE 802.11 b/g/n/ac

* Purchased separately.

** Actual battery life may vary depending on the use of Wi-Fi and the built-in video recorder.

*** The reception range may vary depending on various factors: obstacles, other Wi-Fi networks.

XQ35 Pro

	Model	XQ35 Pro
	SKU (without mount)	76566
	SKU (with Weaver U mount)	76566U
	SKU (with Weaver USQD mount)	76566S
	SKU (with Weaver LQD mount)	76566L
	Microbolometer	
	Type	uncooled
	Resolution, pixels	384x288
	Pixel Pitch, µm	17
	NETD, mK	< 25
	Frame refresh rate, Hz	50
	Optical Specifications	
	Lens, mm	F35 F/1.0
	Magnification, x	2.5-10
	Eye relief, mm/inch	50/1.96
	Field of view (H), °/m@100	10.7/18.7
	Diopter adjustment, D	-3/+4
	Detection distance (Object of "deer" type), m/y	1350 / 1476
	Aiming Reticle	
	Click value, mm@100 m – when magnifying, x	18 mm – 2.5x 9 mm – 5x 4.5 mm – 10x
	Click range (H/V), mm@100 m	3600/3600
	Display	
	Type	AMOLED

Resolution, pixels	1024x768
Operating Features	
Power Supply, V	3–4.2
Battery type / Capacity / Rated Output Voltage	Li-Ion Battery Pack APS 5T / 4900 mAh / DC 3.7 V (removable)
External Power Supply	5 V, 9 V (USB Type-C Power Delivery)
Battery Pack operating time at temp. = 22 °C, hrs**	9
Max. recoil power on rifled weapon, Joules	6000
Max. recoil power on smoothbore weapon, caliber	12
Compatible Pulsar mounts	Weaver U Mount Weaver USQD Mount Weaver LQD Mount
Degree of protection IP code (IEC60529)	IPX7
Operating temperature, °C / °F	-25 – +50 / -13 – +122
Dimensions with an eyecup, mm/inch	330x57x67 / 12.99x2.24x2.64
Weight (with removable battery, without mount), kg/oz	0.82 / 28.92
Video Recorder	
Photo / video resolution, pixels	1024x768
Video / photo format	.mp4 / .jpg
Built-in memory	16 GB
Wi-FiChannel* **	
Frequency	2.4/5 GHz

Standard	IEEE 802.11 b/g/n/ac

* Purchased separately.

** Actual battery life may vary depending on the use of Wi-Fi and the built-in video recorder.

*** The reception range may vary depending on various factors: obstacles, other Wi-Fi networks.

Description

https://www.youtube.com/embed/m_3a5j75kKQ?si=cFDtIFqppD6cpno-

https://www.youtube.com/embed/feOD2H-w1VA

https://www.youtube.com/embed/5XpgXwOyL40

Talionthermal imaging riflescopes are designed for use both at night-time and during the day. They provide exceptional image quality even in adverse weather conditions such as fog, smog and rain without being hindered by obstacles like branches, tall grass, dense foliage, or other debris.

Unlike riflescopes based on electrical-to-optical converters, thermal imaging riflescopes do not require an external light source and are resistant to high levels of illumination.

These riflescopes are designed for hunting, target shooting and recreational shooting, observation and orientation.

To get started, see the sections:

Battery Charging

Battery Installation

Mounting on the Rifle

Powering on and Image Setting

How to Zero

Stream Vision 2

Package Contents

- Thermal imaging riflescope Talion
- Mount*
- Mounting screws*
- Removable rubber eyecup
- APS 5T Battery Pack (2 pcs.)
- APS5 battery charger
- Power adapter
- USB Type-C cable with USB Type-A adapter
- Carrying case
- Lens-cleaning cloth
- Quick User Manual
- Warranty card

---

*Sold separately or included in the package. The type of the mount and screws depends on the device model.

Features

- Built-in 3-axis accelerometer gyroscope (slope angle indication)
- 3 levels of sensitivity enhancement: Normal, High, Ultra
- 3 calibration modes: manual, semi-automatic and automatic
- Smooth Digital Zoom
- Multiple reticle options
- Scalable reticles (proportional to Zoom)
- 5 zeroing profiles (10 distances per profile)
- One-shot “Freeze-Zeroing” function
- Precise “Zoom zeroing” (reducing the MOA per click when zooming in)
- 8-color display palette
- Pixel repair function
- “Display-Off” function
- Integrated Wi-Fi for remote control and personal device connectivity
- Device firmware update using the free Stream Vision 2 App
- Recoil rated to .375H&H, 9.3x64 and 12-gauge

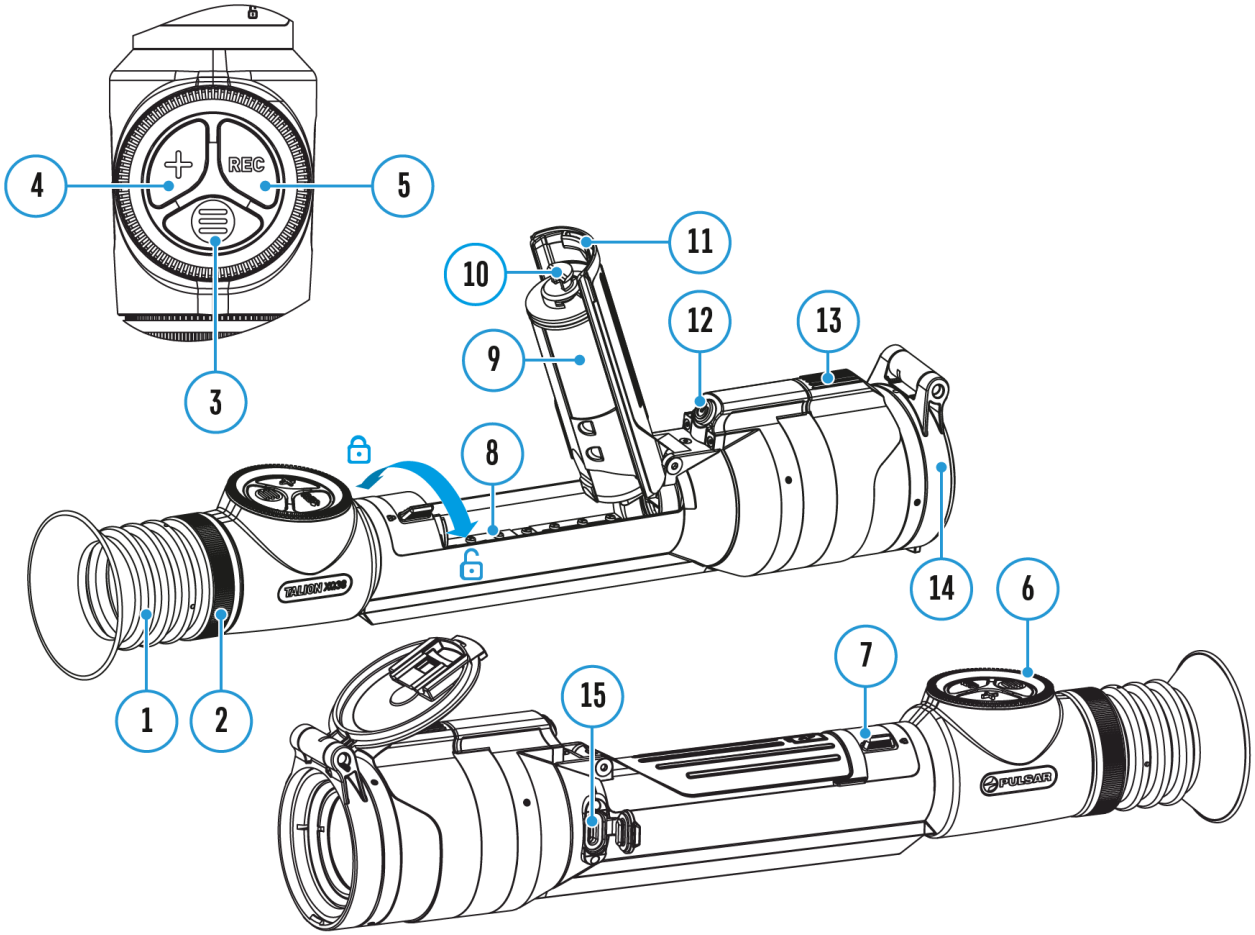
Video Recording

- Built-in photo and video recorder with audio
- 16 GB internal memory
- iOS and Android compatible
- Storing photos and videos in Cloud when using the Stream Vision 2 App

Battery Pack

- Quick-change rechargeable Li-Ion 4900 mAh Battery Pack APS 5T
- Charging via USB Type-C port

Components and Controls



1. Eyecup
2. Eyepiece diopter adjustment ring
3. MENU button
4. ZOOM button
5. REC button
6. Controller
7. Battery compartment cover lock
8. Battery compartment
9. Battery APS 5T
10. Hook
11. Battery compartment cover
12. ON/OFF button

13. Lens focus control
14. Lens cap
15. USB Type-C port

Precautions

- Always use the APS 5 charger supplied with the device (or purchased separately) to charge the APS 5T Battery Pack. The use of any other charger may irreparably damage the Battery Pack or the charger and may cause fire.
- Do not charge the Battery Pack immediately after bringing it from a cold environment to a warm one. Wait for 30-40 minutes for the Battery Pack to get warm.
- Do not leave the Battery Pack unattended while charging.
- Never use a modified or damaged charger.
- Do not leave the Battery Pack with a charger connected to the power adapter after charging is complete.
- Do not expose the Battery Pack to high temperatures or an open flame.
- Do not submerge the Battery Pack in water.
- Do not connect an external device with a current consumption that exceeds permitted levels.
- Do not dismantle or deform the Battery Pack.
- Do not drop or hit the Battery Pack.
- Keep the Battery Pack out of the reach of children.

Recommendations for Battery Use

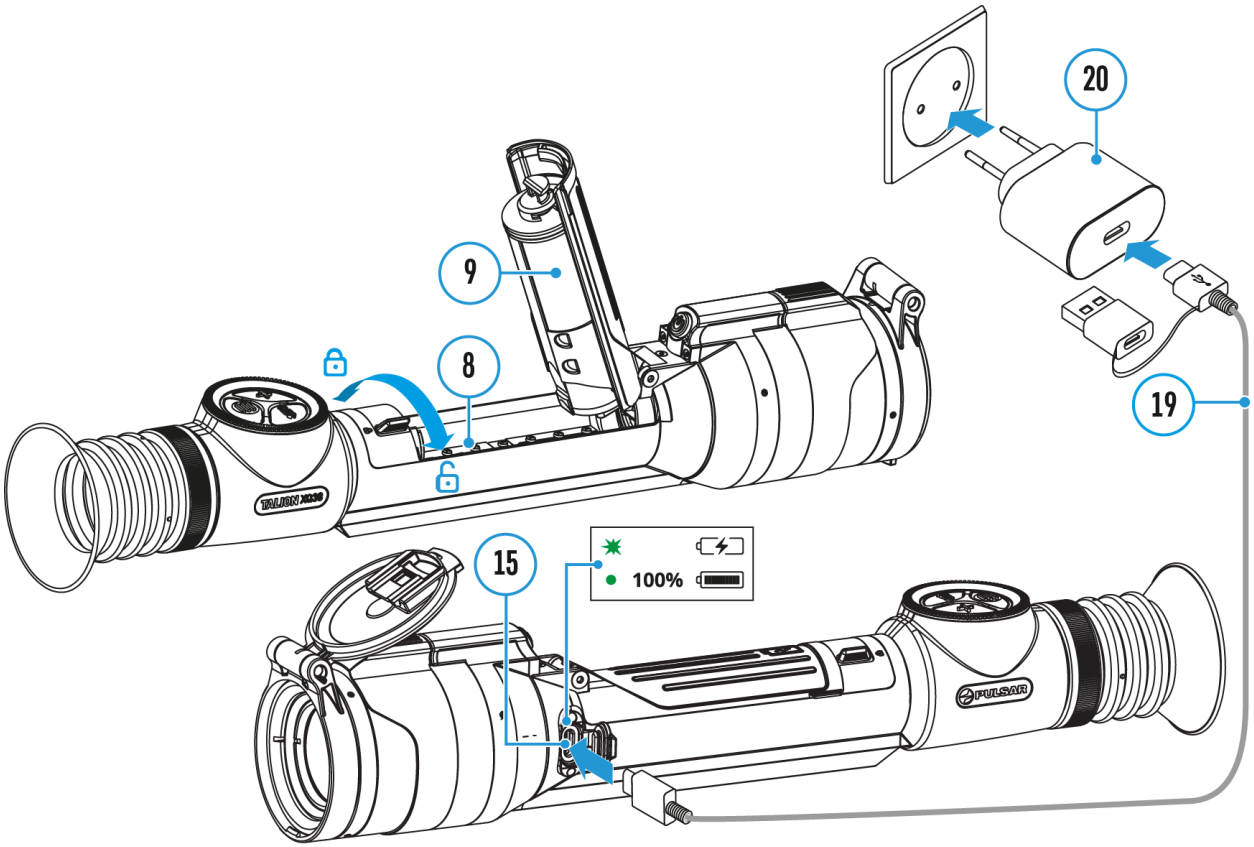
- The battery should be partially charged for long-term storage – 50 to 80 %.
- Charge the Battery Pack at a temperature from 0° C to +45° C (32° F to +113° F), otherwise the battery life will decrease significantly.
- When using the Battery Pack at sub-zero (sub 32° F) temperatures the battery capacity decreases. This is normal and is not a defect.
- Do not use the Battery Pack at temperatures above those shown in the table – this may decrease battery life.
- The Battery Pack is short circuit protected; however, any situation that may cause short-circuiting should be avoided.

Battery Charging

Talionthermal imaging riflescopes come with a rechargeable lithium-ion Battery Pack APS 5T. The battery should be charged before first use.

The icon in the status bar will flash when the battery is low. The battery needs to be charged.

Option 1



1. **Install** the APS 5T battery **(9)** in the battery compartment **(8)** of the device.
2. Connect the USB Type-C cable **(19)** to the USB Type-C connector **(15)** of the device.
3. Connect the other end of the USB Type-C cable **(19)** to the Power Adapter **(20)** by removing the USB Type-A adapter.
4. Plug the Power Adapter **(19)** into a 100-240 V socket**.**

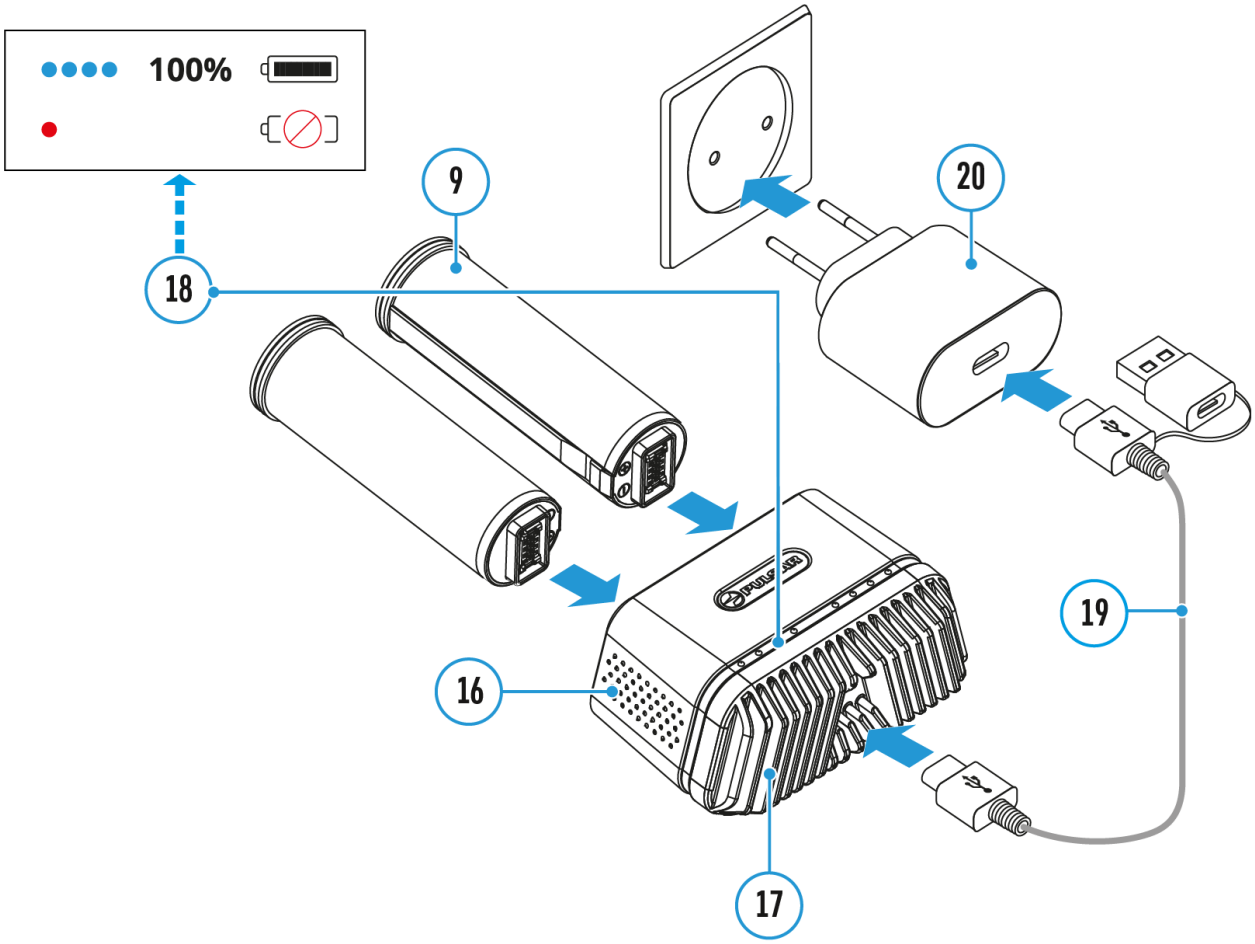
5. Wait until the battery is fully charged (indication in the status bar:

).

If the device is off, the LED indicator will display the battery charge status:

LED indication	Battery charge status
	Battery is charging
	Battery is fully charged

Option 2



1. Insert the APS 5T battery **(9)** along the guide into the APS 5 charger* **(16)** slot as far as it will go. The APS 5 charger is supplied with your device or purchased separately.
2. Connect the other end of the USB Type-C cable **(19)** to the Power

Adapter **(20)** by removing the USB Type-A adapter.

3. Plug the Power Adapter **(20)** into a 100-240 V socket**.**
4. Connect the other end of the USB Type-C cable **(19)** to the USB Type-C connector **(17)**of the charger.
5. LED indicators **(18)** will display the battery charge level (see Table).
6. Wait until the battery is fully charged (LED indication **(18)**: ● ● ● ●).

Note: Two batteries can be charged at the same time, a second slot is provided for it.

