

USER MANUAL

ENGLISH

vetec

MECHANICAL OVERLOAD SWITCH

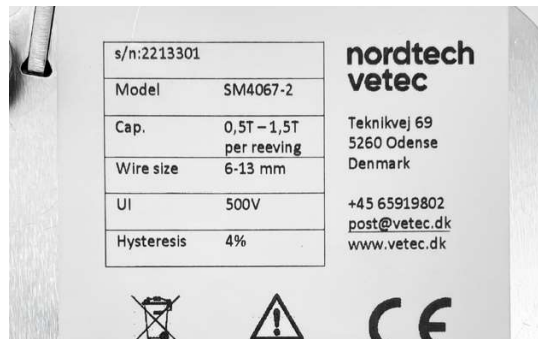
SM4067 / SM4068



Important information

This manual describes the operation of the SM4067/68 (2-6)

This mechanical overload switch is adjusted to specific use. Do not apply the mechanical overload switch to a wire with any other diameter without contacting Vetec for advice. Unauthorized installation could result in product failure.



Model:	Built for 6-13 mm. wire 2 springs in this unit
UL 500V:	Voltage approval on switch
Hysteresis 4%:	Difference between the points, where the unit switches on and off
S/No:	Unique serial number on this unit
Rope size:	Can be used from 6 to 13 mm wire
Load:	0-800 KG (in this unit the crane has 2 reevings (a 1,6T crane)

Read the installation instructions carefully before mounting and installing the product.

These instructions are solely directed towards qualified installers. The information should not be handed to end users.

These instructions contain information regarding installation and configuration which is not intended for end users - only for qualified technicians.

The machine manufacturer is obliged to produce an operating manual for the machine. Only such information may be passed on to the end user, that is needed to operate the machine correctly.

According to European law, instructions for end users must be produced and submitted from the operator that can overlook the final usage of the products. When parts of machines are joined together, they become a new machine and should no longer be looked at as separate machines.

- Allow only licensed or qualified personnel to install the product.
- Use undamaged cables. No cables should hang loose.
- Avoid installing in areas affected by strong vibrations.
- Make sure that the user is following the instructions.
- Make sure that the user has reached the certified age to operate the equipment.
- Make sure that the user is not under the influence of drugs, alcohol and medicines.
- Make sure that the user keeps a good overview of the work area.
- Always contact your representative for service and maintenance work.

Load Limiter / Mechanical Overload Switch



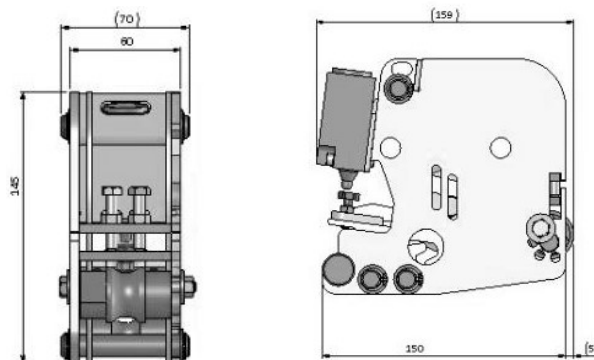
SM4067, SM4068

- Designed for load limitation of hoisting devices i.e. cranes.
- The compact size provides a minimal lifting height reduction. L 150 mm.
- Quick and precise installation with simple tools.
- May easily be adjusted to fit different wire types and capacities.
- Linear force development.
- Available with 1 or 2 cut off points.
- Designed and manufactured in Denmark for high quality assurance.

