



Motorized Flipper Mount 8MFM-1 / 8MFM-2

User manual



Manufacturer of Opto-Mechanical equipment for research, industry and education

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1. CAUTIONS

Please read this manual entirely before installing, operating or servicing the product. Please do not make mechanical or electrical change if you do not understand the information in this manual. Failure to observe precautions could result in injury of the operator and/or damage the equipment.

1.1. Recommendations!

Proper requirements of mechanical interface and ambient conditions should be maintained before connecting the stage to the working position:

Standa recommends lifting and transporting of the stages securely and with care.

1.2. Restrictions!

- Do not lift or handle motorized flipper mount by optics mount.
- Do not move the flipper arm by hand.
- Access to the internal parts of the stages is restricted.
- Access to electrical parts of stages (including connection and disconnection) is restricted during operation.
- Safeguarding requirements must be addressed to the operator before final integration of the product.
- Do not connect or disconnect electrical power while connected to a power source.
- Disconnect electrical power before maintain.



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1.3. Warnings!

- System integrator is responsible for determining and meeting all safety and compliance requirements necessary for the integration of this stage into their final application.
- Moving parts can cause injuries. Physical access to the working zone must be restricted.
- Cables must be securely mounted/ placed in order to avoid dangerous hazards.
- All stages must be mounted properly in accordance to the mounting requirements. Improper mounting can result injury and damage of the equipment.
- Improper moving and lifting the stage can result damage of the equipment. Please lift and move the stage in accordance to the manual and with care.
- If stages are used in conditions not specified by manufacturer, protections provided by the design of product can be impaired and result in damage, shock, injury or death.



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2. MOTORIZED FLIPPER MOUNT 8MFM-2 SPECIFICATION

Model	8MFM-1	8MFM-2
Flipper Optics Mount	4FOM-1	4FOM-2
Kinematics and Feedback information		
Flip range	90°	
Flip position	0° and 90°	
Optics	1" (25.4 mm)	2" (50.8 mm)
Central aperture	Ø23 mm	Ø48 mm
Optics thickness, max	7 mm	8 mm
Flip to flip repeatability	≤50 µrad	
Flip time	<0,7...1,5s (Depends of load)	
Work speed	128...60 °/s (Depends of load)	
Limit Switches	Opto (2 pcs)	
Switch polarity	Pushed is open	
Load and Transmission information		
Gear reduction rate	1:207	
Maximum torque	0.1 Nm	
DC Motor	F26/207-6	
Control and Communication		
Can be used with:		
Controller	8SMC5-USB	
Remote handset	8MFM-RC3	
Recommended power supply	12V, PS12-1.5-4	
Connector	HDB15(M)	
Trigger Connector Type (on remote handset)	SMA (2 Places)	
Trigger IN	10...50 ms Pulse 5V	
Trigger OUT	0V – position UP; 5V – position DOWN	
Cable length	1.2 m	
Material and environment conditions		
Base material	Aluminum	
Finish	Black anodizing	
Environment pressure	Atmosphere (10-3 torr on request)	
Additional Details		
Measurement system	Metric	
Weight	0.25 kg	
Dimensions (without mount)	49 x 32 x 62 mm	



8MFM-RC3 handset is designed to control the 8MFM series Motorized Flipper Mounts or the 8MDS series Laser Beam Shutters (factory configured option). The flip action can be controlled in two ways: by the button on the side of device or by SMA connector. The optical device or shutter toggles 90° between vertical and horizontal positions with each button click. Two SMA connectors, marked as TRIGGER IN and OUT for use in applications requiring an external or remote trigger. The TRIGGER IN is a short TTL logic pulse, which toggles the position of optical device. The TRIGGER OUT and two LEDs, located on the front panel, indicate the optical device position.

Motorized flip to flip functionality:

- Flipper moves up to the one direction optical limit switch;
- Reduce voltage and moving to the mechanical hard stop;
- Stops and Power off;
- Flipper position holding by tension spring.