LED indication (18) in the battery charging mode	**Battery Level**
✸	Battery charge level is from 0% to 25%
● ✸	Battery charge level is from 26% to 50%
● ● ✸	Battery charge level is from 51% to 80%
● ● ● ✸	Battery charge level is from 81% to 99%
● ● ● ●	Battery is fully charged. Charging will automatically stop. The battery can be disconnected from the charger.
●	Defective battery. **Do not use the battery!**

LED indication (18) in the standby mode*	**Battery Level**
✸	Battery charge level is from 0% to 25%
●	Battery charge level is from 26% to 50%

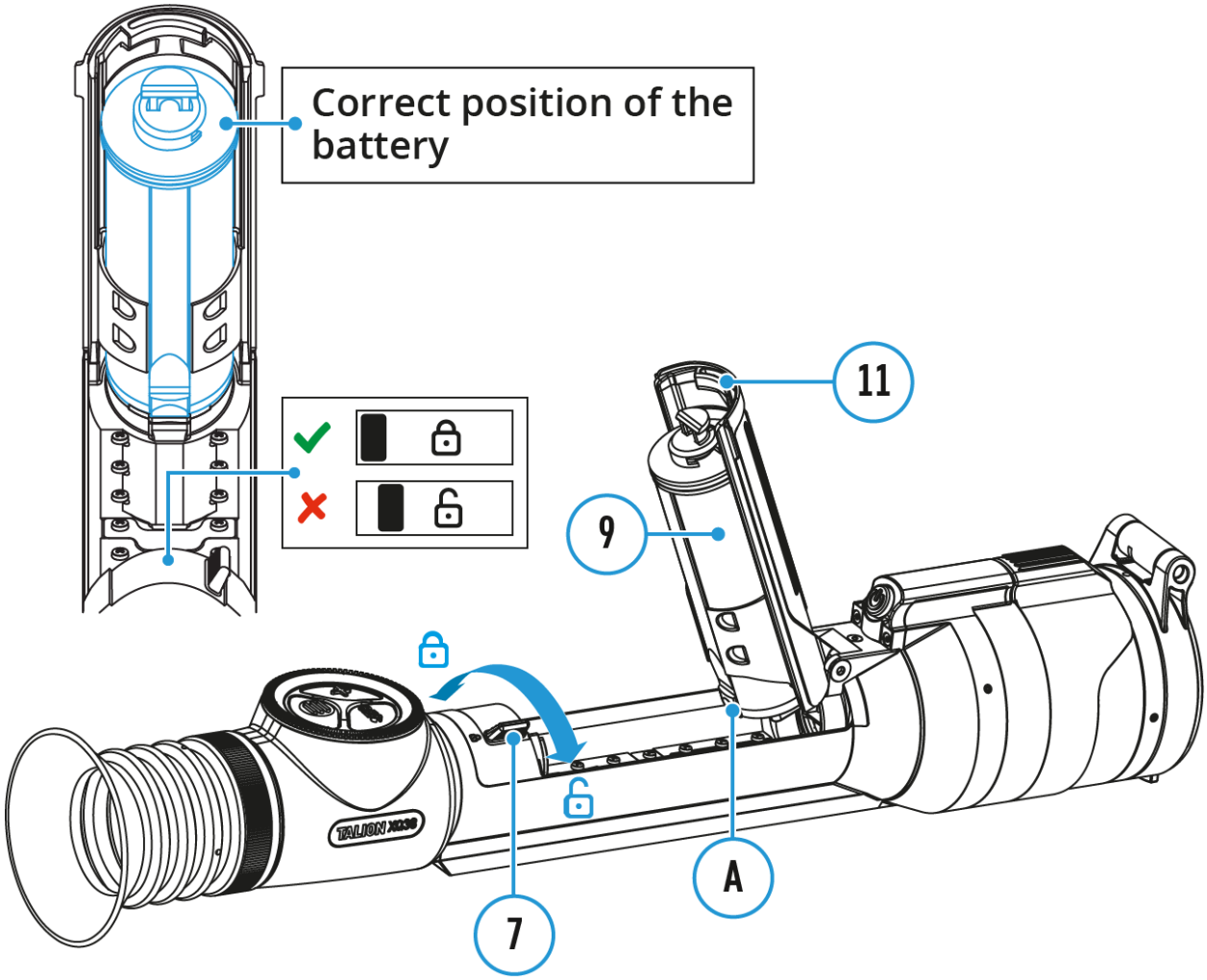
	Battery charge level is from 51% to 80%
	Battery charge level is from 81% to 99%
	Battery is fully charged. It can be disconnected from the charger.
	Defective battery. **Do not use the battery!**

* Standby mode is when the batteries are in the charger but the Power Adapter is not connected. In this mode, the indicators are only on for 10 seconds.

Attention! When using a Power Adapter that does not support USB Power Delivery fast charging technology, the flicker frequency of the LED indicators decreases by a factor of 3 and the charge time increases.

Attention! The charger heats up during fast charging. Excess heat is removed through the radiator and does not affect the device operation.

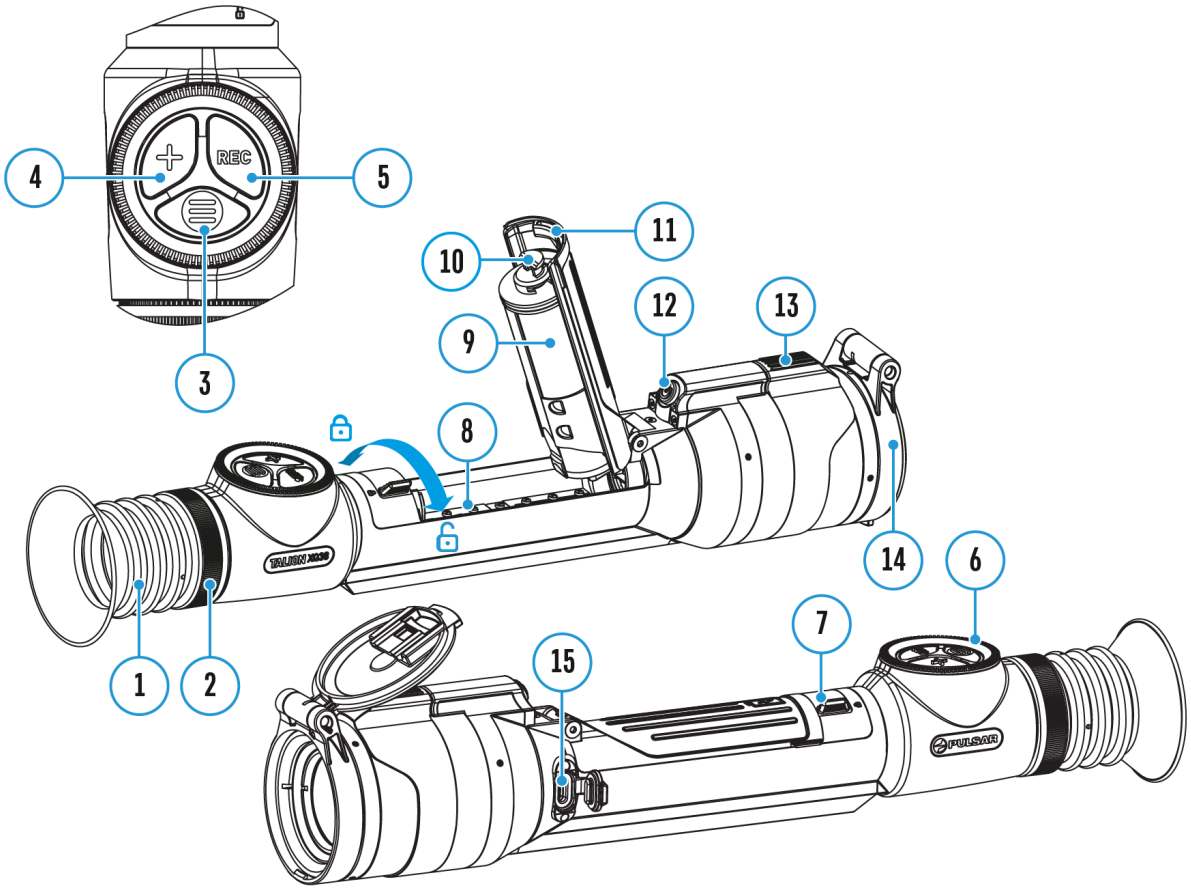
Battery Installation



1. Set the battery compartment lock **(7)** to the far right position 🔓.
2. Open the battery compartment cover **(11)**.
3. Insert the APS 5T battery **(9)** under the battery compartment cover **(11)** as shown in the image. The protrusion**(A)** on the battery should fit into the groove between the fasteners under the battery compartment cover **(11)**.
4. Close the battery compartment cover **(11)**. The hook**(10)** must fit into the groove of the battery compartment cover lock **(7)**. Then move the lock **(7)** to the left as far as it will go into the fixed position until it clicks. The lug on the lock **(7)** must line up with the icon 🔒.

External Power Supply

Show device diagram



Power can be supplied from an external source such as a 5V or 9V power bank

1. Connect the external power supply to the micro USB Type-C port **(15)** of the riflescope.
2. The riflescope switches to external power source, while the APS 5T Battery Pack will gradually recharge.
3. A rechargeable battery icon Image not found or type unknown indicating a percentage of the battery life will appear in the status bar.
4. If the riflescope operates on external power supply but the Battery Pack APS 5T is not installed, an icon is shown.
5. When external power supply is disconnected, the riflescope switches to

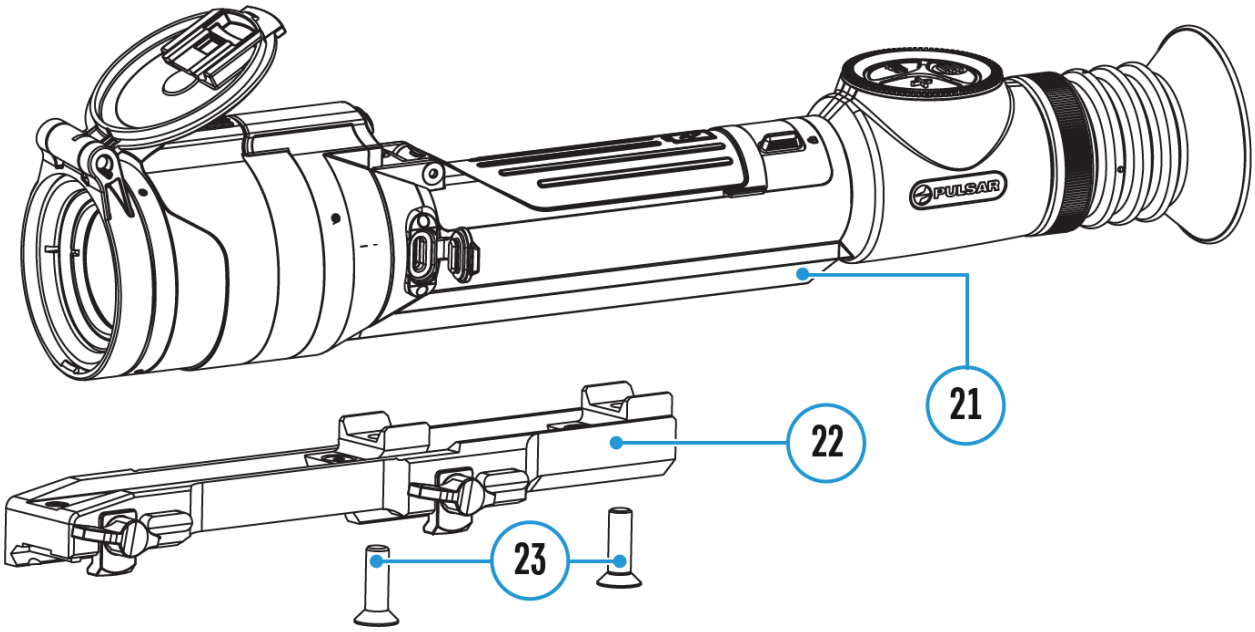
the APS 5T battery pack without powering off.

Warning! Charging APS 5T batteries at air temperatures below 0° C (32° F) may reduce battery life. When using external power, connect the Power Bank to the device after it has been turned on and working for several minutes.

Mounting on the Rifle

https://e.issuu.com/embed.html?d=2020_pulsar_digital_and_thermal_riflescopes_mounts

---



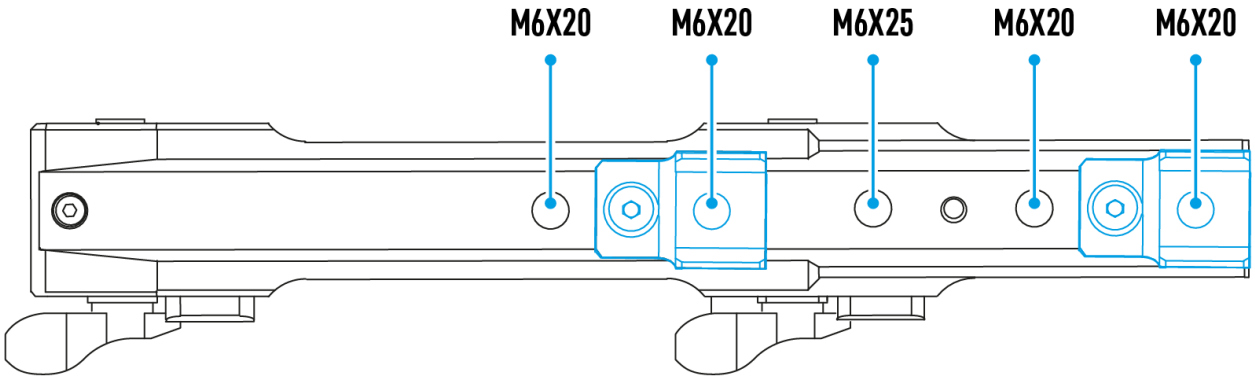
To ensure accurate shooting the **Talion** riflescope should be properly mounted on the rifle.

1. Secure the support* **(22)** on the riflescope mount **(21)** using a Allen wrench/hex key* and screws **(23)*** (clamping force – 4 Nm/35.4 in-lbs).
2. Choosing the position of the mount helps to ensure the correct eye relief, depending on the type of rifle.
3. Install the riflescope with the mount on the rifle and check if the position is suitable for you, then remove it.
4. Unscrew the screws **(23)** halfway, apply some thread sealant onto the thread of the screws **(23)** and tighten them fully (clamping force – 4 Nm/35.4 in-lbs). Let the sealant dry for the time specified in the instructions. The riflescope is ready to be installed on a rifle and to be zeroed.
5. Before using the riflescope (especially for hunting), follow instructions in the **Zeroing** section.

---

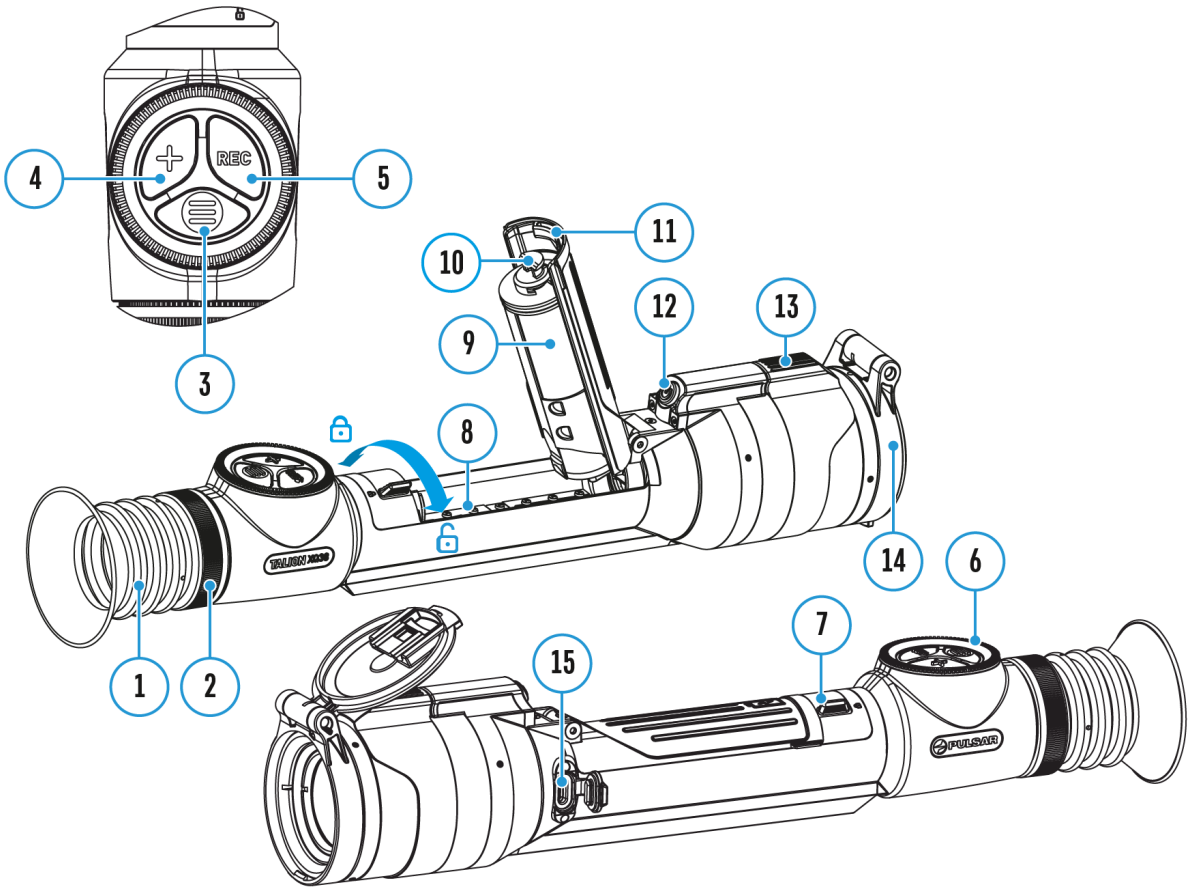
*Sold separately or included in the package. The type of the mount and screws depends on the device model.

Mount	Screws
Weaver U	2 screws M6x18
Weaver LQD	3 screws M6X12
Weaver USQD	2 screws M6x20 or 1 screw M6x20 + 1 screw M6x25 (for the mount center bore)



Powering on and Image Settings

Show device diagram



---

1. Remove the lens cover **(14)**.
2. Turn the unit on with a short press of the**ON/OFF (12)** button.
3. Adjust the sharpness of the symbols on the display by rotating the dioptre adjustment ring of the eyepiece **(2)**.
4. Rotate the lens focus control **(13)** to focus on visual target.
5. Enter the main menu with a long press of the **MENU (3)**button and select the desired **calibration mode** by rotating the controller: manual **(M)**, semi-automatic **(SA)** or automatic **(A)**.
6. Calibrate the image with a short press of the **ON/OFF (12)** button

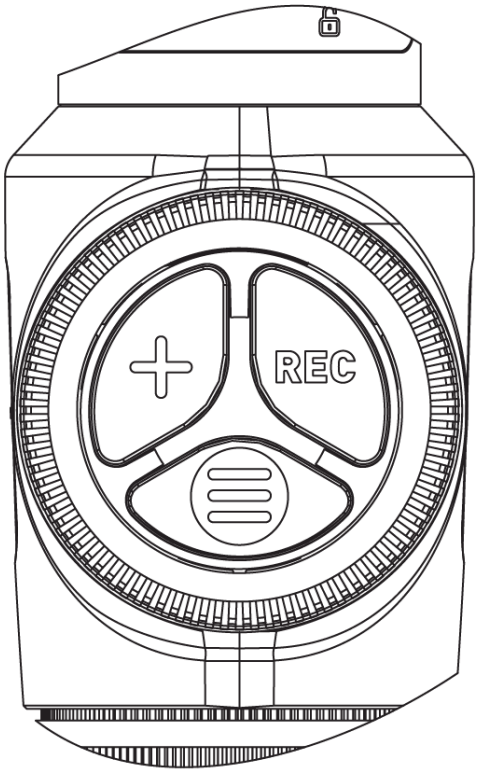
(when calibration mode **SA** or **M** has been selected). Close the lens cap before manual calibration.