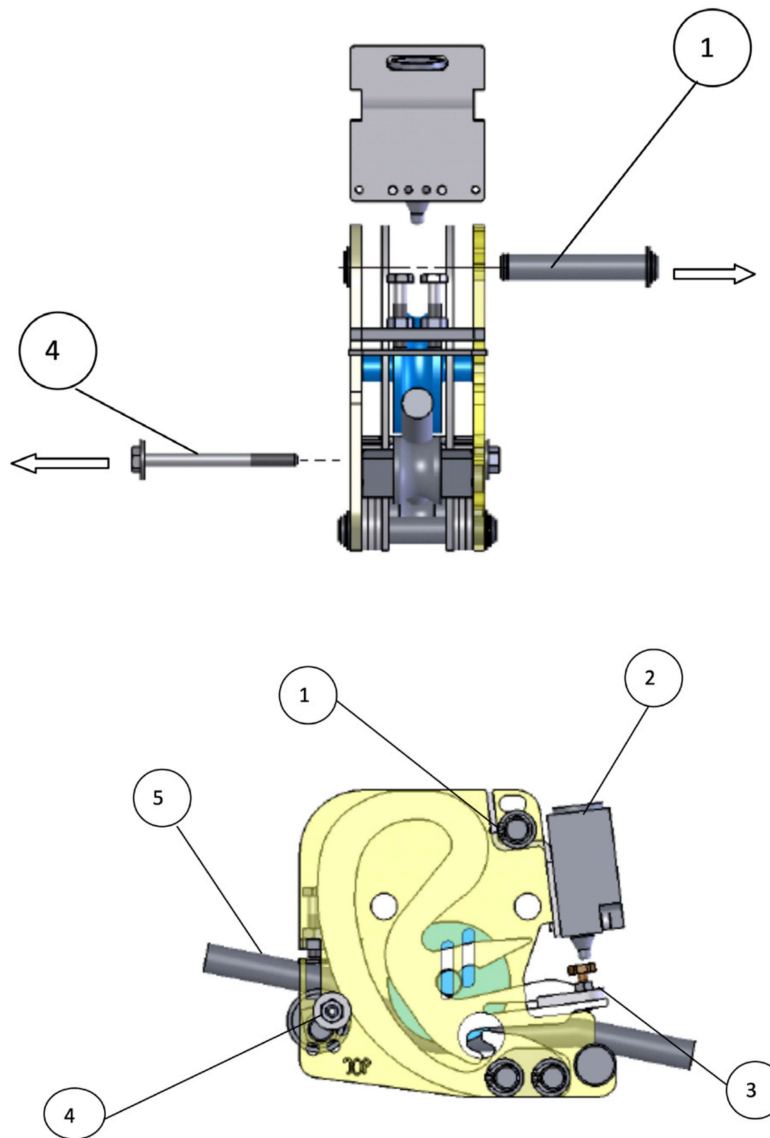


Specifications			
Application areas:	<ul style="list-style-type: none"> • Load limitation of hoisting devices, cranes and overhead cranes. Suitable for a variety of industrial environments, including high temperature and dusty environments. • May be used for low and high load limits. 		
Accuracy:	1% FS.		
Materials:	Housing:	Nickel plated steel	
	Springs:	Heat treated spring steel, according to GB/T 13304	
	Axles:	CK45	
Hysteresis:	Max 4% FS.		
Operating temperature:	0 to 90 °C. Below 0 °C a heating device is recommended		
Switch:	UI:	500V	UL Listed
	Utilisator:	AC-15-230V/4A	IEC 60947-5-1
		DC-13: 24V / 1A	

Item No.	Wire	Capacity	Weight	Dimensions
SM4067-2	6-13 mm	500-1500 kg. per reeving	2,45 kg.	W70 x H145 x L150
SM4067-4	6-13 mm	1500-3000 kg. per reeving	2,9 kg	W70 x H145 x L150
SM4067-6	6-13 mm	3000-5000 kg. per reeving	3,15 kg.	W70 x H145 x L150
SM4068-2	13-20 mm	500-1500 kg. per reeving	2,45 kg.	W70 x H145 x L150
SM4068-4	13-20 mm	1500-3000 kg. per reeving	2,9 kg.	W70 x H145 x L150
SM4068-6	13-20 mm	3000-5000 kg. per reeving	3,15 kg.	W70 x H145 x L150