3. OPTIC MOUNT INSTALLATION

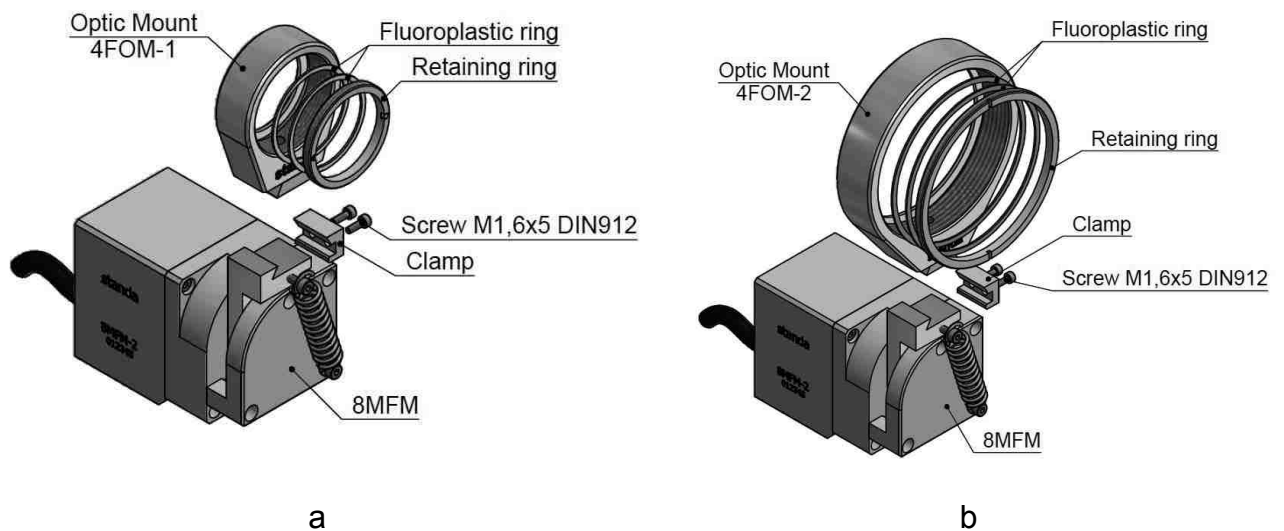


Fig. 1. Optic mount installation: a – 4FOM-1 installation; b – 4FOM-2 installation;

ATTENTION!

- Do not lift or handle motorized flipper mount by optics mount.
- Do not move the flipper arm by hand.

We recommend before optic mount installation, install optics inside the mount (see Fig.1):

- Inside optic mount place one of two fluoroplastic rings;
- Place optics;
- Place second fluoroplastic ring;
- Fix optics position inside mount using retaining ring;

For optic mount installation follow steps (see Fig.1):

- Unscrew 2 screws M1,6x5 DIN 912 and remove clamp;
- Place Optic Mount to the installation spot;
- Fix it position with clamp and 2 screws M1,6x5 DIN 912 (Tightening torque 0,1 Nm).



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4. CUSTOMER SERVICE

For inquiries and orders, contact your Standa sales engineer or send to email sales@standa.lt

