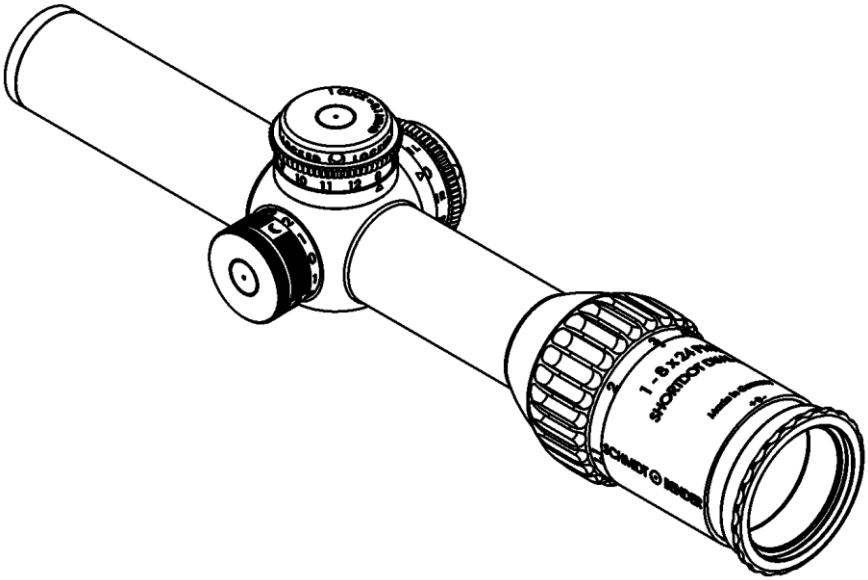
SCHMIDT ⊙ BENDER



1-8x24 PM II
ShortDot Dual CC

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1. Scope description

1.1 Introduction

The Schmidt & Bender PM II series scopes are designed to meet the unique challenges of high precision shooting. Their quality and function make it possible to achieve exceptional shooting results as well as to fulfill the critical and demanding needs of official, law enforcement and tactical applications. Strict observation of the following operating instructions is prerequisite for successful long-term use.

1.2 Safety instructions

Never look into the sun or into laser light with the scope. This may cause serious eye injuries. Do not tamper with the scope. Any repairs beyond the maintenance described in the maintenance manual should only be performed by Schmidt & Bender or by other specialists authorized by Schmidt & Bender. Protect the scope against shocks beyond normal use.

Avoid unnecessary long exposure of the scope to direct sunlight; intense and excessive sun radiation will cause extremely high temperatures inside the tube which may be detrimental to the scope.

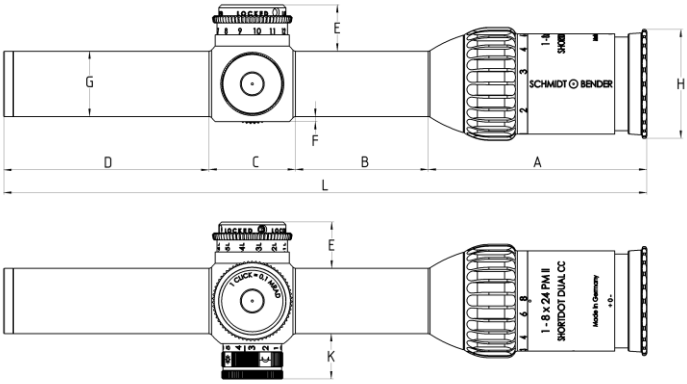
The scope must be properly mounted to the firearm by a qualified specialist. Perfect mounting is an essential requirement for maximum accuracy and efficient functioning of the firearm and the scope. Be sure to assume the proper firing position and keep a correct eye relief in order to obtain an optimal full field of view and to avoid any injuries due to the recoil of the weapon.