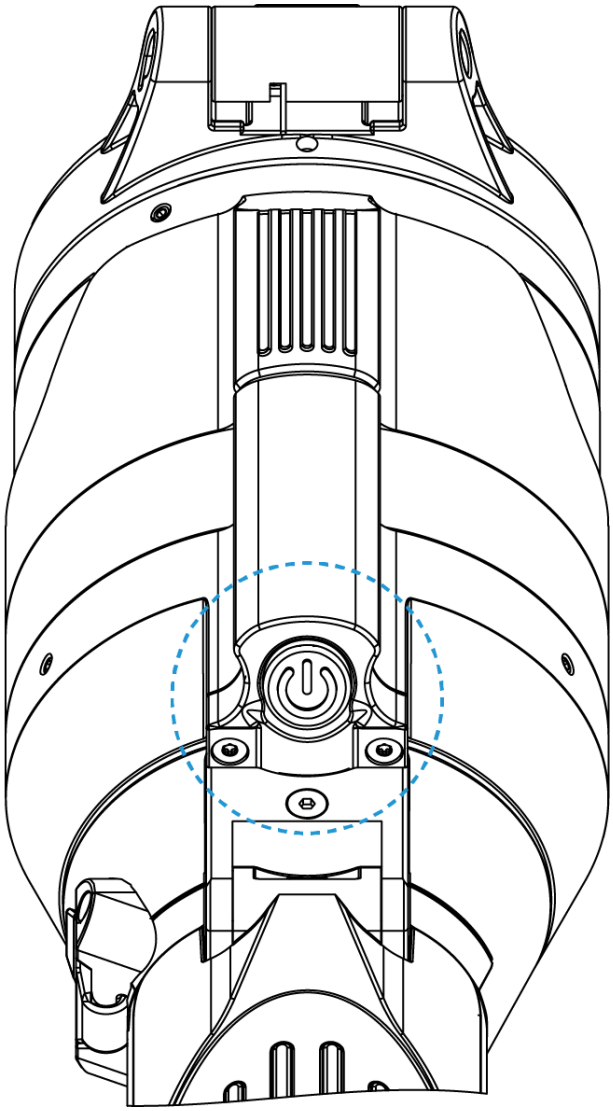
7. Activate the quick menu by briefly pressing the **MENU (3)** button to select the **amplification level** (**“Normal”** , **“High”** , **“Ultra”**), adjust the brightness and contrast (see the **Quick Menu** section).
8. Repeatedly press the **ZOOM (4)** button successively to change the magnification ratio of the riflescope. While the magnifying glass icon is visible on the screen, rotate the controller **(6)** for smooth digital zooming from the current magnification.
9. Power the device off with a long press of the **ON/OFF (12)** button.

Observation conditions: time of day, weather, different observation objects affect the image quality. Custom settings for brightness, display contrast as well as the function of adjusting the microbolometer sensitivity level will help to achieve the desired quality in a particular situation.

Warning! Never point the lens at intensive energy sources such as laser radiation emitting devices or the sun. It can damage electronic components in the device. The warranty does not cover damage arising from failure to comply with operating instructions.

Button Operation



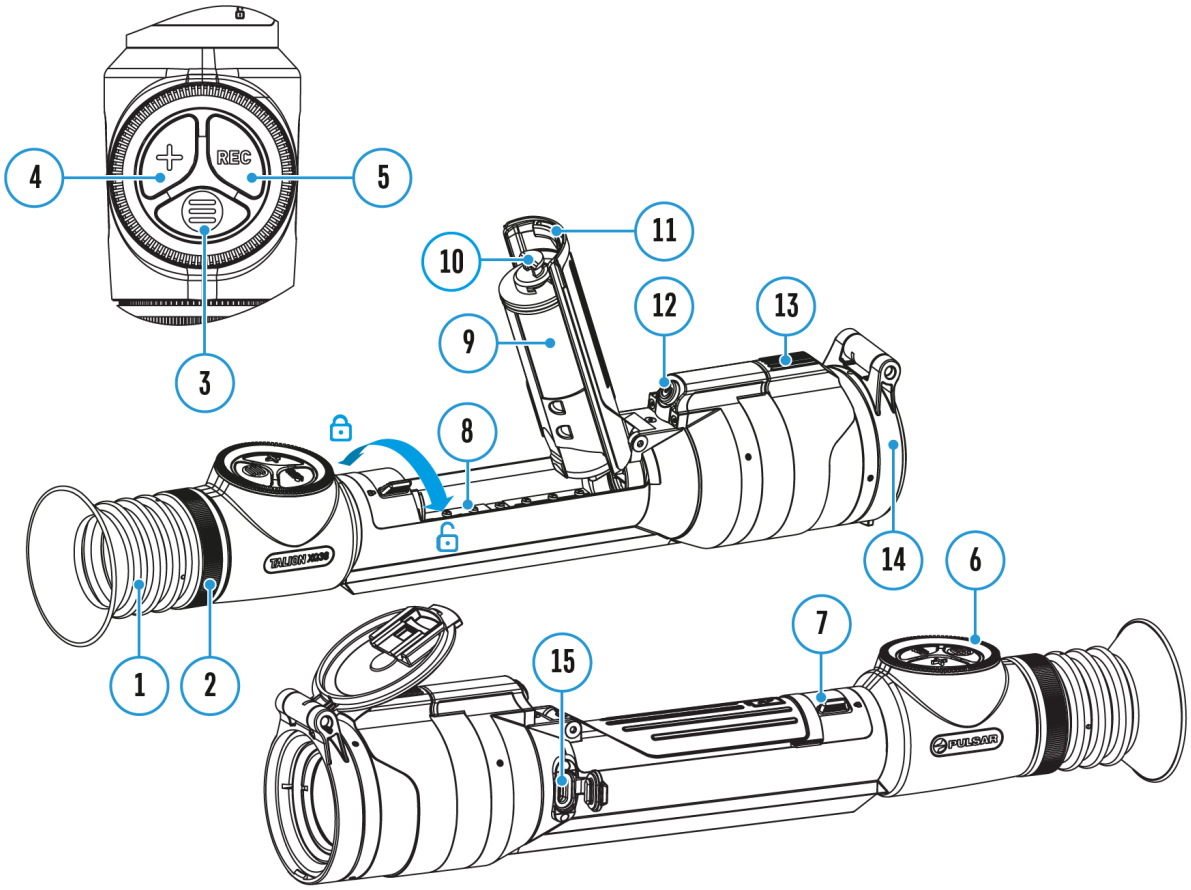


Operation	Button
Power device on	⏻ short press
Power device off	⏻ long press for 3 secs
Turn display off	⏻ long press for less than 3 secs
Turn display on	⏻ short press
Calibrate the microbolometer	⏻ short press

Control discrete digital zoom		short press
Smooth Zooming		rotation
PiP on/off		long press
Video Recorder	**Button**	
Start/pause/resume video recording	REC	short press
Stop video recording	REC	long press
Switch to video / photo mode	REC	long press
Capture Photo	REC	short press
Main Menu	**Button**	
Enter main menu		long press
Navigation through menu		rotation
Enter menu items		short press
Confirm value		short press
Exit menu items		long press
Exit main menu		long press
Quick Menu	**Button**	
Enter quick menu		short press
Switch between quick menu options		short press
Parameter change		rotation
Exit quick menu		long press

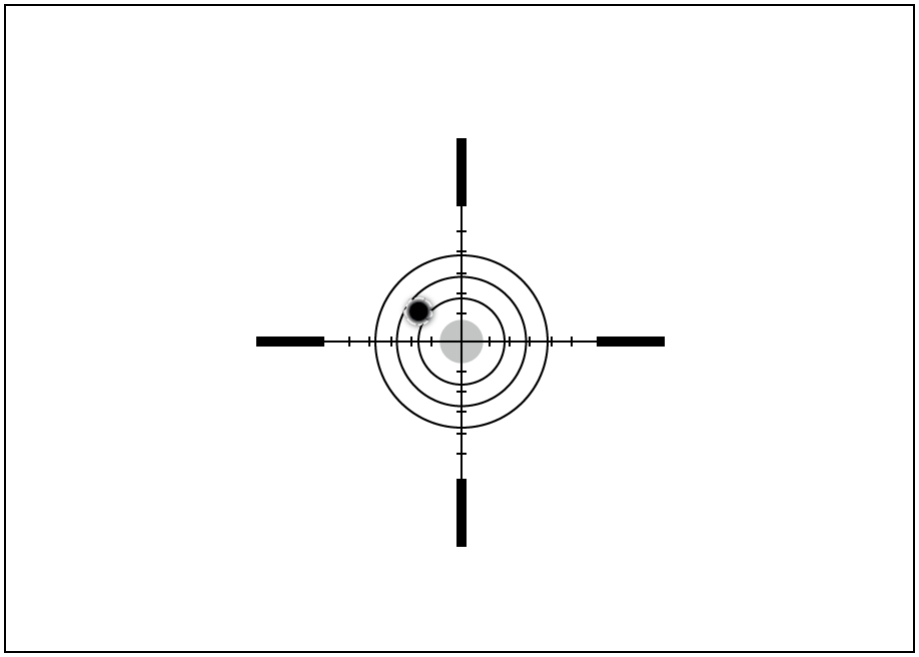
How to zero

Show device diagram



Zeroing at a temperature close to the riflescope’s operating temperature is recommended.

Step 1. Take a shot



1. Shooting from a benchrest is recommended.

2. Set a target at a known distance.

3. Adjust the riflescope according to the **Powering on and Image Setting** section.

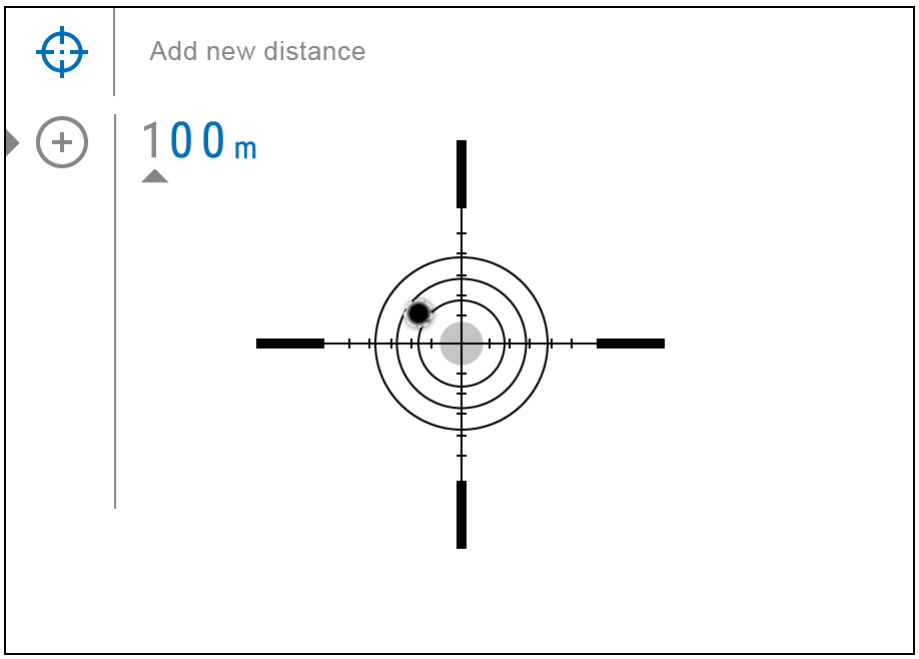
4. Select the zeroing profile (see **Reticle & Zeroing** **->** **Zeroing Profile** main menu item)

5. Point the rifle at the center of the target and shoot.

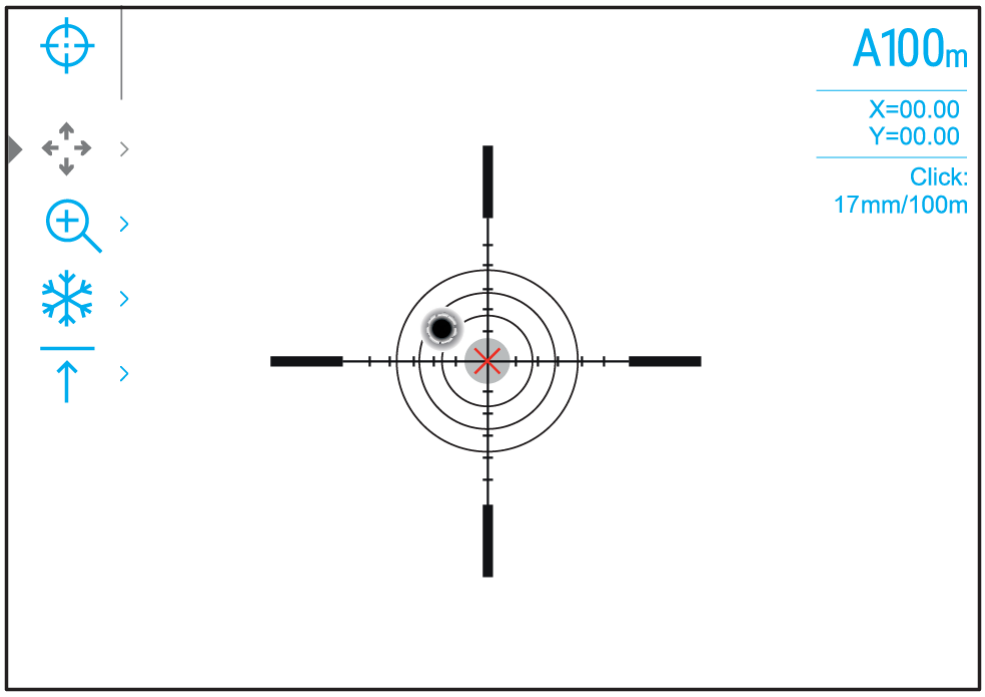
Step 2. Align the reticle with the point of impact

1. Press and hold the **MENU (3)**button to enter the main menu.

2. Add the distance you are aiming at (e.g. 100 meters):**Reticle & Zeroing** **->Add New Distance**. Select the value for each distance digit by rotating the controller**(6)**. Press the **MENU (3)**button briefly to switch between digits. After setting the required distance, press and hold the **MENU (3)**button to save it.

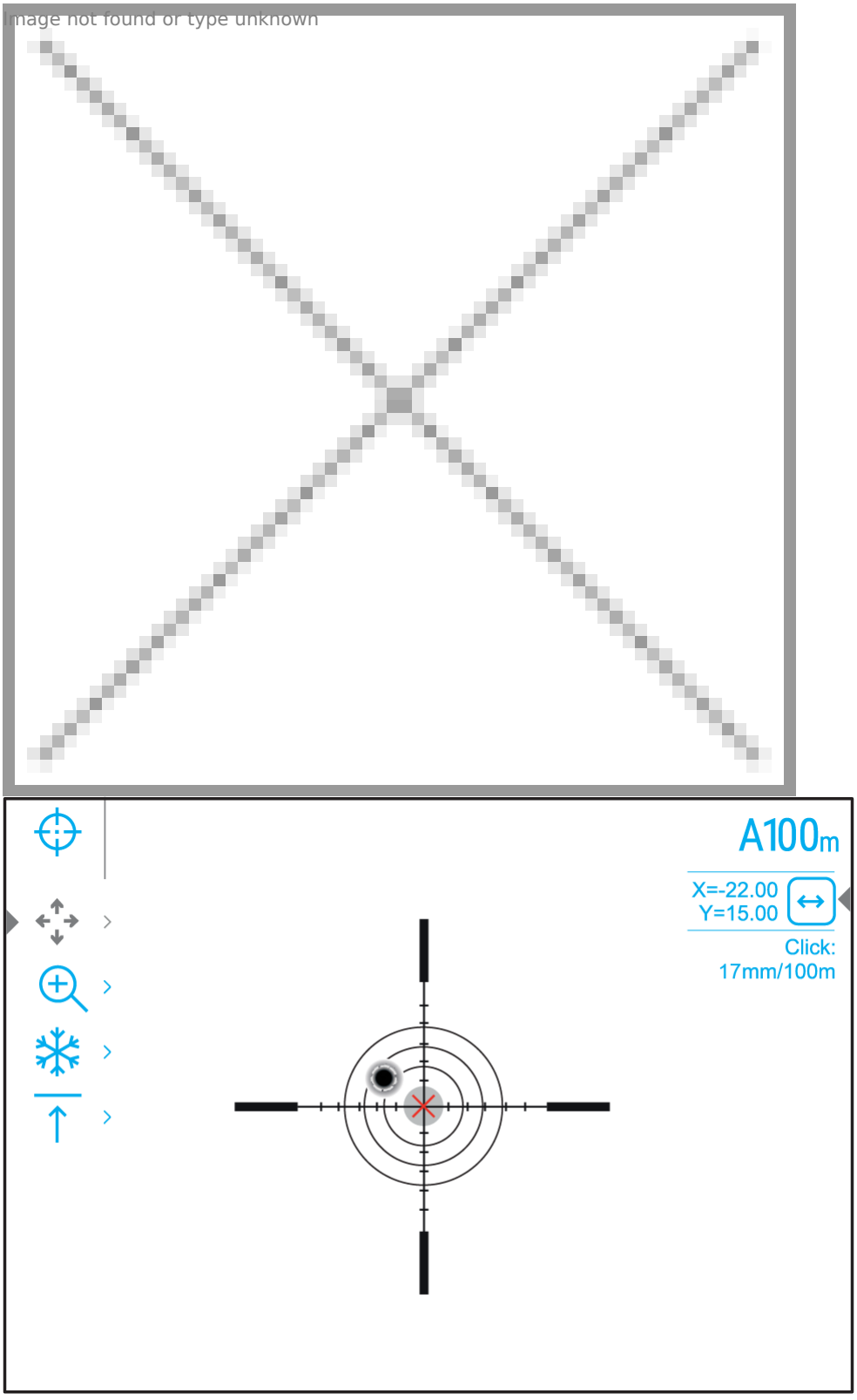


3. After adding the distance, it will switch to the **Zeroing parameters settings** menu . An auxiliary cross will appear in the center of the display, and X and Y coordinates of the auxiliary cross will appear in the upper right corner.



4. Press the **MENU (3)**button briefly to enter the **Windage/Elevation** submenu.

5. While holding the reticle at the aiming point, move the auxiliary cross until it is aligned with the impact point by rotating the controller **(6)**.



6. To change the direction of the auxiliary cross movement from horizontal to vertical, press the **MENU (3)**button briefly.

Zoom Zeroing function:

To improve the accuracy of zeroing, you can change the magnification in the

menu . The larger the magnification, the smaller the step of shifting the reticle on the display relative to the image from the sensor.

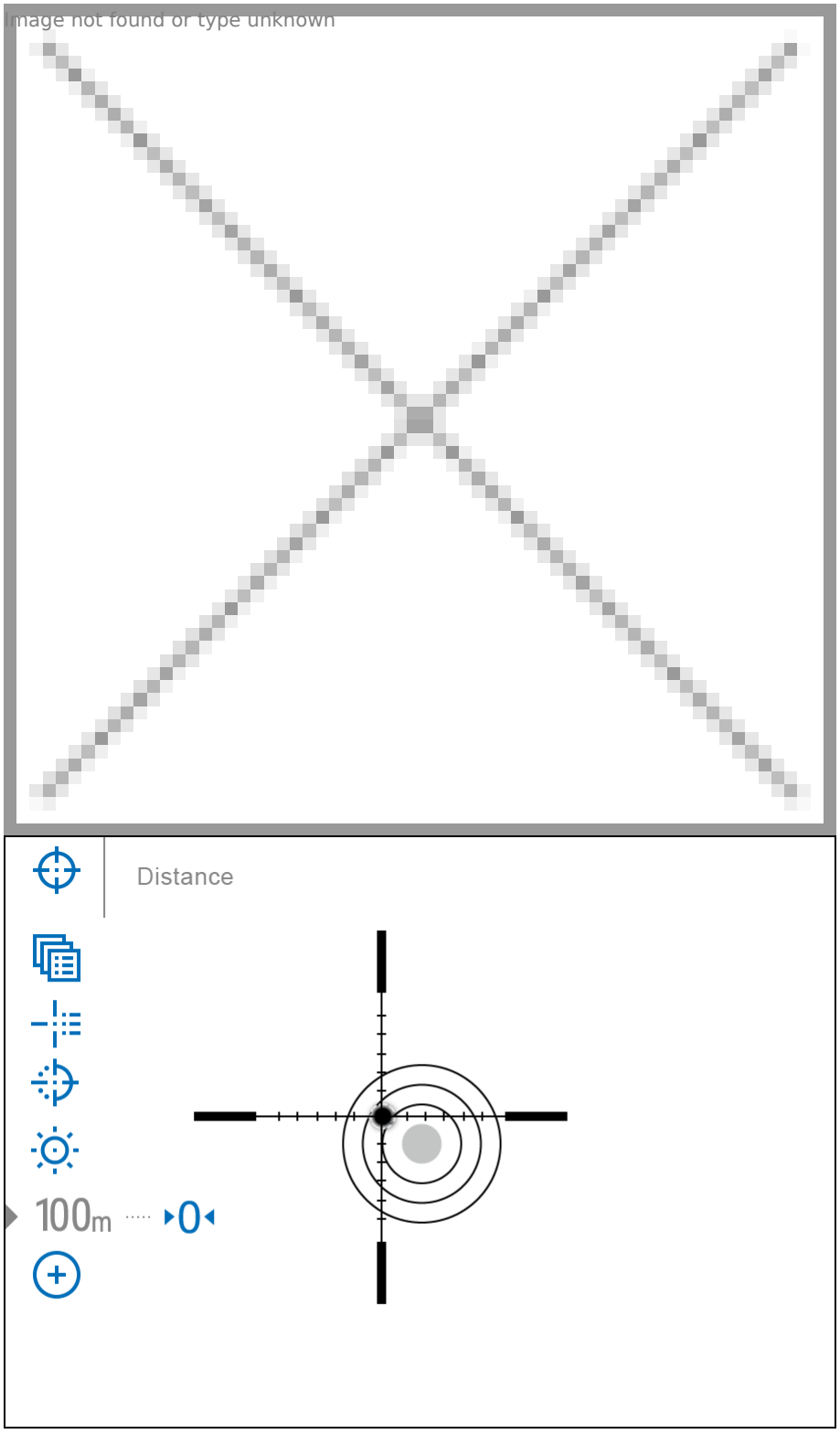
Model	XQ38	XG35
Click value, mm@100 m – when magnifying, x	17 mm – 2.5x 8.5 mm – 5x 4.25 mm – 10x	21 mm – 2x 10.5 mm – 4x 5.25 mm – 8x 2.6 mm – 16x

One-shot "Freeze Zeroing" function:

Using the **Freeze** function allows you to make adjustments without the need to hold the rifle precisely at the initial aiming point – freezing the zeroing screen (refer to **Reticle & Zeroing** menu item => **Distance** submenu => **Zeroing Parameters Settings** submenu => **Freeze** submenu or short pressing of the **ON/OFF (12)** button. The image will “freeze” and the icon will appear.