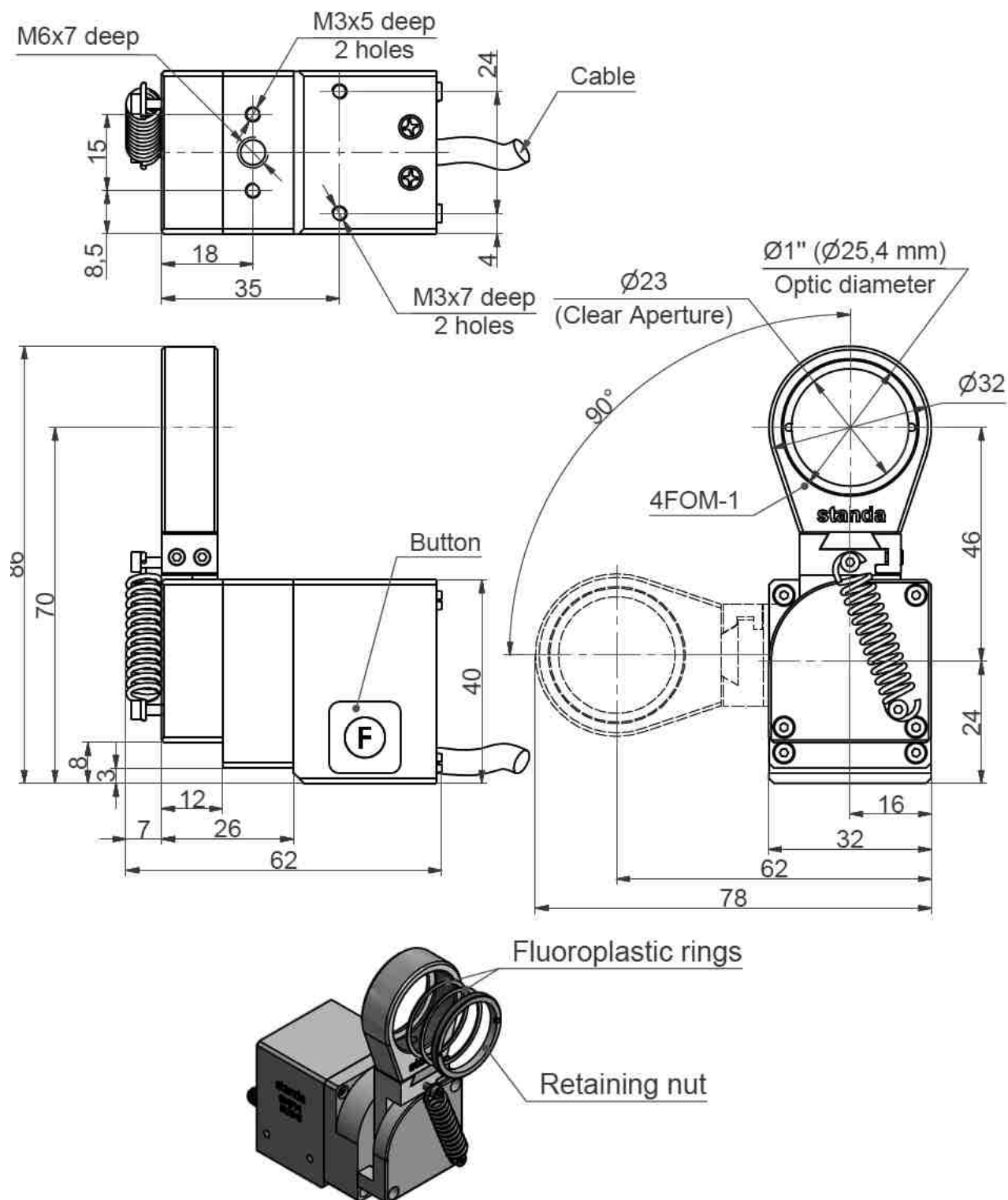
If you have any question according to your stage / system, have following information ready:

- Order number;
- Stage / system code;
- Current controller (if present);
- Software version of the driver (if present);
- User operating system;