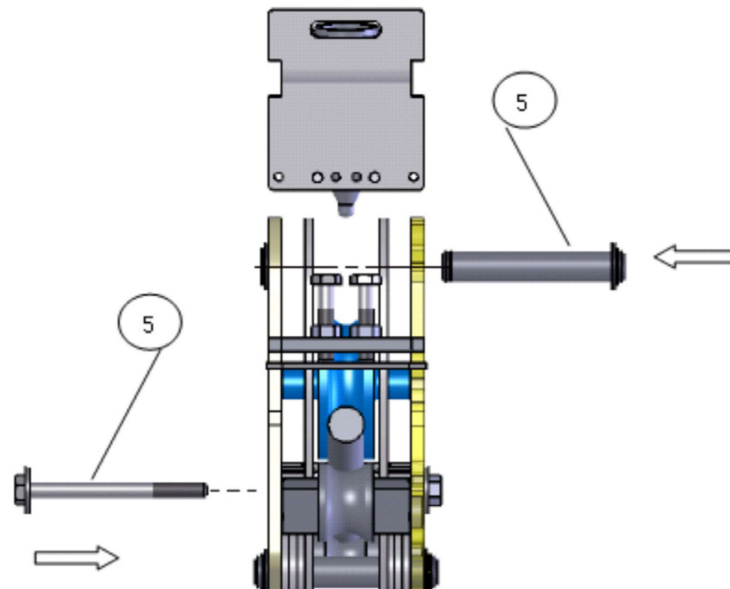
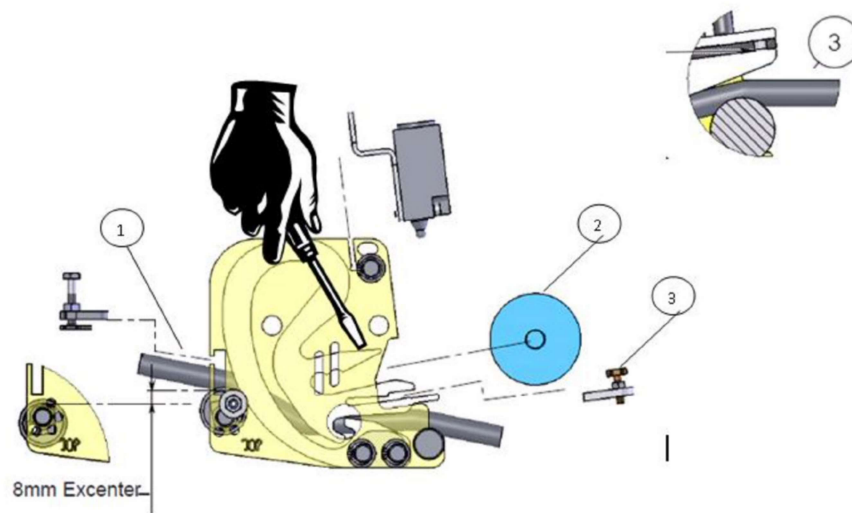


Mounting and installation: Disassembly



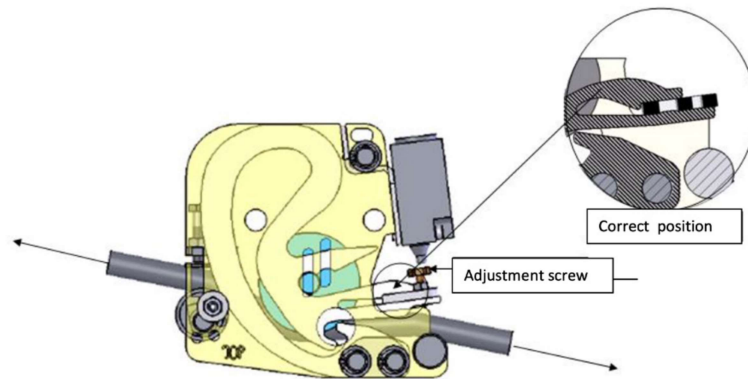
1. Remove lock-ring, and pull out axle.
2. Detach positioning box
3. Remove metal plate
4. Remove pulley
5. Place housing on the wire

Mounting and installation: Reassembly



1. The wire must be placed, as shown on illustration
2. Tighten support plate applying the two socket screws
3. Pulley is pushed into place (Apply grease or oil before fitting the pulley)
4. Mount plate
5. Mount sensor
6. Mount lock-pins and fit with lock-ring

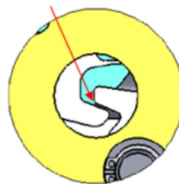
Operating the SM4067/SM4068



1. Make sure all components are fitted correctly
2. Connect the switch and make sure the wire is not pinched
3. Adjust the switch by using the adjustment screw
4. Make sure the springs do not reach their maximum capacity (See figure below)
If the spring is near maximum capacity, two more springs should be added (one on each side of the pulley) Maximum capacity is 3 sets of springs.