Step 3. Save the coordinates

1. Press and hold the **MENU (3)**button to save a new position for the reticle. The reticle will be aligned with the impact point and it will exit the **Windage/Elevation** submenu.



2. Press and hold the **MENU (3)**button again to exit the zeroing settings menu - the message “Zeroing coordinates saved” appears, confirming the successful operation.

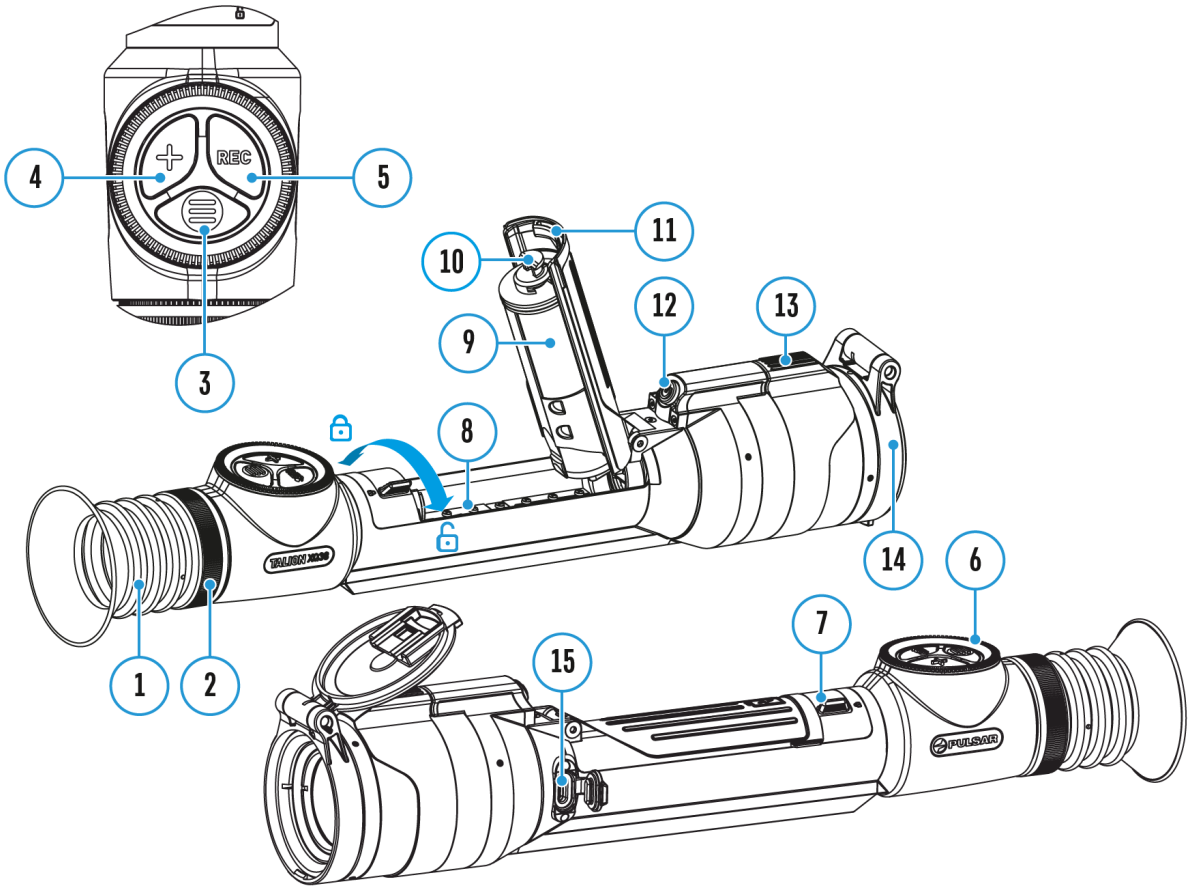
3. Fire a second shot - now the point of impact and the aiming point must be matched.

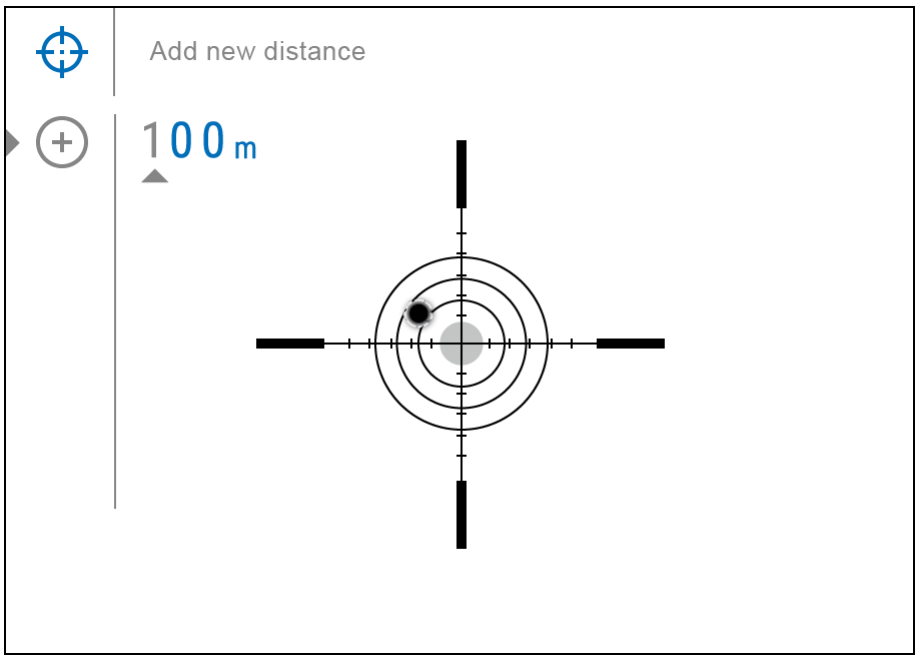
Notes:

- After zeroing, the reticle may not be in the center of the display.
- The range of movement of the riflescope reticle allows you to successfully zero the riflescope, even on mounts that are far from ideal, minimizing the possible disadvantages of the mounts. The better the mount is installed, the less you have to move the reticle. We recommend mounting the riflescope as low as possible.

Add New Distance

Show device diagram





To zero your riflescope, you need to set a zeroing distance first in the range of 1 to 910 m (955 yards).

1. Press and hold the**MENU (3)**button to enter the main menu.
2. Rotate the controller **(6)** to select the **Reticle & Zeroing** Image not found or type unkn menu item.
3. Press the **MENU (3)**button briefly to enter the Reticle & Zeroing submenu.
4. Rotate the controller **(6)** to select **Add New Distance** ⊕ menu item.
5. Press the **MENU (3)**button briefly to enter the submenu.
6. Rotate the controller **(6)** to select a value for each digit. Press the

   ⊕ 150 m Image not found or type unknown

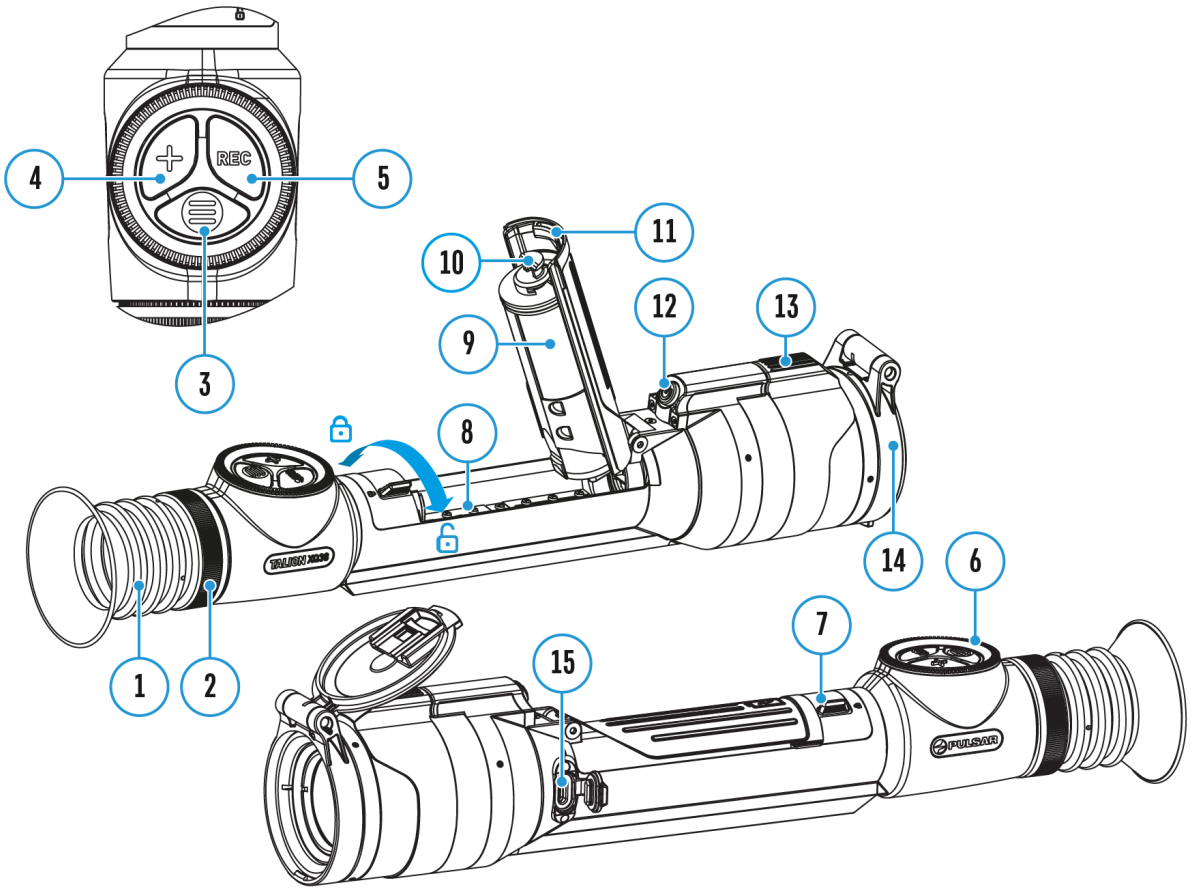
   MENU (3)button briefly to switch between digits .
7. Having set the desired distance, press and hold the **MENU (3)**button to save it.

The distance you set first becomes a **primary distance –**shown with the ▸0◂ icon on the right of the distance value.

Note: Maximum number of zeroing distances is 10 for each profile.

Zeroing Parameters Settings

Show device diagram

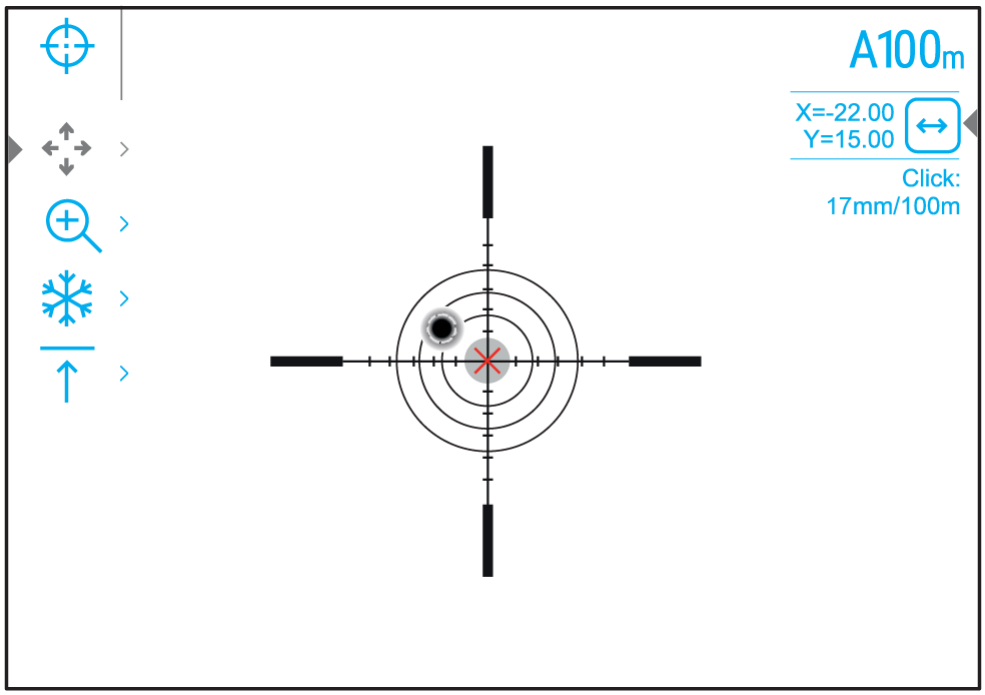


---

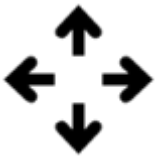
1. Press and hold the **MENU (3)** button to enter the main menu.
2. Rotate the controller **(6)** to select **Reticle & Zeroing** in the menu. Briefly press **MENU (3)** to select it. Zeroed distances are displayed below.
3. The values (e.g., +7.0) shown on the right of the distance values, stand for the number of clicks along the Y axis, at which the reticle position at

other distances differs from the reticle position in the primary distance.

4. To zero at any distance again, rotate the controller **(6)** to select the required distance and briefly press the **MENU (3)** button.
5. Rotate the controller **(6)** to select the **Zeroing Parameters Settings** and enter by briefly pressing the **MENU (3)** button.
6. **Zeroing** screen, which allows the change of zeroing coordinates, will appear:



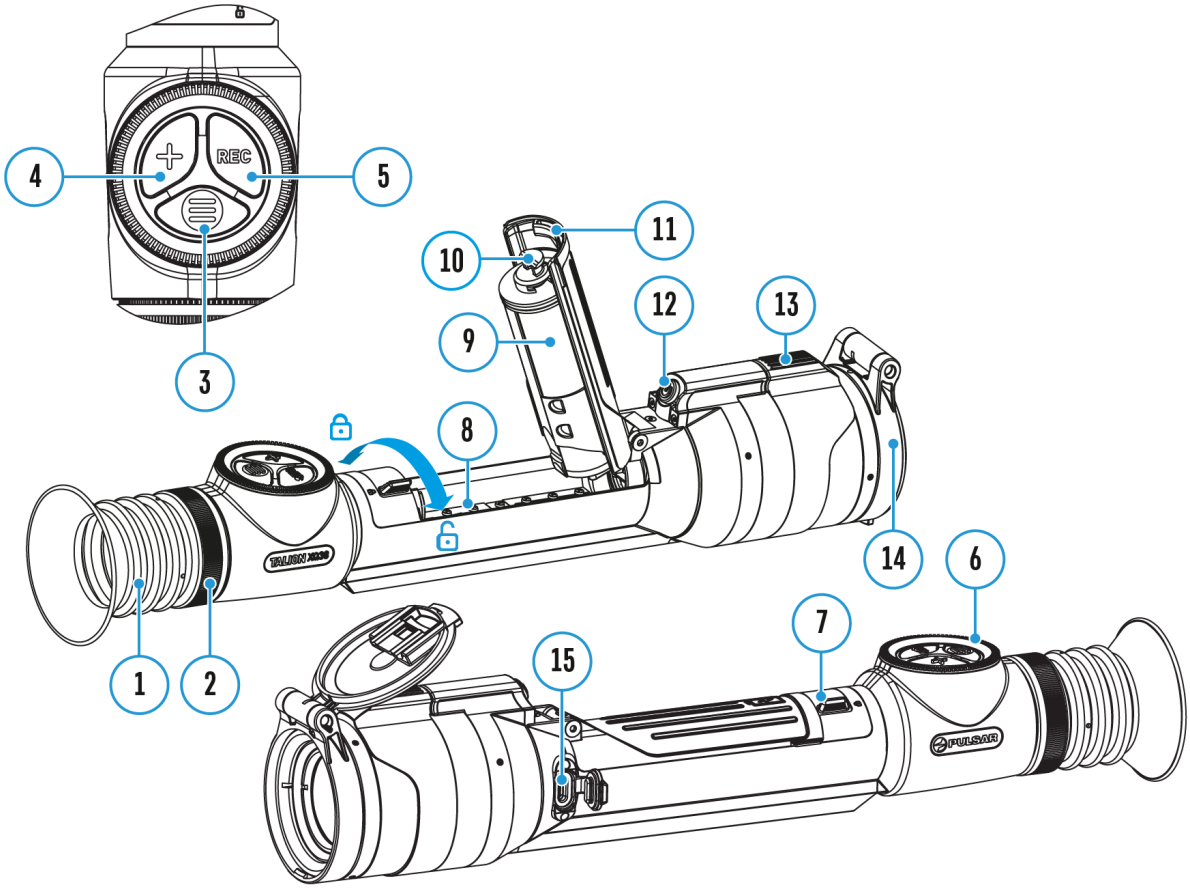
Windage/Elevation



Adjust the reticle position through the **Windage/Elevation** submenu in **Zeroing Parameters Settings**. For more information, see the **How to Zero** section.

Magnification (when Zeroing)

Show device diagram



Magnification allows you to magnify via the device's digital zoom when zeroing, which reduces the MOA-per-click values of adjustments and improves zeroing accuracy.