5. APPENDIX A (8MFM-1 Stage main view drawing)

8MFM-1

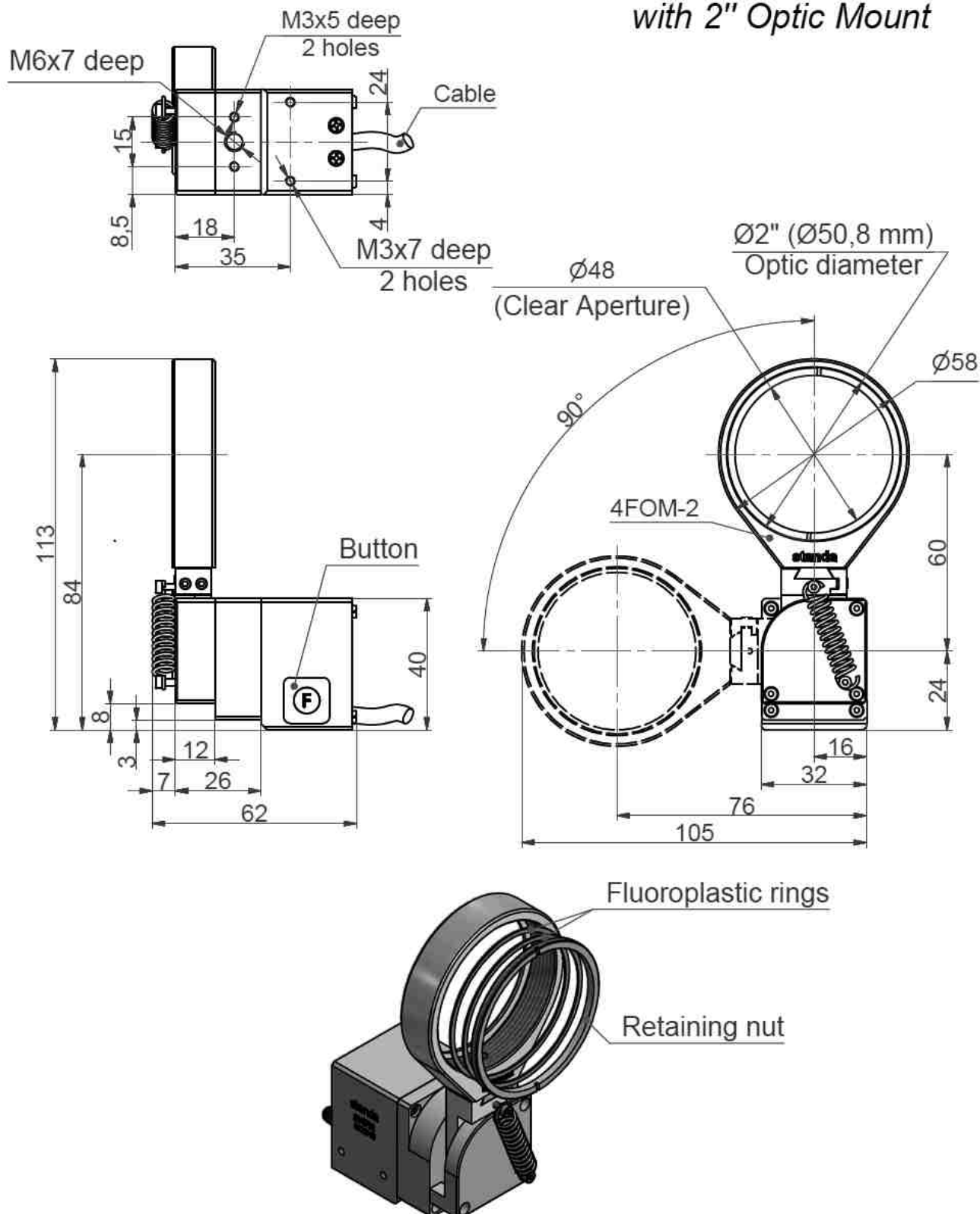
*Motorized Flipper Mount
with 1" Optic Mount*