No. 1 open position



No. 2 Locking position



Adjustment is correct when there is space between the springs. (See fig. 2.)

Maintenance manual

Recommended maintenance and service for Mechanical Overload Switches SM4067 (2-6) and SM4068 (2-6)

Recommended daily checks:

- Check Mechanical Overload Switch for fractions or deformations
- Make sure the switch is functional
- The wire must be in the pulley, and the switch firmly attached

Recommended monthly checks:

- Make sure the spring is not in locking position, when the maximum capacity is reached
- Lubricate the wire roll, wire and spring with KK-2002 chain oil or similar oil

Disposal

If SM 4067/68 (2-6) must be dismantled for scrap, it is important to disassemble components that must be disposed of in accordance with relevant environmental regulations on the destruction and disposal of hazardous waste.

These rules apply to:

- Mechanical Components
- Plastic and rubber components
- Components are surface treated
- Electrical components

Guarantee

Vetec's product guarantee covers material, construction or manufacturing faults. When products are covered by guarantee, Vetec may replace the product or faulty parts with new. Repairs or replacement must be carried out by Vetec or by an authorized service centre specified by Vetec.

The following faults are not covered by the guarantee:

- Defects or malfunction from normal wear and tear
- Parts of a consumable nature
- Products that have been subject to unauthorized modifications
- Incorrect installation or usage
- Damage from liquids

Service and repairs

Repairs and maintenance must be carried out by qualified personnel. Use only spare parts from Vetec.

Please contact your dealer if you have complaint about a product or require other services. Please have the following ready when you contact a dealer: Name of the system, model and a description of the problem.

If you need to return a product, the invoice number and delivery date must be included.

Care

- Keep the product in a dry, clean place
- Make sure that contacts are kept clean
- Wipe off dust using a slightly damp, clean cloth
- Never use cleaning agents or high-pressure washer

Datasheet - TS 236-02Z

Position switch / 236 thermoplastic enclosure - DIN EN 50047 with Actuator / 236 Plunger S



Image

Preferred typ



- thermoplastic enclosure
- Good resistance to oil and petroleum spirit
- Wide range of alternative actuators
- 30 mm x 58,5 mm x 30 mm
- 1 Cable entry M 20 x 1.5
- Double-Insulated
- Mounting details to EN 50047
- Actuator heads can be repositioned by 4 x 90°

(Minor differences between the printed image and the original product may exist!)

Ordering details

Product type description	TS 236-02Z
Article number	1163385
EAN code	4030661203454

Approval

Approval	USA/CAN CCC
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Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact (NC)	20.000.000
Mission time notice	20 Years
	$MTTF_{d,nc} = \frac{B_{10d}}{0,1 \times n_{cyc}}$ $n_{cyc} = \frac{d_{nc} \times f_{op} \times 3600 \text{ s/hr}}{t_{cyc}}$

Global Properties

Additional information

Incorporation of partly completed machinery.
Machinery Directive 2006/42/EC, Annex II B

JOP Engineering Ltd

Herewith declares that:

Vetec Mechanical Overload Safety

Is manufactured in accordance with the following directives:

- Machine Directive 2006/42 as implemented by the Danish Labour Inspection Decree 612 of 25 June 2008 on the design of technical aids
 - EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC

The following national standards and technical specifications are used:

- DS / EN 12077-2 "Cranes - Safety, Limiting and indicating devices

Part-machine should not put into service until the final machinery as it will be assembled, is consistent assessed and found to comply with all relevant health and safety requirements in 2006/42/EC and other relevant directives.

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