1. In the **Zeroing Parameters Settings** menu, rotate the controller **(6)** to select the **Magnification** submenu item and enter by

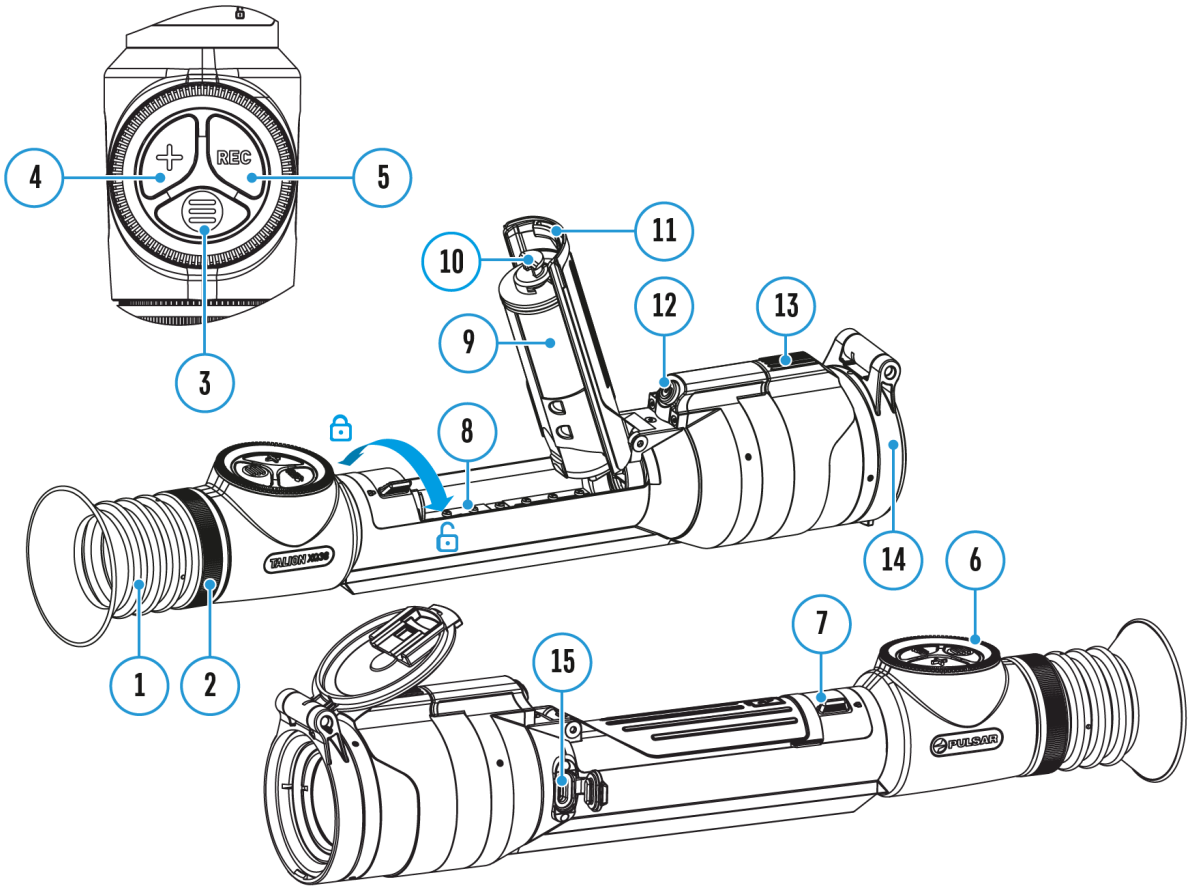
briefly pressing the **MENU (3)** button.

2. Rotate the controller **(6)** to select a digital magnification value of the riflescope (e.g., x4).
3. Press the **MENU (3)** button briefly to confirm your selection.

The minute of angle click when using the Magnification function is indicated in the Table of **Technical Specifications**.

Freeze

Show device diagram



The “freeze” function allows the user to adjust the riflescope’s reticle on a still image while manipulating the rifle.

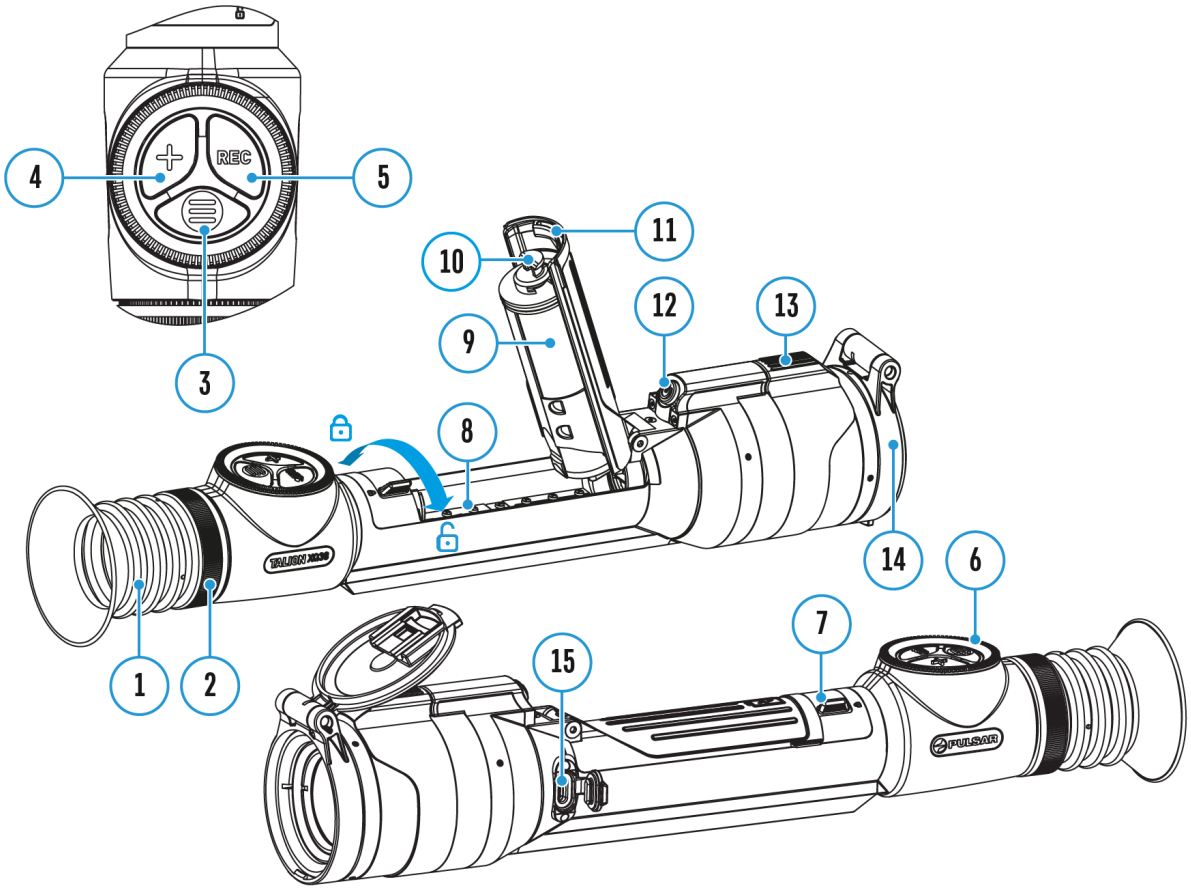
1. In the **Zeroing Parameters Settings** menu, rotate the controller **(6)** to move the cursor to the **Freeze** function.
2. Align the reticle with the point of aiming and press the **MENU (3)** button or the **ON/OFF (12)** button. A screenshot will be taken, an icon will appear.
3. Go to the additional **Windage/Elevation** submenu and adjust

the position of the reticle (see the **How to Zero** section).

4. Select the **Freeze** Image not found or type unknown submenu item again and briefly press the **MENU (3)**button or **ON/OFF(12)** button - the image will “unfreeze”.

Name Distance

Show device diagram

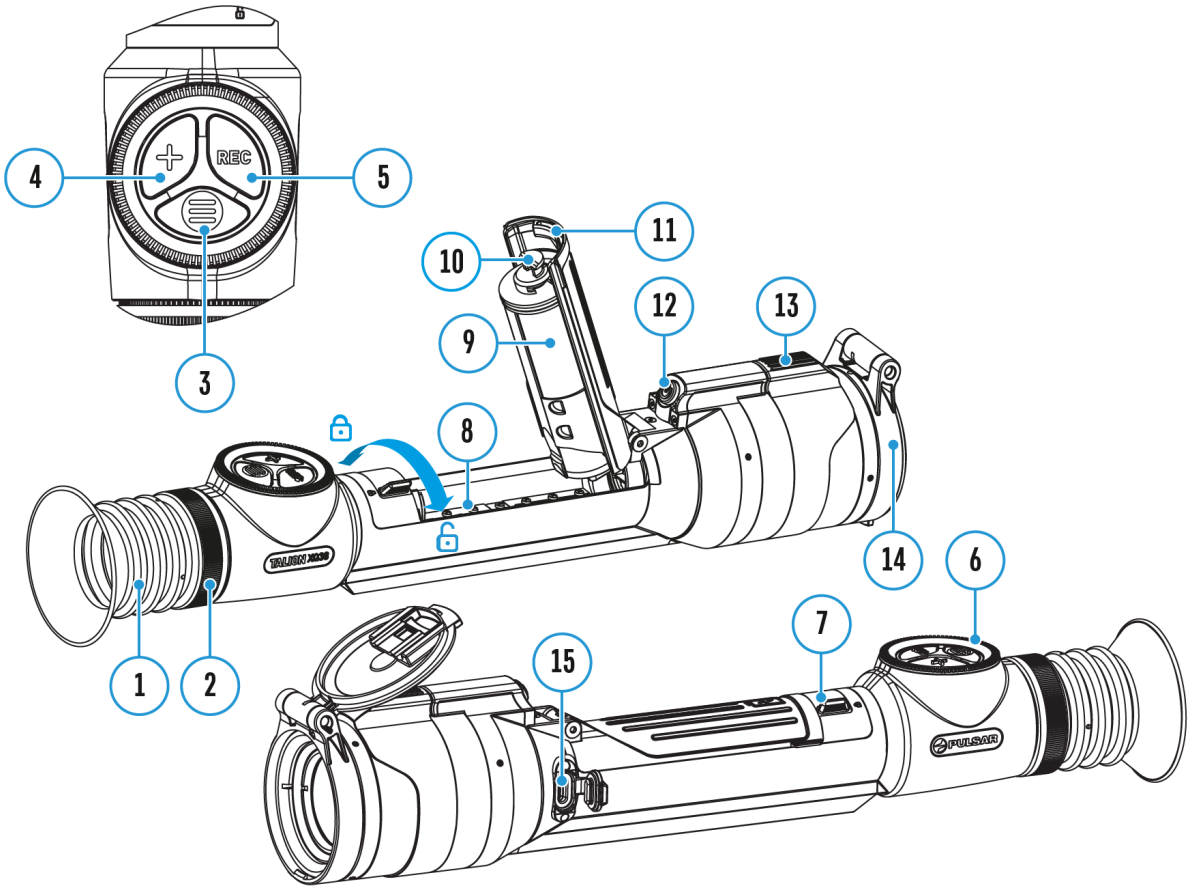


---

1. In the **Zeroing Parameters Settings** menu, rotate the controller **(6)** to select the **Name Distance** submenu item and enter it by briefly pressing the **MENU (3)**button.
2. Rotate the controller **(6)** to select a value for each digit. Press the **MENU (3)**button briefly to switch between digits.
3. Press and hold the **MENU (3)**button to confirm the selection.

Change Primary Distance

Show device diagram



---

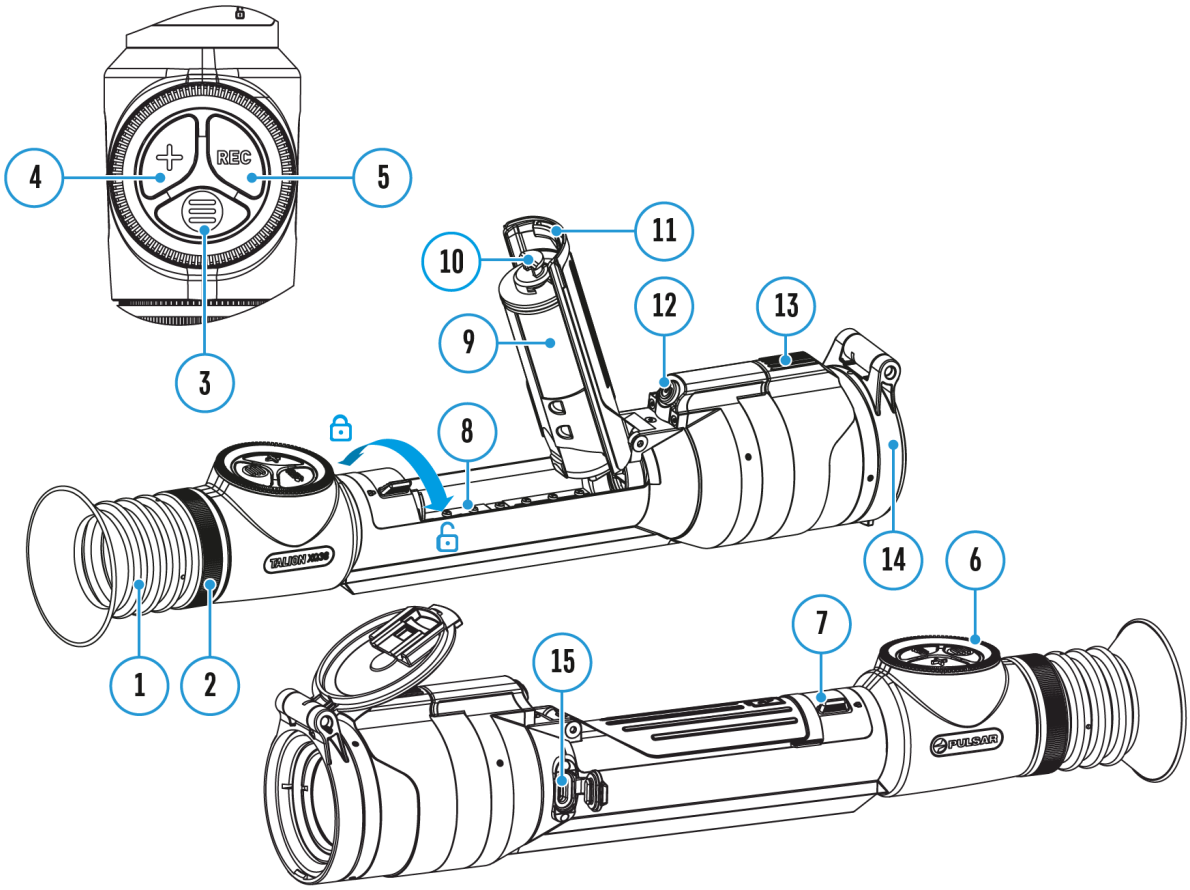
1. Press and hold the **MENU (3)**button to enter the main menu.
2. Rotate the controller **(6)** to select the **Reticle & Zeroing** menu item and enter by briefly pressing the **MENU (3)**button – zeroed distances are displayed at the bottom.
3. Select a non-primary distance and enter the submenu for operating the distance with a brief press of the **MENU (3)**button.
4. Select **Change Primary Distance** item.
5. Press the **MENU (3)**button briefly.

6. Icon Image not found or type unknown 0 next to the selected distance confirms the change of primary distance.

There will also be a recalculation of corrections in clicks for other distances relative to the new primary distance.

Delete Distance

Show device diagram



---

1. Press and hold the **MENU (3)**button to enter the main menu.
2. Rotate the controller **(6)** to select the **Reticle & Zeroing** menu item and enter by briefly pressing the **MENU (3)**button – zeroed distances are displayed at the bottom.
3. Select the distance you wish to delete and enter the submenu for operating the distances with a brief press of the **MENU (3)**button.
4. Select **Delete Distance** item.
5. Press the **MENU (3)**button briefly.

6. Select *“Yes”* in the appeared dialog box to delete a distance. *“No”* – to cancel deletion.
7. Press the controller button **(6)** briefly to confirm your selection.

Attention! If the primary distance is deleted, the first distance on the list automatically becomes the new primary distance.

Status Bar

The status bar at the bottom of the display shows current operating statuses via icons, including:

1. Colour Mode:

- White hot

- Black hot

2. Actual zeroing profile (e.g., A)

3. Zeroing distance (e.g., 100 m)

4. Amplification level (e.g., Normal)

5. Smoothing Filter (displayed when the function is on)

6. Calibration mode (a countdown timer 00:03 will appear instead of the calibration icon when in automatic calibration mode with 3 seconds remaining until automatic calibration)

7. Magnification

8. Microphone

9. Wi-Fi connection

10. Auto Shutdown function (e.g., 5 min.)

11. Clock

12. Power Indication:

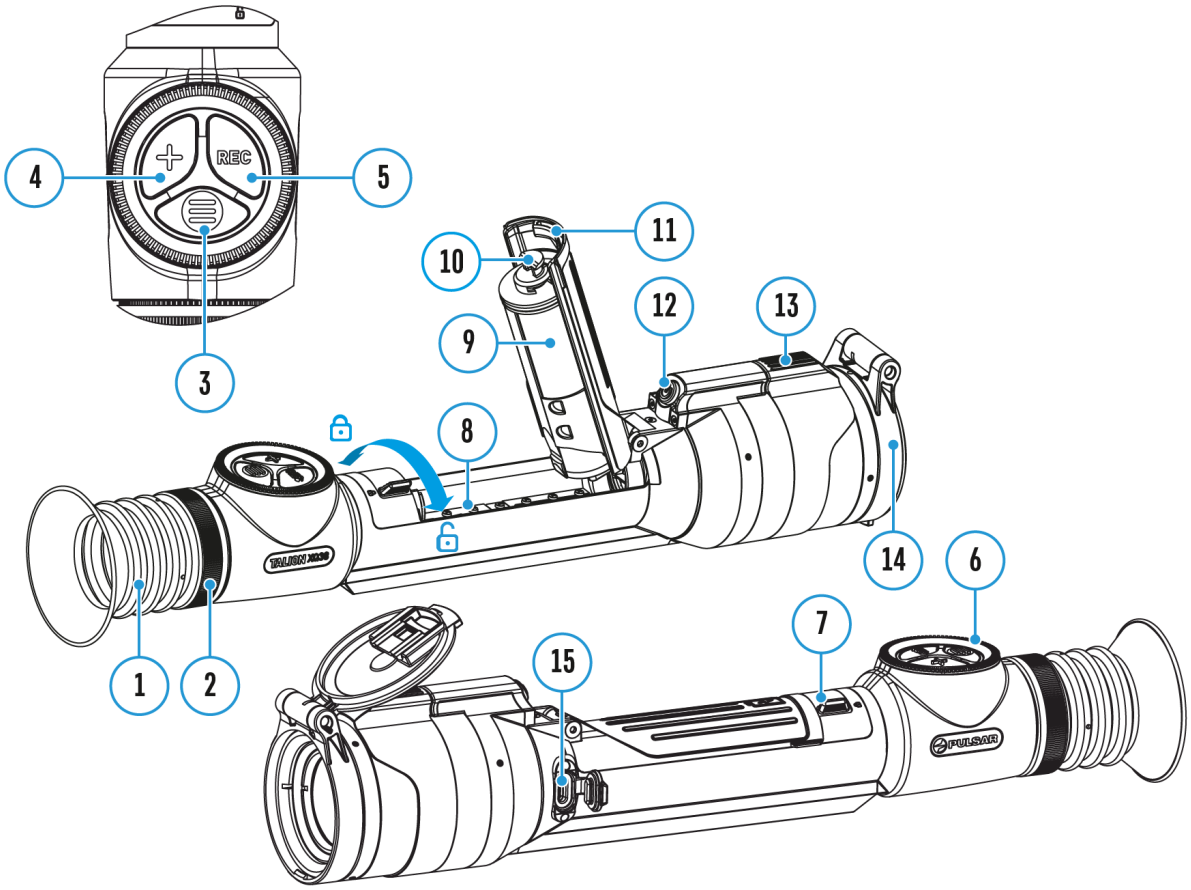
- charge level if the device is powered by a battery

- charge level if the device is charging and powered by a battery

- no battery, the device is connected to an external power supply

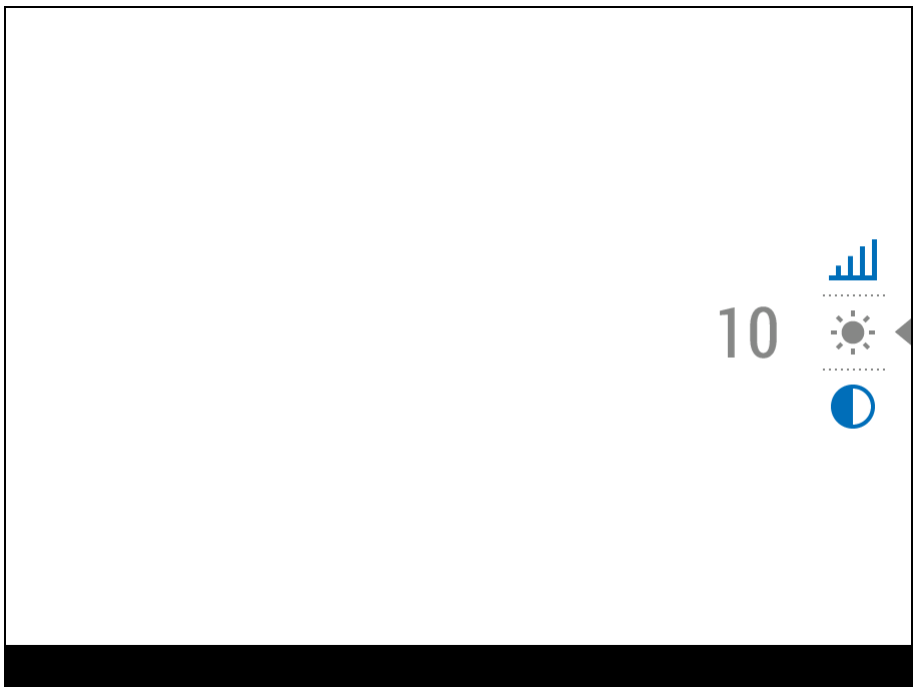
Quick Menu

Show device diagram



The quick menu allows you to control the main settings of the riflescope (brightness, contrast), select the sensitivity amplifying level, measure the distance using a stadiometric rangefinder and change the zeroing distance (if there are several) to another one in the current profile.