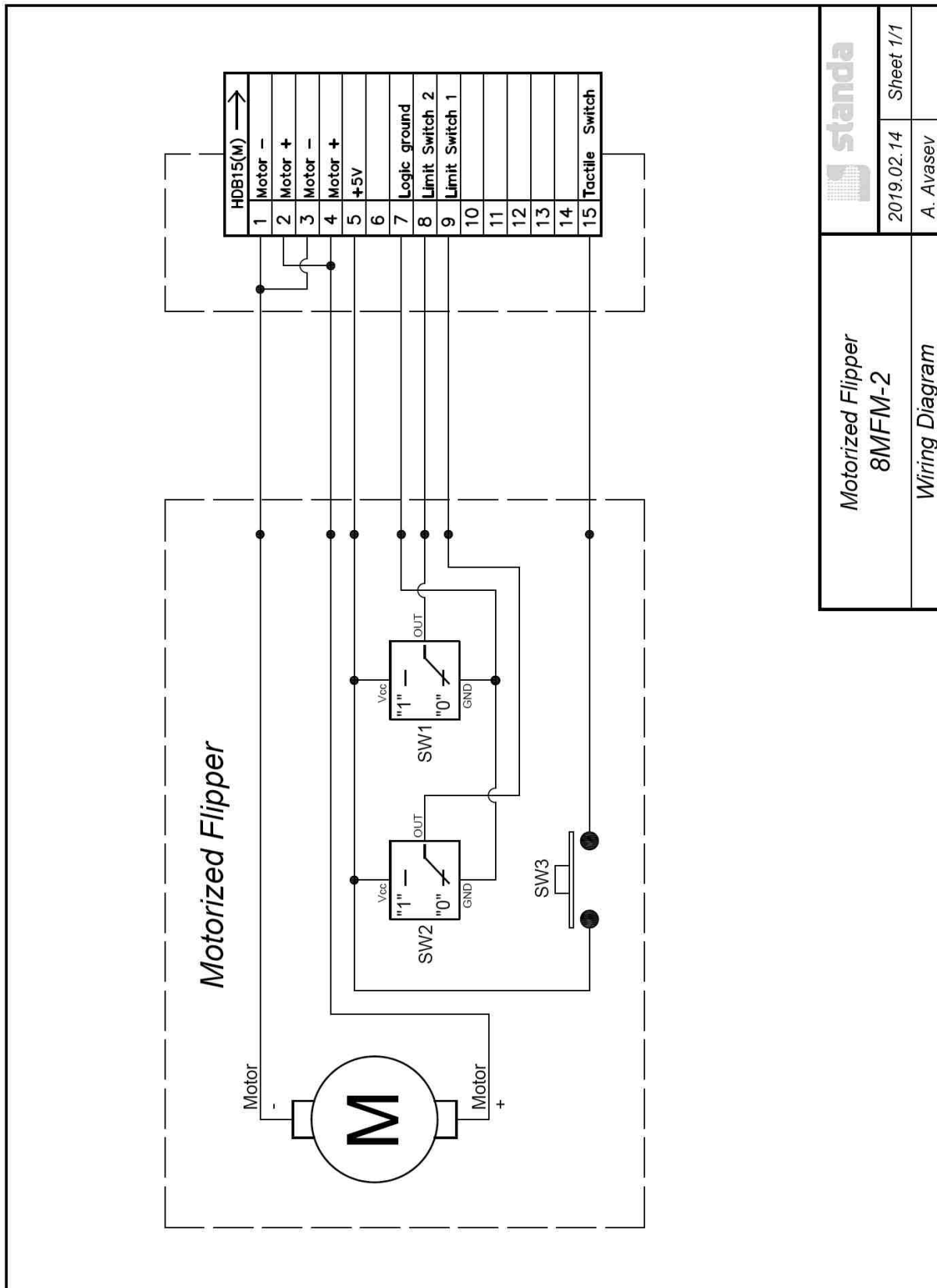
6. APPENDIX B (8MFM-2 Stage main view drawing)