2. Technical data

2.1 General data

• Field of view	-	35,3 – 4,9	(m/100m)
• Exit pupil	-	9,8 – 3	(mm)
• Eye relief	-	90	(mm)
• Twilight factor	-	4,9 – 13,9	
• Transmission	-	>85	(%)
• Diopter adjustment	-	+2 to -3	(dpt)
• Parallax	-	100	(m)
• Reticle focal plane		1st and 2nd	

2.2 Dimension



Einheit	A	B	C	D	E	F	G	H	K	L
mm	100,3	61	39,7	94	21,3	2,3	30	50	20,1	295
inch	3,95	2,40	14,3	3,70	0,84	0,09	1,18	1,97	0,79	11,61

Illustr. 1: Dimensions of the scope in mm/inch

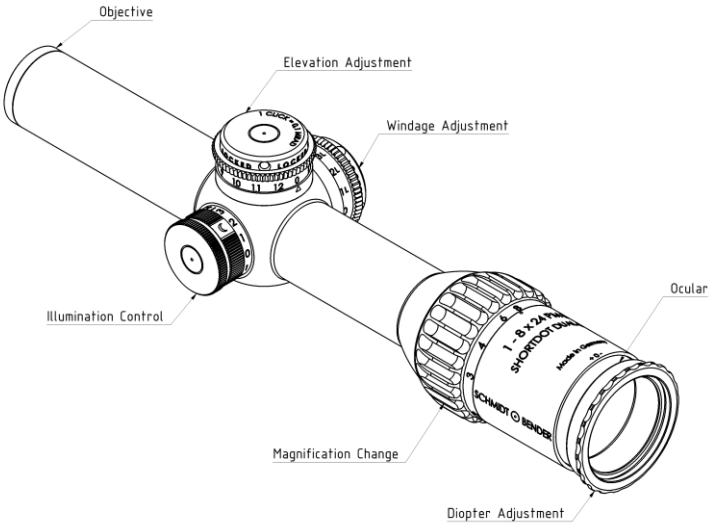
3. Accessories / Scope of supply

Some of the listed accessories are delivered with the scope while optional accessories are marked with a (*). All parts can be ordered by the listed part numbers.

Cleaning Kit
Objective Flip-Up
Eyepiece Flip-Up
Registration card
Reply card

4. Operating instructions

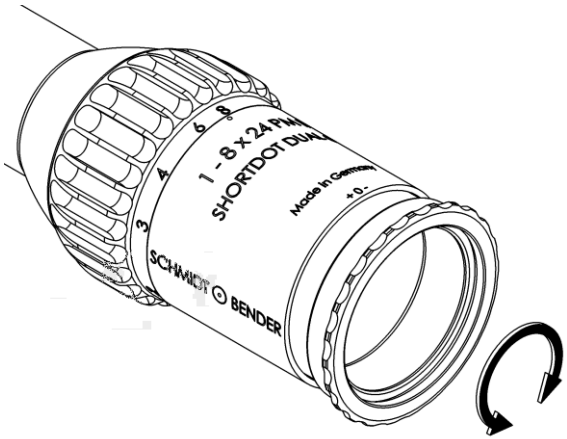
Your new Schmidt & Bender riflescope consists of different functional parts and adjustments. (See Illustr. 2)



Illustr. 2: Scope parts and controls

4.1 Adjusting the image focus with the diopter adjustment of the eyepiece

The eyepiece provides the adjustment of the reticle focus to the individual eye diopter. Set the scope to the highest magnification. Rotate the eyepiece counterclockwise until it stops. Rotate the eyepiece clockwise until you see a sharp image of the reticle (see Illustr. 3).



Illustr. 3: Diopter adjustment

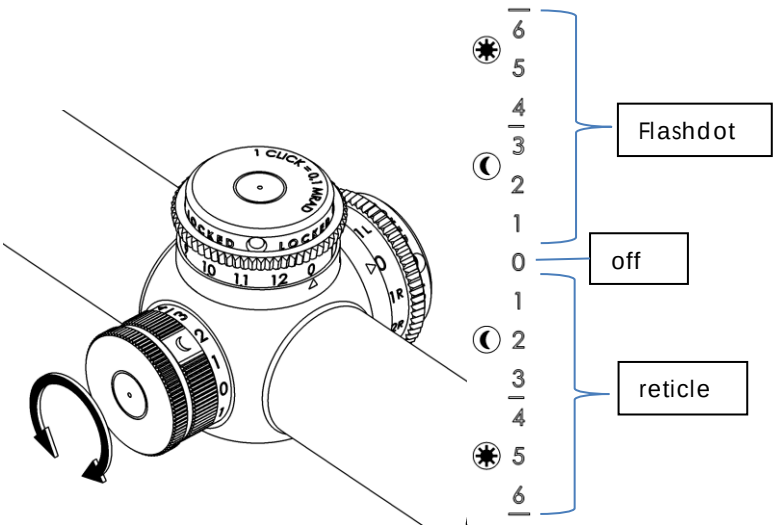
4.2 Illumination control

The illumination is designed to help identifying the correct aiming point on a dark target and/or in poor light conditions.