- Press the **MENU (3)**button briefly to enter the quick menu.
- A short press of the **MENU (3)**button enables you to switch between functions, as described below.



Brightness – rotate the controller **(6)** to change the display brightness value from 00 to 20.

Contrast – rotate the controller **(6)** to change the image contrast value from 00 to 20.

A100 – information on the current profile and zeroing distance in this profile (e.g., profile A, zeroing distance of 100 m). This information is always displayed in the status bar. Rotate the controller **(6)** to switch between the zeroing distances in the selected profile. This function is available if there are two or more distances in the profile.

*Tip:*To quickly switch between distances while hunting, leave the Zeroing Distance option selected before exiting the quick menu. The menu item will be saved, and the next time you enter the quick menu, you can quickly switch the zeroing distances by turning the controller **(6)** (for example, 100 m, 150 m, 200 m).

Amplification Levels – allows you to select one of three **amplifying levels of sensitivity**(Normal N, High H, Ultra U).

Note: To maintain brightness and contrast settings when changing amplifying levels, activate **User Mode**.

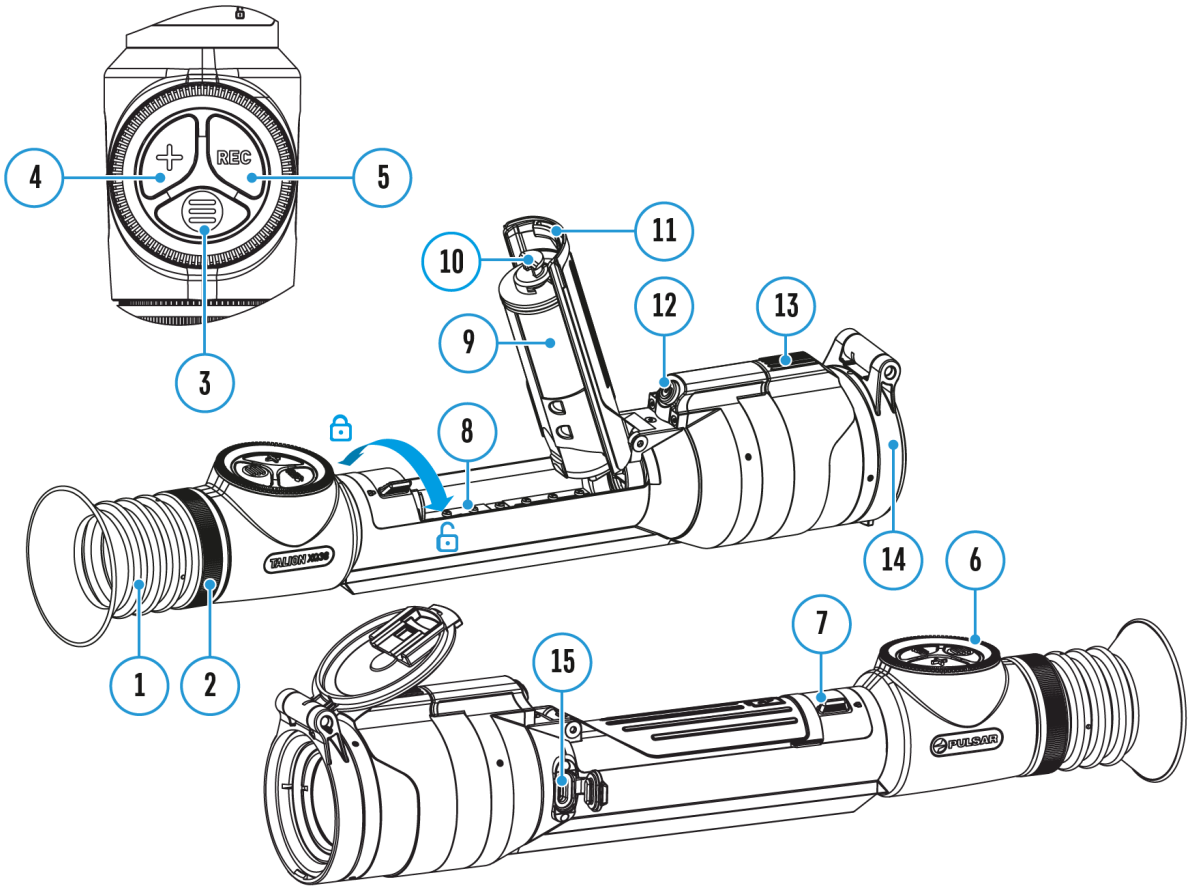
Stadiametric rangefinder

– rotating the controller **(6)**, change the distance between the special mark points to determine the distance to the observed object (for more details on the rangefinder, see the **Stadiametric Rangefinder** section).

- Press and hold the **MENU (3)**button to exit the menu or wait 10 seconds to exit automatically.

Amplification Level

Show device diagram



---

https://www.youtube.com/embed/StOPxTd-wps

Sensitivity enhancement levels (Normal, High, Ultra) are software algorithms that enhance the quality of detection and recognition in various observation conditions. When the temperature contrast decreases (fog, precipitation, high humidity), it is recommended to increase the amplification level. To optimize the image, activate the **Smoothing Filter** in the main menu.

Normal

High

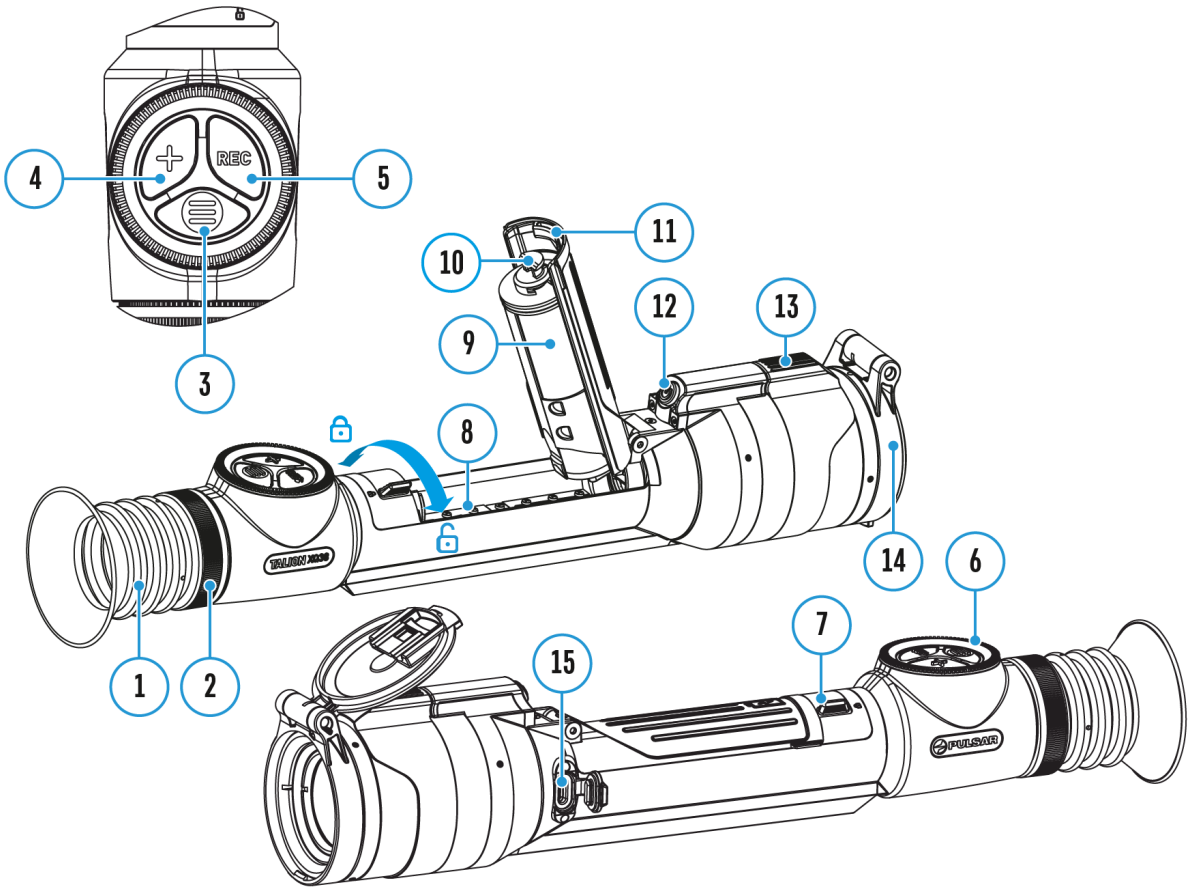
Ultra

---

1. Press and hold the **MENU(3)**button to enter the quick menu.
2. By short pressing the **MENU(3)**button select the menu item **Amplification level** .
3. Rotate the controller **(6)** to select one of the levels: Normal , High , Ultra .
4. Press and hold the **MENU (3)**button to exit the menu or wait for 3 seconds to exit automatically.

Video Recording and Photography

Show device diagram



The riflescope is capable of video recording and photography. Videos and images are saved on the built-in memory card.

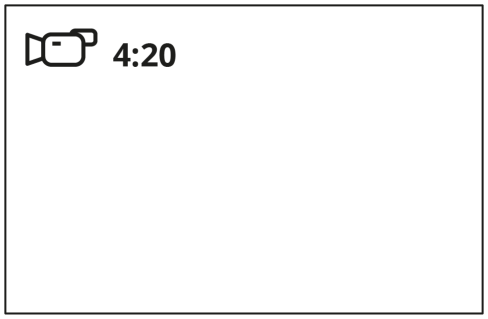
Before using the photo and video functions, read the **Date**and **Time** subsections of the **General Settings** section.

For information on how to watch recorded photos and videos, see the Stream Vision 2 user manual: **Android**, **iOS**.

Built-in recorder operates in two modes:

- **Photo** (photography; the icon is displayed in the upper left corner of the display).

- **Video** (video recording; the icon is displayed in the upper left corner of the display, the total remaining recording time is given taking into account the current resolution in the HH:MM format (hours:minutes).



Toggle (switch) between the riflescope operating modes with a long press of the **REC (5)** button. Switching between the modes is cyclical (**Video**–> **Photo**–> **Video**...).

Photo mode. Capturing an image

1. Switch to the **Photo**mode with a long press of the **REC (5)** button.

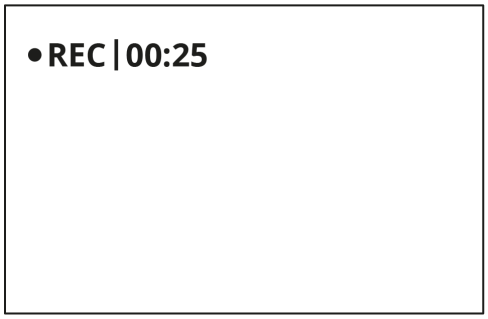
2. Press the **REC (5)** button briefly to capture a photo. The icon flashes – the photo file is being saved to the built-in SD card.

Video mode. Recording a video

1. Switch to the **Video** mode with a long press of the **REC (5)** button.

2. Press the **REC (5)** button briefly to start video recording.

3. When the video recording starts, the icon will disappear, instead of it the **REC** icon as well as the video recording timer displayed in the MM:SS (minutes:seconds) format will appear ●REC | 00:25.



4. Pause/continue recording by briefly pressing the **REC (5)** button.

5. Press and hold the **REC (5)** button to stop video recording.

Video files are stored in the built-in memory card:

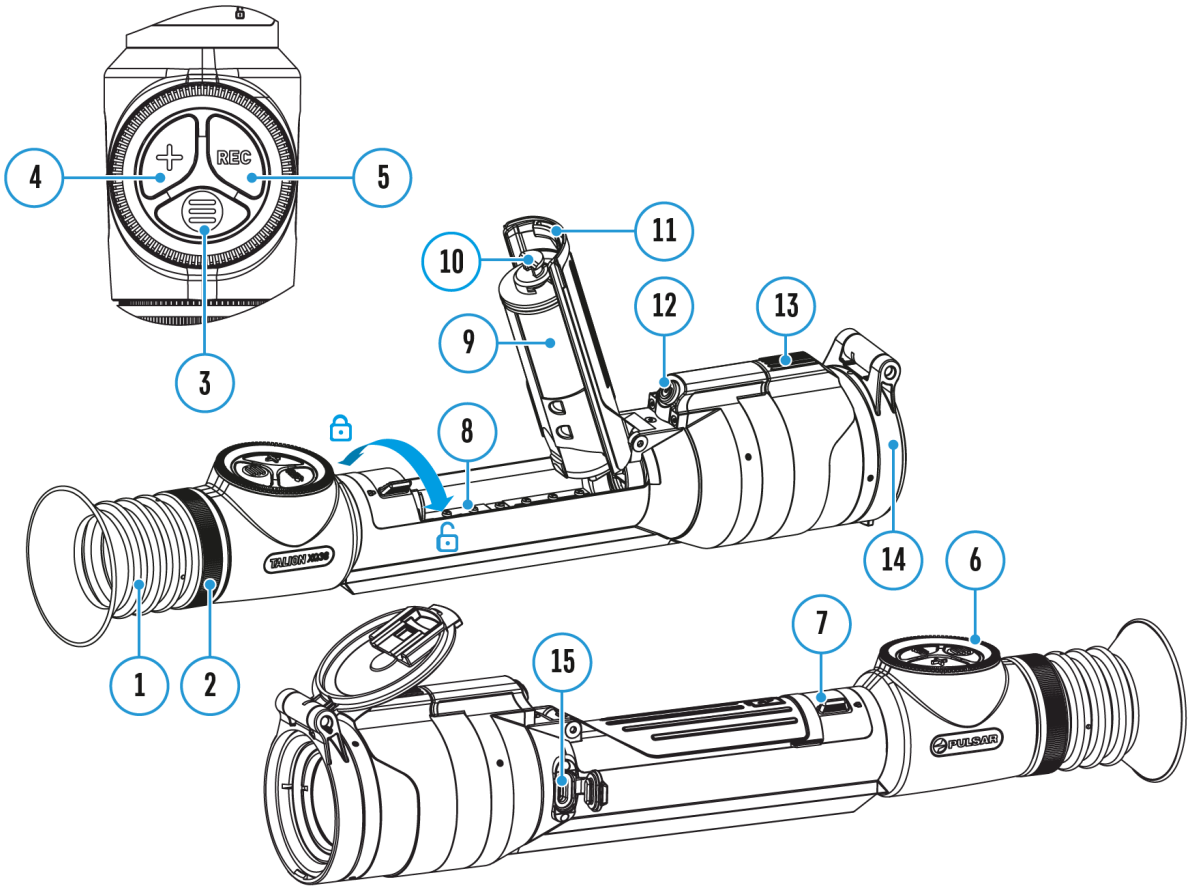
- After turning off the video recording;
- Upon powering the riflescope off if recording was on;
- When the memory card is overfilled during recording (Memory Full message appears on the display).

Notes:

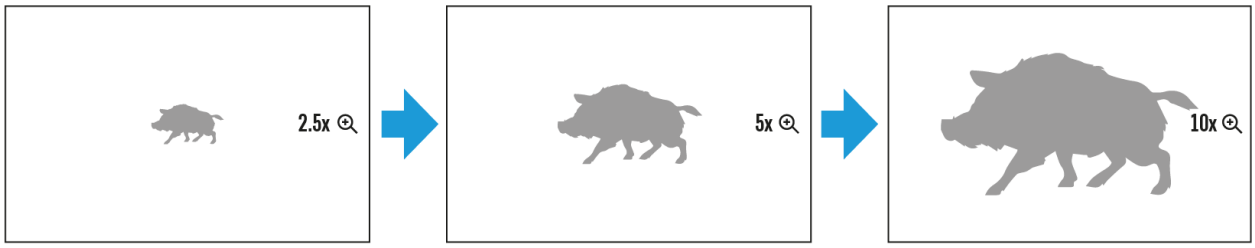
- You can enter and navigate the menu during video recording.
- Recorded videos and photos are saved to the built-in memory card of the riflescope in the format img_xxx. jpg (for photos); video_xxx. mp4 (for video).
- Videos are recorded in clips with a maximum duration of 5 minutes. The number of recorded files is limited by the capacity of unit’s internal memory.
- Regularly check free memory within the built-in memory card and move the footage to other storage media to free up the memory card space.
- In case of a memory card error, you can use the format function in the **General Settings** section of the main menu.
- When the Display Off function is activated, video recording continues to run in the background.

Discrete Digital Zoom

Show device diagram



Discrete digital zoom allows you to quickly increase the basic magnification (see **Magnification** line in the table of **Technical Specifications**) by 2x or 4x, as well as return to the basic magnification.