8MFM-2

*Motorized Flipper Mount
with 2" Optic Mount*



7. APPENDIX C (8MFM-1 and 8MFM-2 Stage wiring diagram)

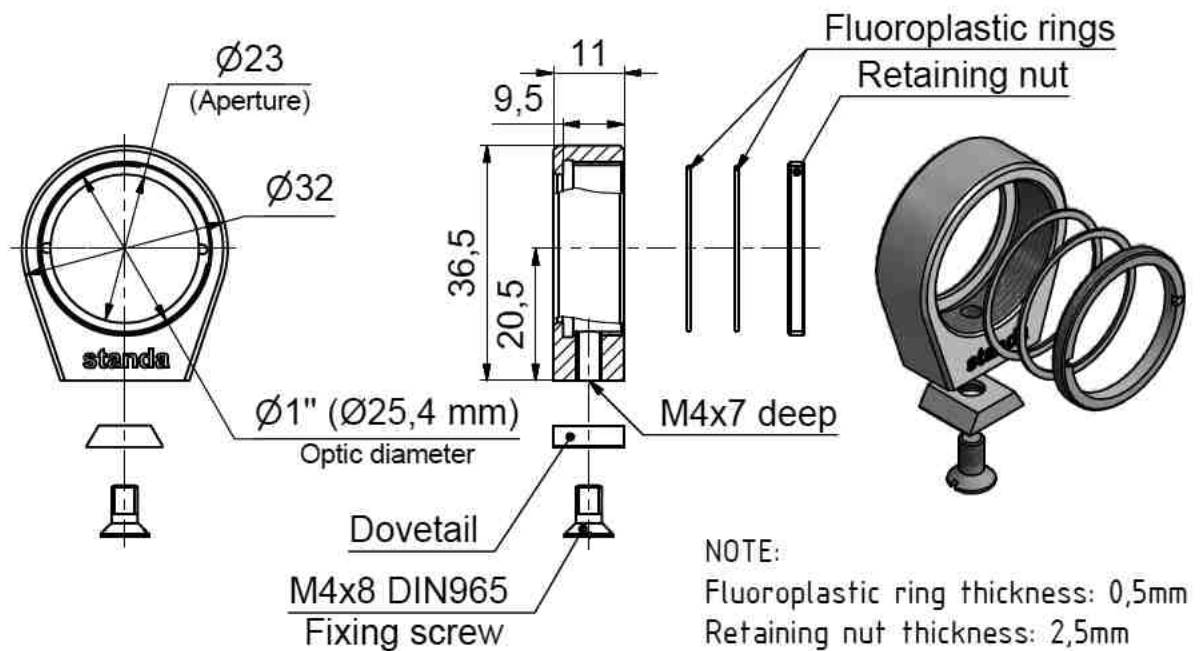


8. APPENDIX D (4FOM-1 Optic Mount Drawing)

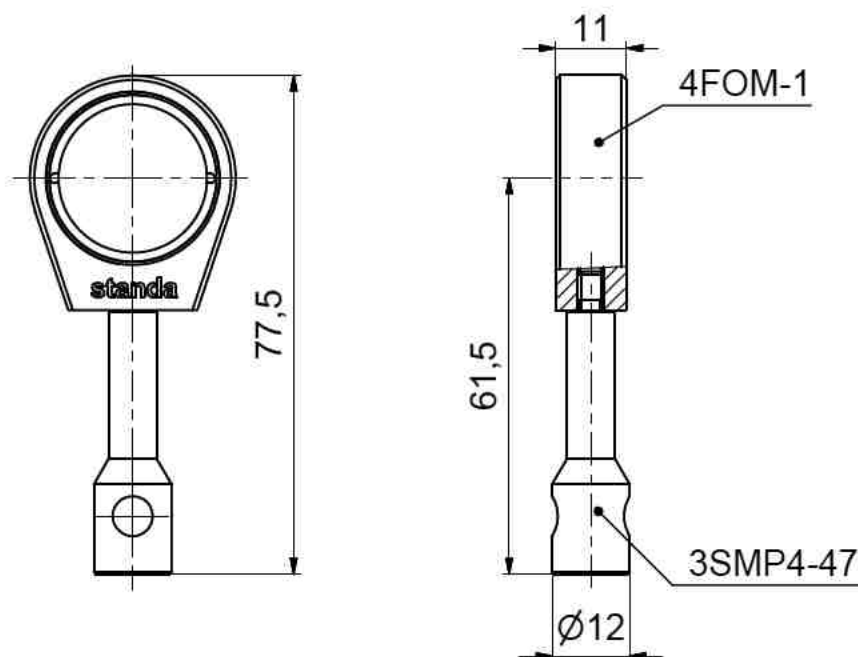
4FOM-1

Flipper Optic Mount

Flipper Optic Mount 4FOM-1 full set preview



Flipper Optic Mount 4FOM-1 with Mounting Post 4SMP4-47 combination example