The 1-8x24 PM II ShortDot Dual CC has an illuminated reticle in the 1st focal plane and a Red Dot in the 2nd focal plane. The shooter can either switch on the reticle or the Red Dot.

The Flashdot can be adjusted in 6 levels depending on the lighting conditions, the reticle can also be adjusted in 6 levels.

In order to a better handling, the illumination of the reticle is divided into two levels that are marked with engraved symbols: The sun stands for bright ambient light, the moon stands for low light conditions and for the use with a night-vision device.



Illustr. 4: Illumination control

Illuminated reticle and Red Dot should help you to find the aiming point against the dark target at low light conditions.

First, set the intensity of the illuminated dot to the respective light conditions. To do this the illumination control has to be turned from -0- toward position -6- until a setting is achieved where the illuminated dot is just bright enough to be picked up by the eye without glaring. If possible, this adjustment should be performed under quiet conditions prior to the actual shooting (see Illustr. 4).

Please switch off the illumination after use.

If the illumination is not switched off by the shooter after use, illumination control electronics automatically switch off the illumination after 6 hours.
If the illumination starts blinking, the battery is low and should be replaced.

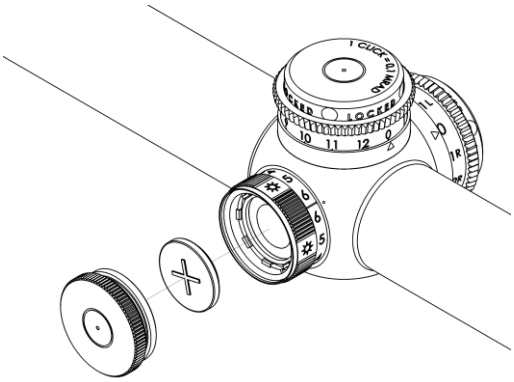
4.3 Changing the battery

To replace the battery screw off the battery cap and remove the old battery.

Please discard the used battery in an ecologically compatible way!

Place the new battery (coin cell CR 2032/3V) with the „+" facing up into the battery compartment. Do only change the battery in a dry environment. (see Illustr. 5). Under continuous operation, its life expectancy is as follows:

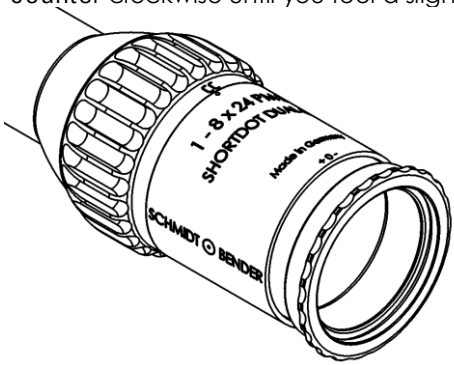
DOT:	middle intensity	approx. 550h
	highest intensity	approx. 46h
CROSS:	middle intensity	approx. 350h
	highest intensity	approx. 7h



Illustr. 5: Battery replacement

4.4 Using the CC-Mode

The 1x magnification is available in the CC-Mode. To switch into the CC-Mode, turn the magnification change ring until the letters „CC“ are inline with the engraved index dot (Illustr. 6). In the „CC“-Setting, the scope is parallax free on approximately 7m to 20m distance. To leave the „CC“-Mode, turn the magnification change ring counter-clockwise until you feel a slight „click“.