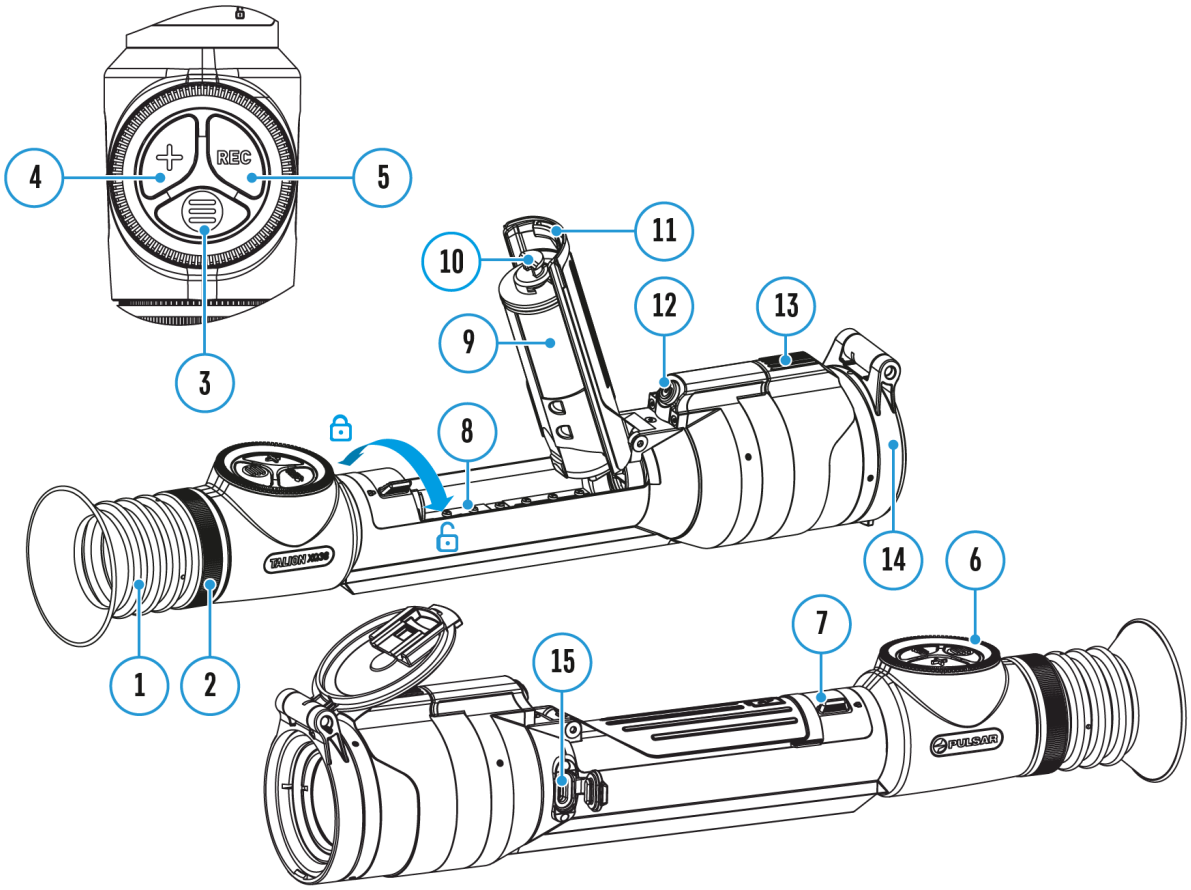


- Press the **ZOOM (4)** button successively to change the magnification ratio of the riflescope.
- While the icon Image not found or type unknown is visible on the screen, rotate the controller ring **(6)**

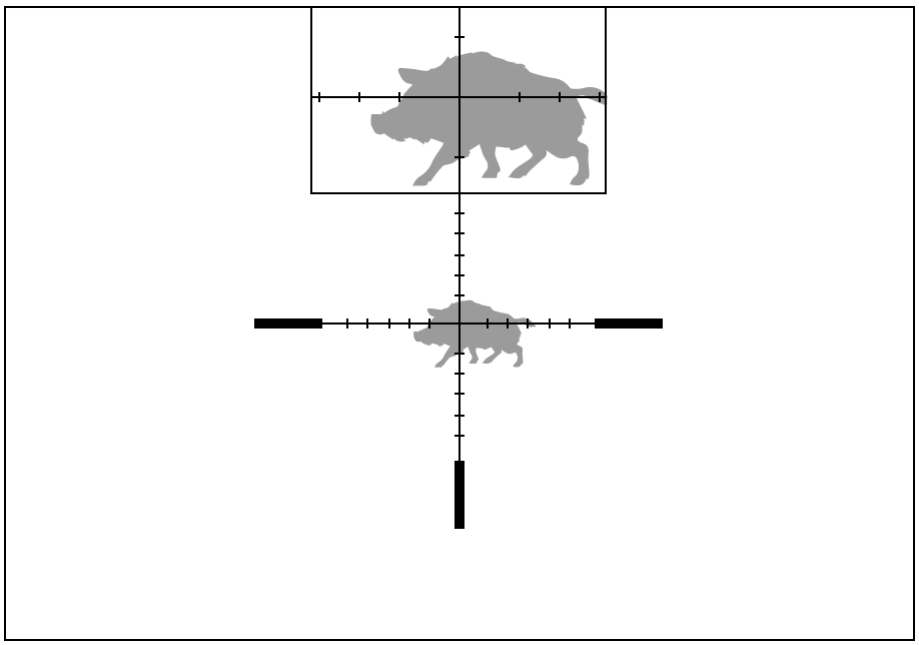
for smooth digital zooming from the current magnification.

PiP Function

Show device diagram



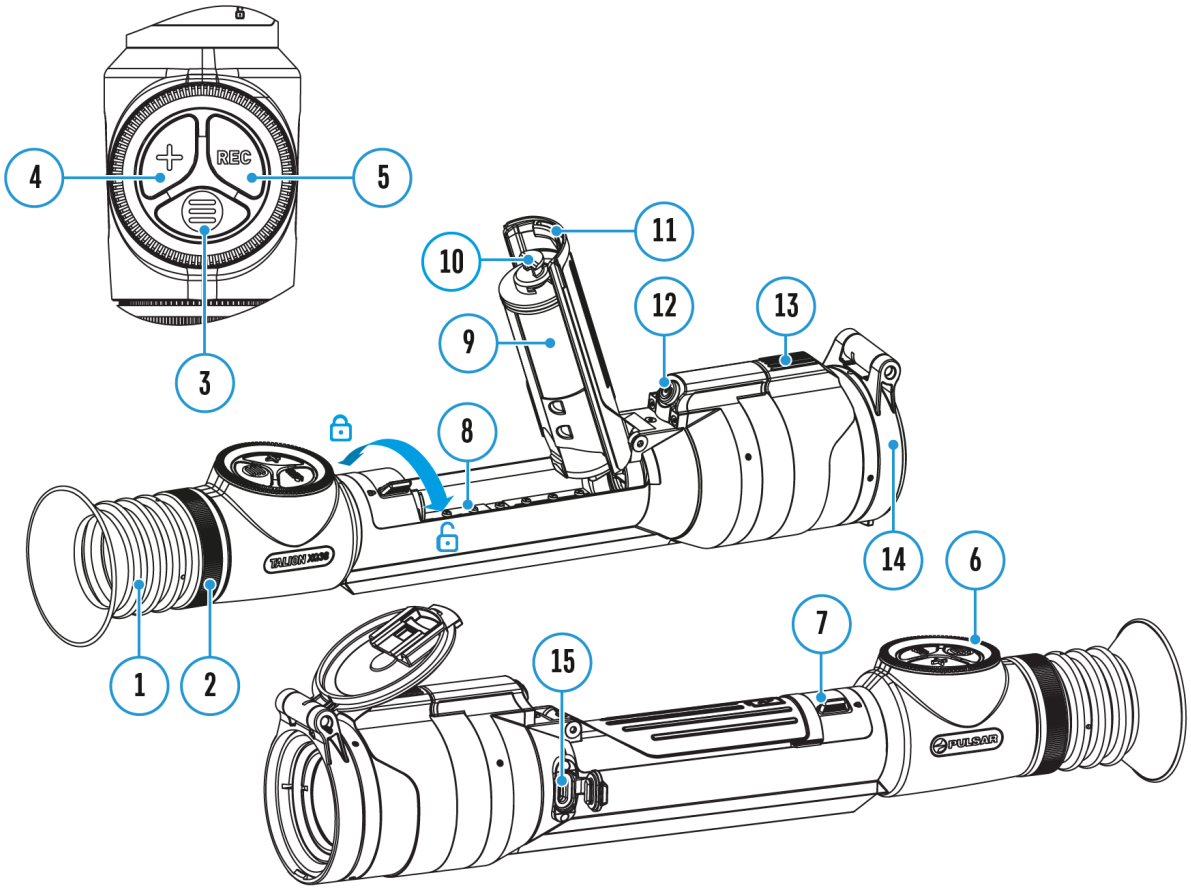
The PiP function (Picture-in-Picture) allows you to see both a magnified image in a particular dialog box and the main image.



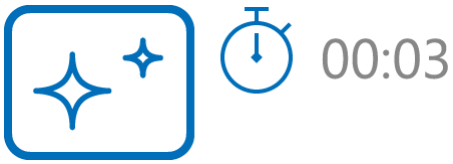
1. Press and hold the **ZOOM (4)** button to turn on/off the PiP function.
2. To change the digital zoom in the PiP window, briefly press the **ZOOM (4)**button or rotate the controller **(6)** until the icon is visible on the screen .
3. The magnified image is displayed in a particular dialog box, with the full magnification being used.
4. The rest of the image is displayed only with the optical zoom (digital zoom is off).
5. When PiP is turned off, the display shows the full magnification set for the PiP mode.

Display-Off Function

Show device diagram



This function darkens the screen, which aids the user’s concealment. However, the device stays on.



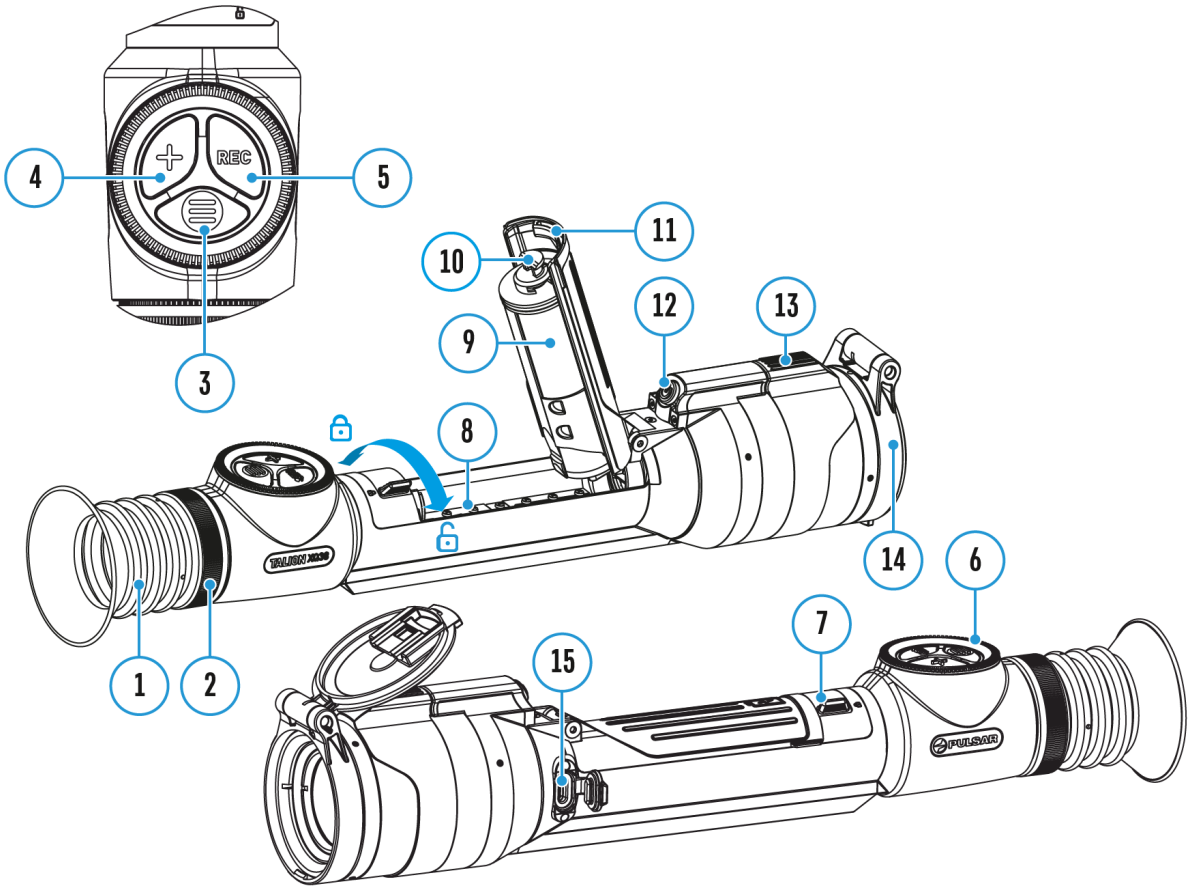
---

1. When the device is on, press and hold the **ON/OFF (12)** button for less than 3 seconds. The display will turn off, the current time and the **"Display off"**icon will appear.
2. Press the **ON/OFF (12)** button briefly to turn on the display.
3. When you press and hold the **ON/OFF (12)** button, the display shows

the **"Display off"**icon with a countdown. Holding the button down for the duration of the countdown will power the device off completely.

Wi-Fi Function

Show device diagram



The riflescope has a function for wireless communication with mobile devices (smartphone or tablet) via Wi-Fi.

1. To enable the wireless module, enter the main menu by long pressing the **MENU (3)**button.
2. Rotate the controller **(6)** to select the **Wi-Fi Activation** menu item.
3. Press the **MENU (3)**button briefly to turn on/off the Wi-Fi module.

Wi-Fi is displayed in the status bar as follows:

Indication in the Status Bar	Connection Status

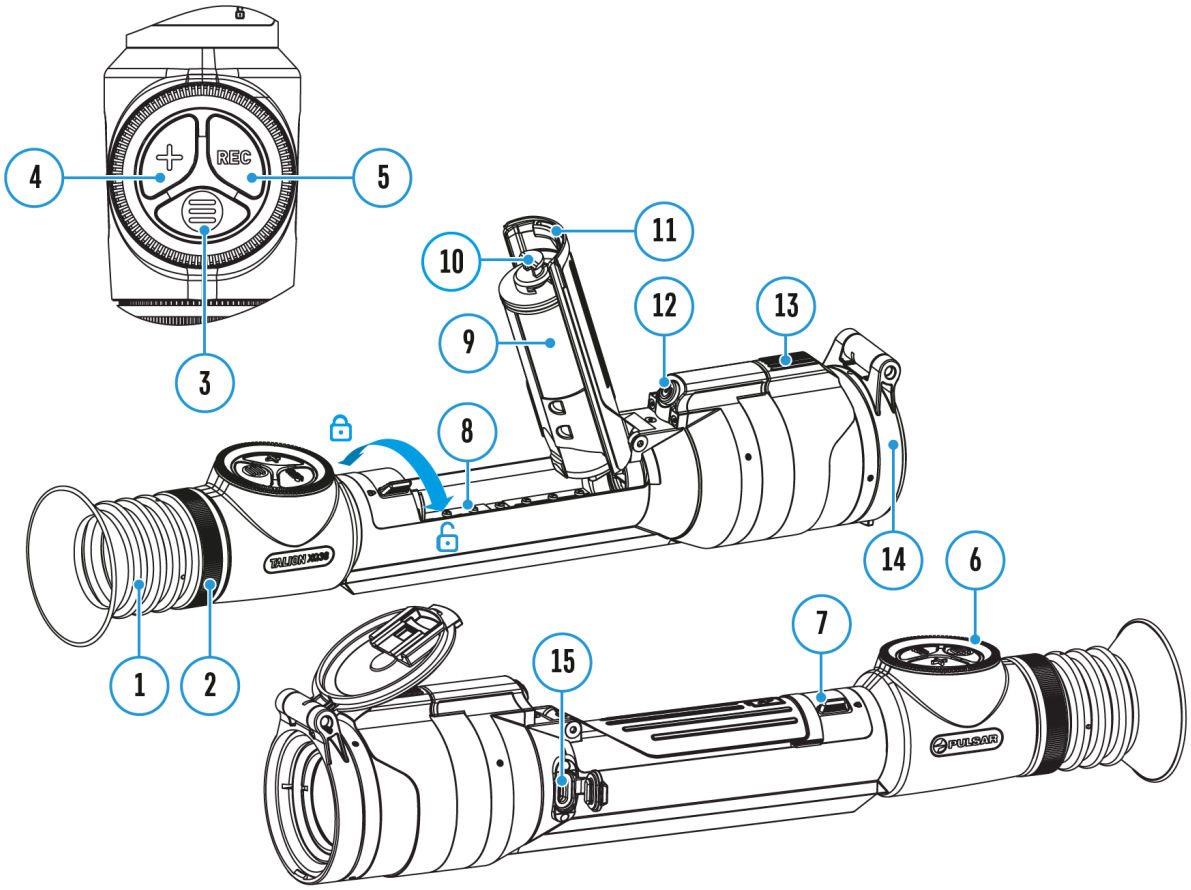
	Wi-Fi is switched off
	Wi-Fi is switched on by the user, Wi-Fi connection in the riflescope is in progress.
	Wi-Fi is switched on, there is no connection to the riflescope
	Wi-Fi is switched on, there is connection to the riflescope

- An external device recognizes the riflescope under the name Talion_XXXX, where XXXX are the four last digits of the serial number.
- After entering the password (**default: 12345678**) on a mobile device (see **Password Setup** subsection of the **Wi-Fi Settings** section for more information on setting a password) and setting up a connection, the icon in the riflescope status bar changes to Image not found or type unknown.
- The Wi-Fi function will turn off automatically if there is not enough battery power for Wi-Fi. The battery icon will turn red and flash. To use the Wi-Fi function again, you need to charge the battery.

Scalable Reticles

https://e.issuu.com/embed.html?d=talion_xg35_reticle_catalogue&u=yukon2

Show device diagram



This function is designed to preserve ballistic properties of the scalable reticles X51Fi-300, M56Fi, M57Fi for all magnifications.

1. Enter the main menu with a long press of the **MENU (3)**button.
2. Enter submenu **Reticle & zeroing** -> **Reticle Type** Image not found or type unknown
3. Select the reticle X51Fi-300, M56Fi, M57Fi.

Notes:

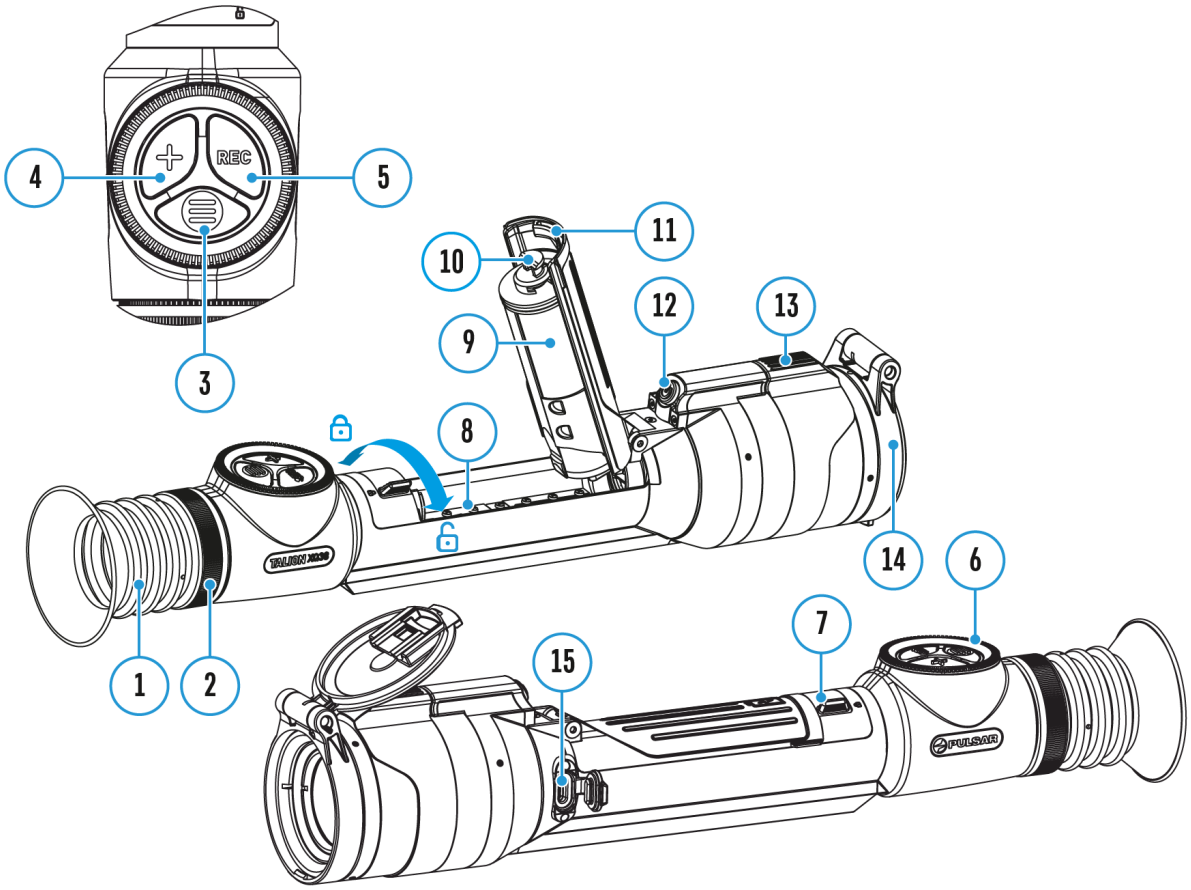
- When zooming in and out the image, the selected reticle on the display

and in the recorded video changes its geometrical size according to the magnification selected.