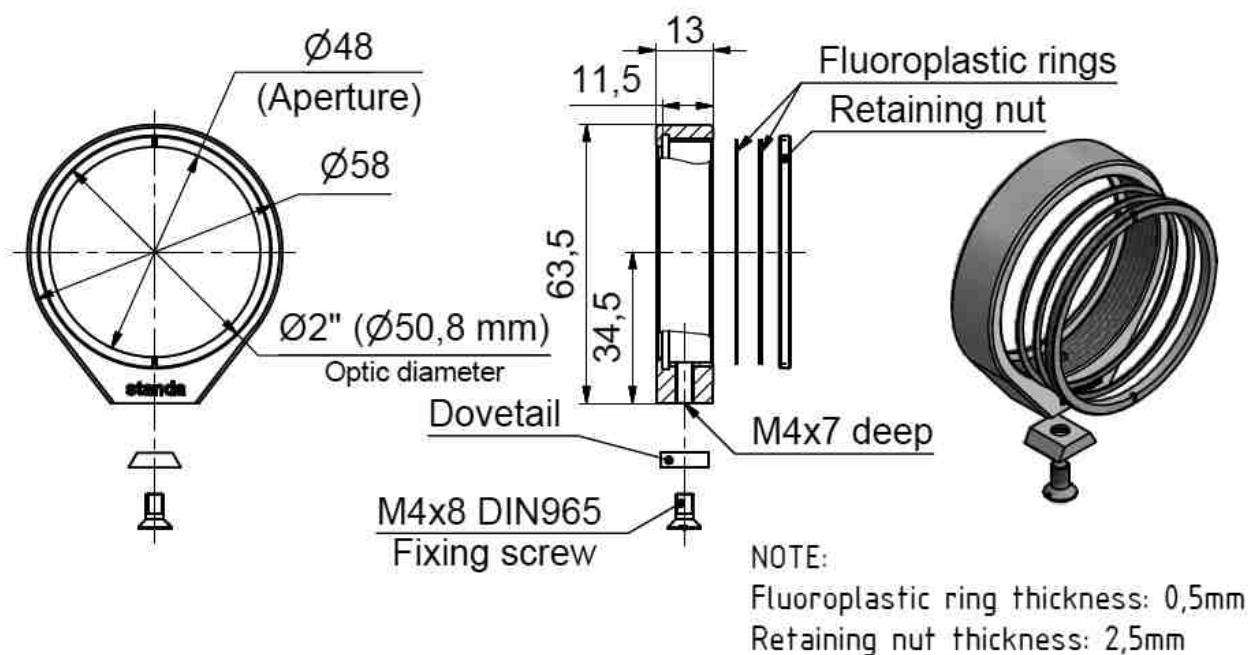


9. APPENDIX E (4FOM-2 Optic Mount Drawing)

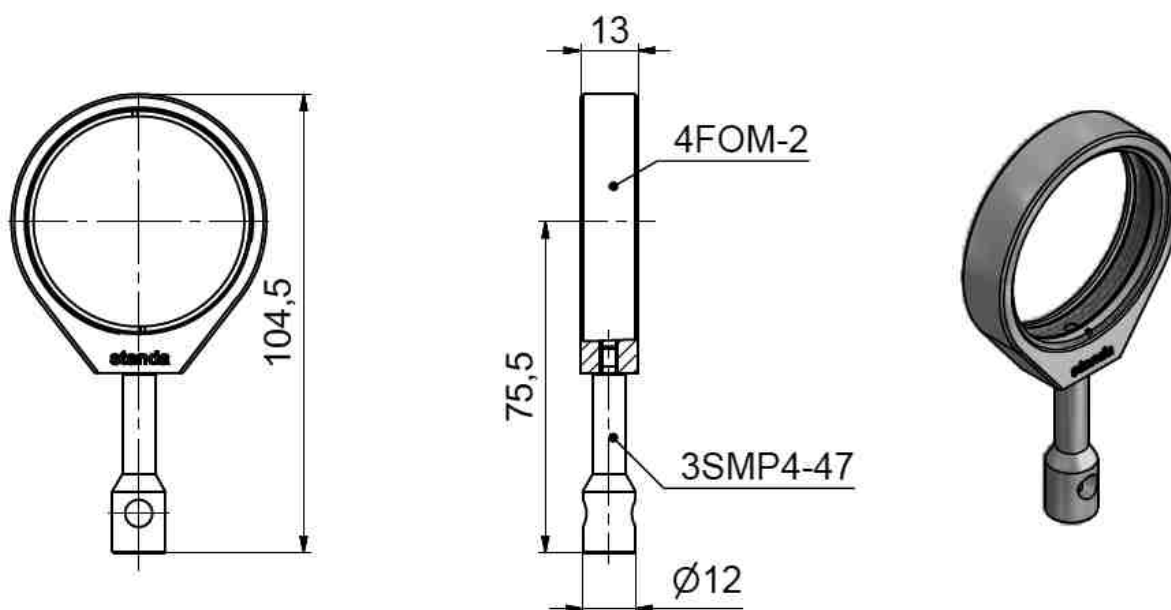
4FOM-2

Flipper Optic Mount

Flipper Optic Mount 4FOM-2 full set preview



Flipper Optic Mount 4FOM-2 with Mounting Post 4SMP4-47 combination example



10. APPENDIX F (8MFM-RC3 Handset drawing)

Flipper Handset

8MFM-RC3