Illustr. 6: CC-Mode

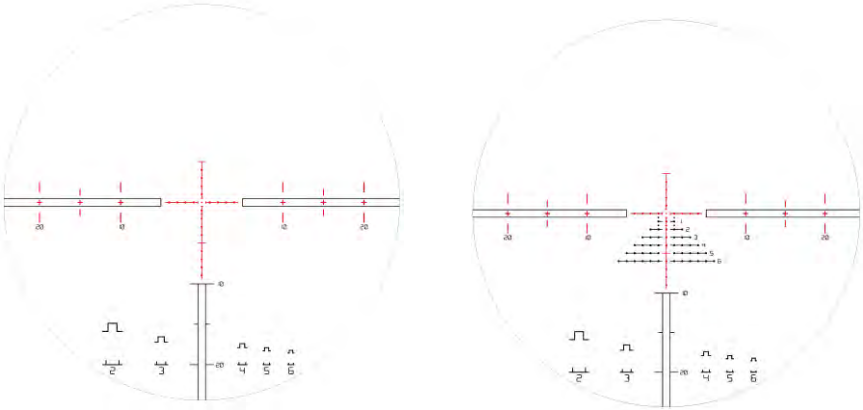
ⓘ The area on the magnification change ring between „CC“ and „1.1“ is not suitable for shooting, since it is optically uncorrected.

4.5 Using the reticle for the distance estimation

The different available reticles offer a variety of possibilities to estimate or measure important parameters by means of reticle subtensions. This allows the shooter to place highly precise shots even on large distances by use of the estimates and the ballistic compensator.

The reticle is in the first focal plane such that the reticle subtensions remain constant on all magnifications.

Exemplary for the MDT and MDR-T6 reticle in the first focal plane (see picture below) the distance between the dots is 10cm/100m. The shooter can thus calculate the distance to a target, which size is known by measuring it with the reticle pattern. With the distances calculated from the reticle a compensation of the bullet drop can be done by turret or reticle.



Illustr. 7 MDR-FFP MDR-T6-FFP

The reticle coverages for your reticle can be found in the datasheets, which is available on the homepage www.schmidt-bender.de.

5. Turret useage

5.1 Elevation turret: lockable Single Turn Turret with More Tactile Clicks

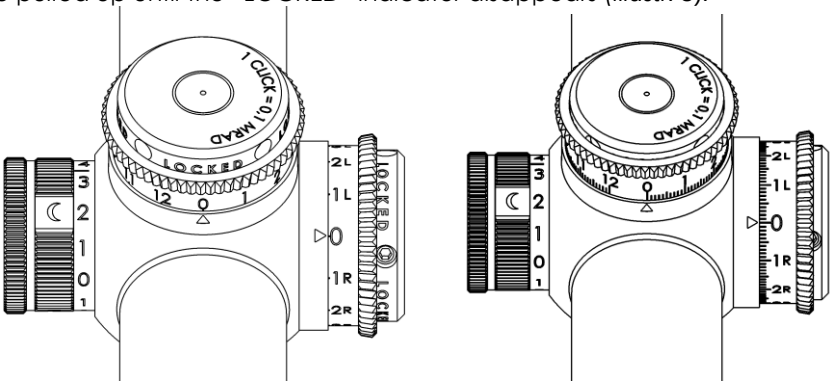
The elevation turret includes the following features:

- Single turn
- MTC (more tactile click)
- Zero stop
- Locking function

The elevation turret provides a fine click adjustment value in addition to a large elevation adjustment. The zero stop function supports the quick adjustment to the zero position. The zero stop function is determined by an end stop.

The MTC (more tactile click) elevation turret has an audible "clunk" on every 10th click by 1 Click = 0.1 MRad and every 4th click by 1 Click = ¼ MOA.

The elevation turret includes a locking function which prevents the inadvertent adjustment of the turret. To lock the turret, the outer flange with the engraving must be pushed down in direction of the scope tube until "LOCKED" appears on the turret. To unlock the turret, the outer flange must be pulled up until the "LOCKED" indicator disappears (Illustr. 8).



Illustr. 8: Locking function of the turrets: locked and unlocked

5.2 Windage turret – Single Turn Turret with Zero click

The windage turret includes the following features:

- Single turn
- Zero click
- Locking funktion

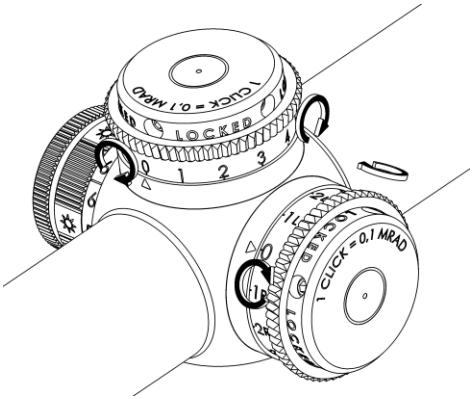
The windage turret has one positive "clunk" at the zero position which provides a "0" reference point.