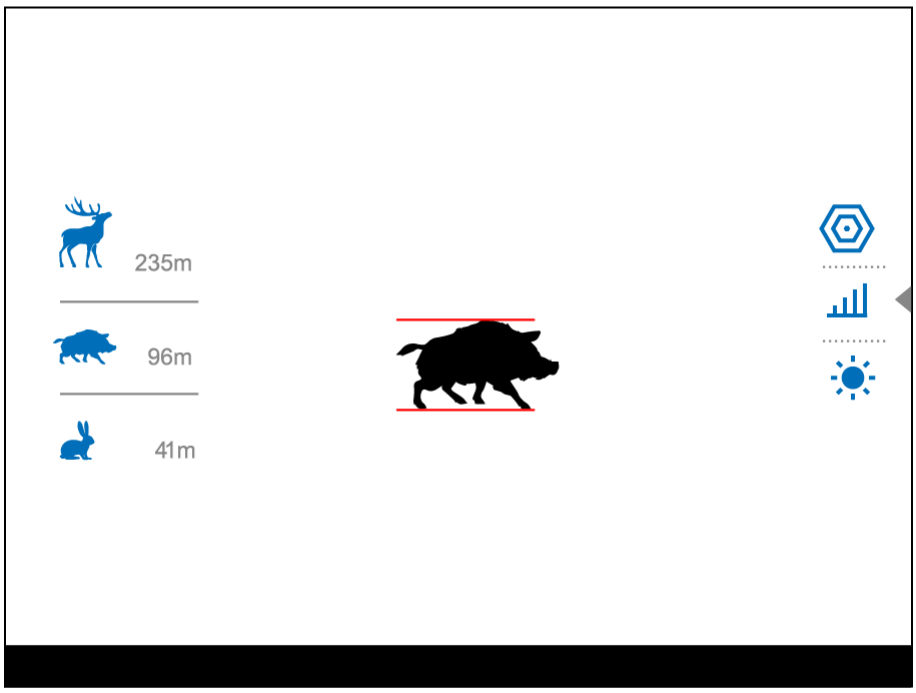
- The reticle scale changes both on the main display and in the PiP mode.

Stadiametric Rangefinder

Show device diagram



Thermal imaging riflescopes are equipped with a stadiametric rangefinder, which allows you to determine the approximate distance to an object, if its size is known.



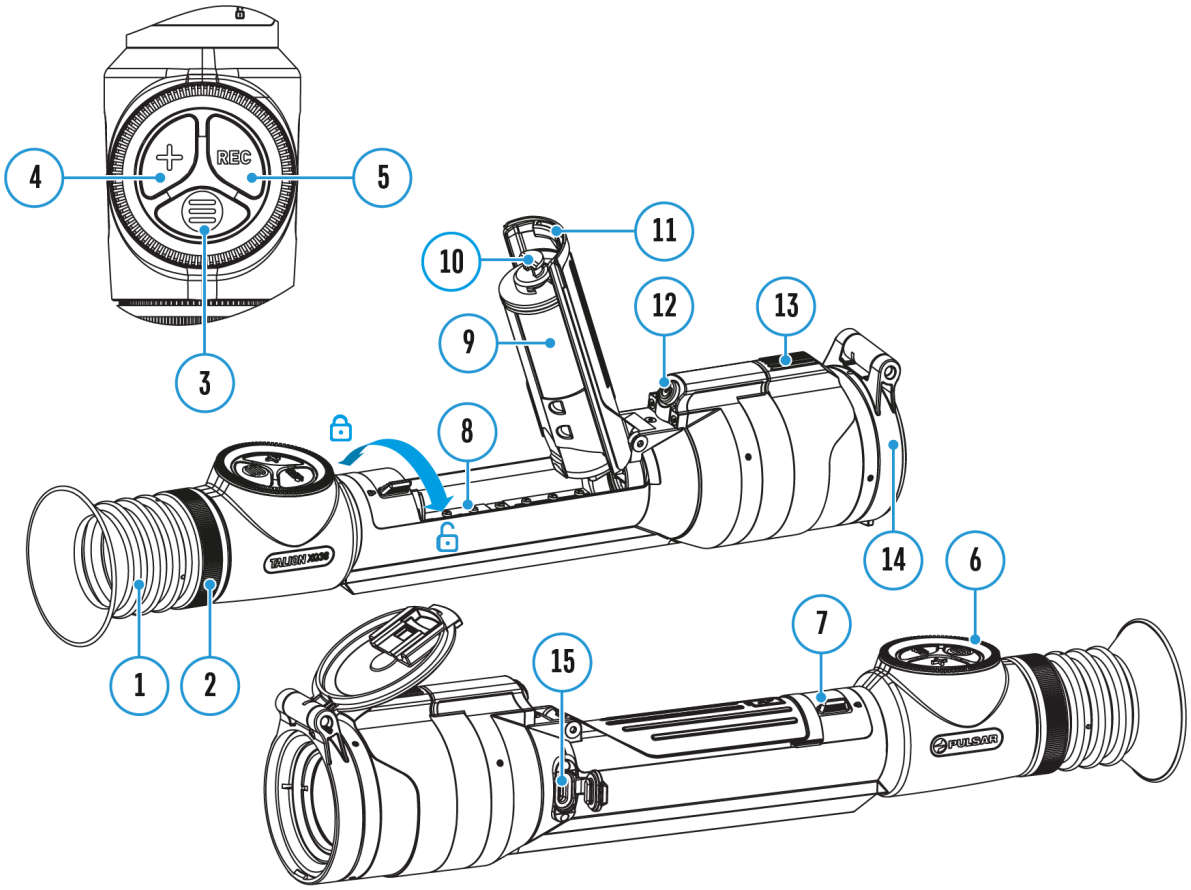
1. To select the **Stadiametric Rangefinder** function, enter the **Quick Menu** by briefly pressing the **MENU (3)**button.
2. Press the **MENU (3)**button briefly to select the icon Image not found or type unknown.
3. The display will show the lines for measurements, the icons and numbers of the measured distance for three objects.
4. Place the bottom fixed line under the object.
5. Rotate the controller **(6)**to move the upper line relative to the lower horizontal fixed line so that the object is located directly between the lines. A target range automatically recalculated along with movement.
6. To exit the rangefinder mode, briefly press the **MENU (3)**button or wait 10 seconds to exit automatically.

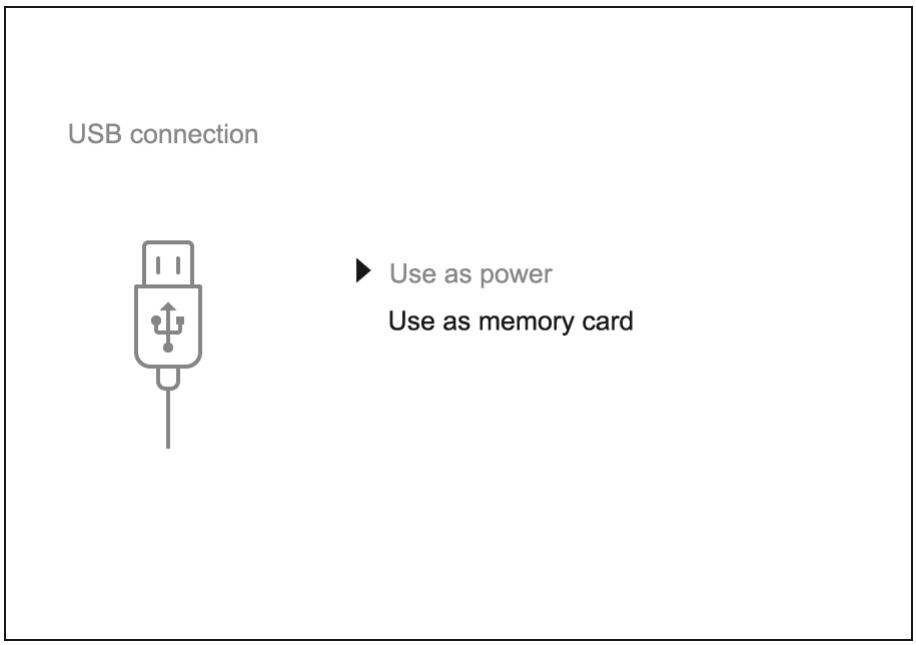
Notes:

- There are three predefined values for objects: Hare – 0.3 m high, Boar – 0.7 m high, Deer – 1.7 m high.
- The measured range value is rounded off before being displayed – for large range values up to 5 m, for shorter range – up to 1 m.
- To select a unit of measurement (meters or yards), go to the **General Settings** Image not found or type unknown menu item => **Units of Measure** submenu.

USB Connection

Show device diagram





1. Press the **ON/OFF (12)** button briefly to power the riflescope on (the computer will not detect the riflescope if it is turned off).
2. Connect one end of the USB cable to the USB Type-C **(15)** connector of the riflescope, the other one to the port on your computer using a USB Type-A adapter.
3. The riflescope is detected by the computer automatically and no installation of drivers is required.
4. After a few seconds, two connection options appear on the display: **Power** and **Memory card**.
5. Rotate the controller **(6)** to select the connection mode.
6. Press the controller**MENU (3)** briefly to confirm your selection.

Power

- Upon choosing this mode, your PC is used as an external power supply. An icon will appear in the status bar.
- The riflescope continues operating and all functions are accessible.
- A battery recharge feasibility depends on your computer's USB port.

Memory Card

- When selecting this mode, the computer recognizes the riflescope as a memory card. This mode is designed to manage the files saved in riflescope’s memory.
- Even though the riflescope is on, its functions are unavailable in this

mode. It will continue to operate after being disconnected from the computer.
- If a video was being recorded at the moment of connection, the recording will stop and will be saved.

USB Disconnection

- If the riflescope is in **Power**mode and is disconnected from a USB power source, it will continue to operate using its rechargeable battery if sufficiently charged.
- If the riflescope is in **Memory Card** mode and is disconnected from USB, the device will remain on.

Stream Vision 2

Install the Stream Vision 2 application to download files, update firmware, control the device by remote control and broadcast images from your device to a smartphone or a tablet via WiFi.

We recommend using the latest version – Stream Vision 2.

Mobile App
STREAM VISION 2

You can find further guidelines on Stream Vision 2 **here**.

Download from Google Play

Download from App Store

Find answers to frequently asked questions about using Stream Vision 2 **here**.

Stream Vision 2 Manual

Android

iOS

Firmware Update

1. Download the free Stream Vision 2 App in Google Play or the App Store.
2. Connect your Pulsar device to your mobile device (smartphone or tablet).
3. Launch Stream Vision 2 and go to section “Settings”.
4. Select your Pulsar device and press “Check firmware update”.
5. Wait for the update to download and install. Pulsar device will reboot and will be ready to operate.

Important:

- if your Pulsar device is connected to a phone or mobile device, please turn on mobile data transfer (GPRS/3G/4G) to download the latest firmware update;
- if your Pulsar device is not connected to your phone or mobile device but is already listed under “My devices” in “Settings”, you may use Wi-Fi to download the latest firmware update.

Find answers to frequently asked questions about using Stream Vision 2 **here**.

Is your firmware up to date?

Click **here**to check the latest firmware for your device.

Technical Inspection

It is recommended to inspect your riflescope before each use. Check the following:

- The device should be free of any cracks or deformations.
- The lenses should be free of cracks, grease, dirt or debris.
- The battery level of the device should be full. Electrical sockets should be free of salts, oxidation, or other debris.
- All controls should be responsive.

Technical Maintenance

Maintenance should be carried out at least twice a year and should include the following steps:

- Wipe the exterior surfaces of metal and plastic parts with a cotton cloth. Do not use chemically active substances, solvents, etc. as these will damage the paint.
- Clean the electric contacts of the battery pack and battery slots on the riflescope using a non-greasy organic solvent.
- Recharge the battery if necessary (50%-80% is recommended for normal use).
- Check the lenses of the eyepiece and objective. If necessary, remove dust and sand from the optics (it is preferable to use a non-contact method). Cleaning of the exterior surfaces of the optics should be done with cleaners designed especially for this purpose.

Troubleshooting

For technical support please contact support@pulsar-vision.com.

Answers to frequently asked questions about the devices can also be found in the **FAQ** section.

The device does not turn on

Possible cause

The Battery Pack is empty

Solution

Charge the Battery Pack

Device malfunction

Solution

In case of any malfunctions during operation, try resetting the device by long pressing the ON/OFF button for 10 seconds.

The device does not operate from an external power source

Possible cause

USB cable is damaged.

Solution

Replace USB cable.

Possible cause

The external power supply is discharged.

Solution

Charge the external power supply.

The image is fuzzy. There are distortions in the form of bars of different widths lying in different directions, or dots of different size and brightness.

Possible cause

Calibration is required.

Solution

Perform image calibration according to **Calibration Mode** section.

Black screen after calibration

Solution

If the image does not clear after calibration, you need to recalibrate.

When the device is turned on, the calibration frequency is at first higher, then decreases (if the automatic calibration mode is enabled)

Possible cause

After turning on the device, it takes some time for the sensor temperature to stabilize. This is normal and is not a defect.

The reticle is blurred and cannot be focused with the dioptre ring

Possible cause

The dioptre adjustment range is not enough for your eyesight.

Solution

If you wear glasses with a range of -3/+4, keep glasses on when looking through the eyepiece.

Coloured lines appeared on display or image has disappeared

Possible cause

The device was exposed to static electricity during operation.

Solution

After exposure to static electricity, the device may either reboot automatically, or require turning off and on again.

The image is too dark

Possible cause

Brightness or contrast level is too low.

Solution

Adjust the brightness or contrast in the **Quick Menu**.

The reticle is crisp but an object at least 30 m away is blurry

Possible cause

Dust and condensation are covering the outside or inside optical surfaces.

Solution

Wipe the outer surface of the objective lens with a soft cotton cloth. Dry the riflescope. Let it stand for four hours in a warm room.

Possible cause

The lens is not focused.

Solution

Adjust the clarity of the picture by rotating the lens focus control.

The point of impact shifts after firing rounds

Possible cause

The riflescope is not mounted securely or the mount was not fixed with thread sealant.

Solution

Check that the riflescope has been securely mounted.

Make sure you are shooting the same cartridge and load as when the weapon was first zeroed.

Be advised that changes in season, time of day and/or changes in temperature may slightly shift your point of impact. Double checking your zero before hunting is recommended.

After zeroing, the aiming reticle moves relative to the centre of the display

Possible cause

After shooting, the aiming reticle may not be in the centre of the display. This is normal and is not a defect.

The riflescope will not focus

Possible cause

Wrong settings.

Solution

Adjust the riflescope according to the **Powering on and Image Setting** section.

Check the outer surfaces of the objective lenses and eyepiece and, where necessary, wipe away dust, condensation, frost, etc. In cold weather, you can use special anti-fogging coatings (e.g., the same as for corrective glasses).

Smartphone or tablet cannot be connected to the device

Possible cause

Password in the riflescope was changed.

Solution

Delete the device from your local network and add it again, using the password saved on your riflescope.

Possible cause

There are too many Wi-Fi networks in the area where the riflescope is located which may cause signal interference.

Solution

To ensure stable Wi-Fi performance, move the riflescope to an area with few or no Wi-Fi networks.

Solution

Switch the device's Wi-Fi bandwidth.

Possible cause

The device has a 5 GHz network enabled, but the smartphone only supports 2.4 GHz.

Solution

Switch the device's Wi-Fi bandwidth to 2.4 GHz.

More information on solving problems with connection to Stream Vision 2 by following the **link**.

Wi-Fi signal is missing or interrupted

Possible cause

Smartphone or tablet is out of range of a strong Wi-Fi signal. There are obstacles between the device and the smartphone or tablet (e.g., concrete walls).

Solution

Relocate smartphone or tablet into the Wi-Fi signal line of sight.

More information on solving problems with connection to Stream Vision 2 by following the **link**.

The image of the object being observed is missing

Possible cause

The object is behind glass, which obstructs thermal vision.

Solution

Remove the glass.

Poor image quality / Reduced detection distance

Possible cause

These problems may occur during observation in adverse weather conditions (snow, rain, fog etc.).

There are several light or black dots (pixels) on riflescope’s display or microbolometer

Solution

The presence of dots is caused by peculiarities of microbolometer or display production technology and is not a defect.

When the device is used in low temperature conditions the image quality is worse than in positive temperatures.

Possible cause

In warm climates, objects in the background of a thermal image heat up differently because of thermal conductivity, generating a high temperature contrast and a sharper thermal image.

In cold climates, objects in the background of a thermal image will cool down to roughly the same temperature, which leads to a greatly reduced temperature contrast and a degraded image quality. This is

normal for all thermal imaging devices.

The device turns off when taking a shot

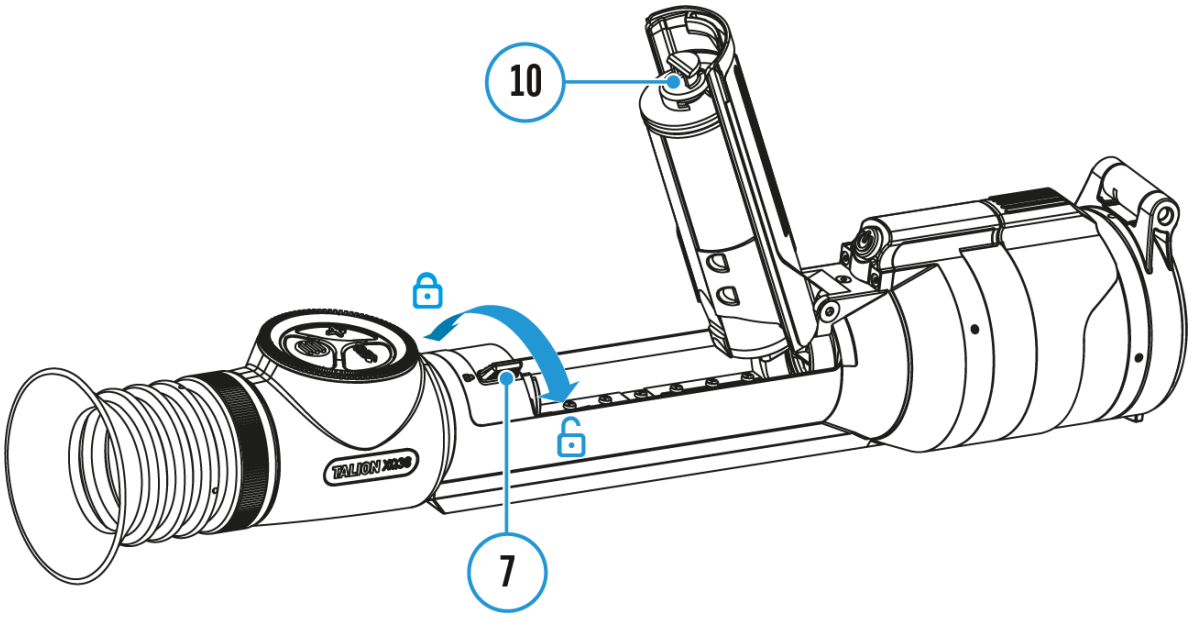
Possible cause

The battery compartment cover lock is not fully closed.

Solution

Close the battery compartment cover. Move the lock to the end left position until it stops. The lock tab should be aligned with the icon 🔒.

The battery compartment cover lock does not close completely



Possible cause

The hook **(10)** has not entered the groove of battery compartment cover lock **(7)**.

Solution

Make sure the battery is in the correct position under the battery cover.

The hook **(10)** must fit into the groove of the battery compartment cover lock **(7)**.

Legal Compliances and Disclaimers

Attention! Talion thermal imaging riflescopes require a license when exported outside your country.

Electromagnetic compatibility. This product complies with the requirements of European standard EN 55032: 2015, Class A.

Caution:operating this product in a residential area may cause radio interference.

Updates of the Product. The manufacturer reserves the right at any time, without mandatory prior notice to the Customer, to make changes to the package contents (subject to the applicable laws, if any), design and characteristics that do not impair the quality of the Product.

Repair. Repair of the product is available within 5 years after purchase of the product.

Limitation of Liability. Subject to mandatory applicable laws and regulations: manufacturer will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities (if any), arising out of the use of this product. Operation and use of the product are the sole responsibility of the Customer. Manufacturer’s sole undertaking is limited to providing the product(s) and related services in accordance with the terms and conditions of concluded transactions, including provisions established in warranty. The provision of products sold and services performed by Manufacturer to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party (other than Distributor, Dealer, Buyer). Manufacturer’s liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to Manufacturer for the product(s) and/or service(s).

MANUFACTURER WILL NOT BE LIABLE FOR LOST REVENUES OR INDIRECT,

SPECIAL, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, OR PUNITIVE DAMAGES, EVEN IF THE MANUFACTURER KNEW OR SHOULD HAVE KNOWN THAT SUCH DAMAGES WERE POSSIBLE AND EVEN IF DIRECT DAMAGES DO NOT SATISFY A REMEDY.