The elevation turret includes a locking function which prevents the inadvertent adjustment of the turret. To lock the turret, the outer flange with the engraving must be pushed down in direction of the scope tube until "LOCKED" appears on the turret. To unlock the turret, the outer flange must be pulled up until the "LOCKED" indicator disappears (Illustr. 8).

5.3 Preliminary adjusting and fine adjusting when sighting in

When sighting in the scope for the first time, or re-sighting the scope due to service or repair, a test shoot for zeroing the scope must be performed on a 100m distance. The centering of the target pattern is then performed according to paragraph 5.4 and 5.5.

To zero the turrets unlock both turrets and loosen the two setscrews on each of the turrets using an Allen key (see Illustr. 9). Turn the turret until the engraved "0" is indicated by the mark on the saddle. Then tighten the two setscrews with an Allen key.
The reticle will not be shifted while the screws are loose. Now the Allen head screws should be tightened with an Allen key.

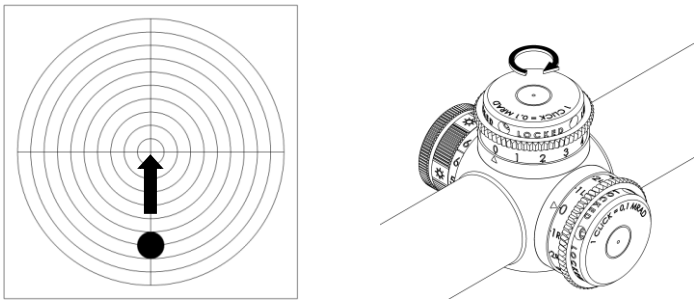


Illustr. 9: Zeroing of the scope – unscrewing the Allen head screws

5.4 Elevation adjustment

Depending on the configuration, the point of impact is moved by either 0.1mrad (1cm on 100m) with every click. A too low point of impact is corrected by rotating the elevation turret clockwise (to the right side, see Illustr. 10 it is in direction of the increasing numbers), a too high point of impact by rotating the elevation turret counter-clockwise.

For counter-clockwise rotating turrets this relation is opposite!

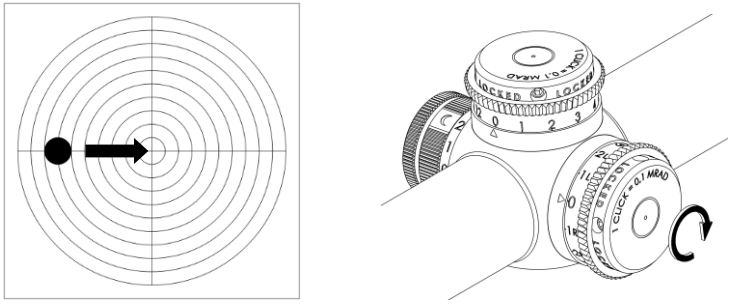


Illustr. 10: Elevation adjustment

5.5 Windage adjustment

Depending on the configuration, the point of impact is moved by either 0.1mrad (1cm on 100m) with every click. A too far left point of impact is corrected by rotating the windage turret clockwise (to the right side direction "R", see Illustr. 11), a too far right point of impact is corrected by rotating the turret counter-clockwise in direction "L".

For counter-clockwise rotating turrets this relation is opposite!



Illustr. 11: Windage adjustment

6. Maintenance

6.1 Care and maintenance

Schmidt & Bender PM scopes do not require any special maintenance. All metal parts have a hard anodized surface that is extremely scratch-resistant and easy to care for.

For cleaning outer surfaces, use a clean and, if necessary, a slightly damp cloth.For cleaning the optics use the included Schmidt & Bender cleaning kit.

Before wiping the optic's surfaces, use a dry brush to remove coarse dirt or dust particles. Slight impurities may then be wiped off using an optic's cleaning cloth.

Breathe onto the optic's surfaces before cleaning them, this helps with the cleaning process. Excessive dirt may be removed using the cleaning liquid included in the cleaning kit.

Avoid dry rubbing on the outside optical surfaces, this may harm the precious coatings.

6.2 Storage temperature

The approved temperature range for the storage of the scope is from -55°C to 70°C.