

# Serie 62 Geared Cam Limit Switches



 **Stromag**<sup>®</sup>  
Altra Industrial Motion



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Stromag's extensive product range includes flexible couplings, disc brakes, limit switches, an array of hydraulically, pneumatically, and electrically actuated brakes, and a complete line of electric, hydraulic and pneumatic clutches.

Stromag engineered solutions improve drivetrain performance in a variety of key markets including energy, off-highway, metals, marine, transportation, printing, textiles, and material handling on applications such as wind turbines, conveyor systems, rolling mills, agriculture and construction machinery, municipal vehicles, forklifts, cranes, presses, deck winches, diesel engines, gensets and stage machinery.



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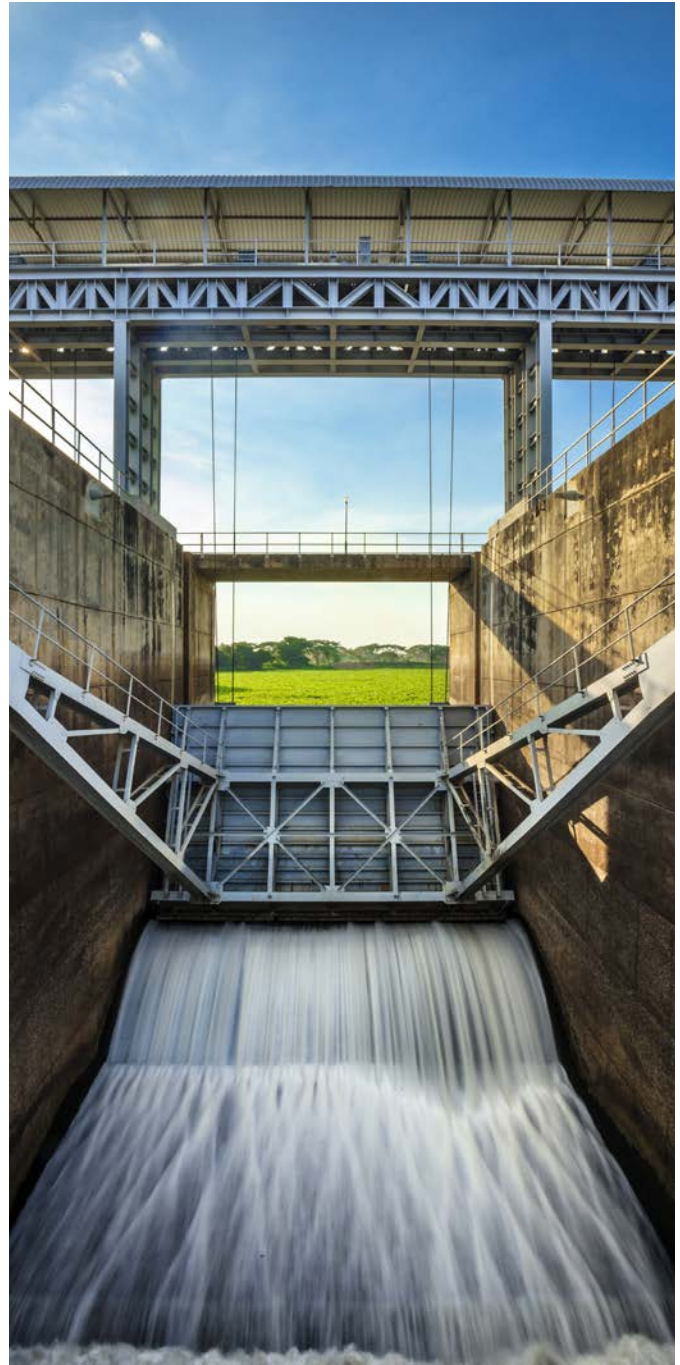
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# Stromag Geared Cam Limit Switches

## AT A GLANCE



## STROMAG SERIES 62

### BENEFITS INCLUDE

- Direct switch of three phase motors
- Contacts for up to 200 Amps

### Series 62 SNE – Basic Design Spindle Gear Switch

Revision number: 3.2.1.1-01

Revision date: 19.11.2019

**Features**

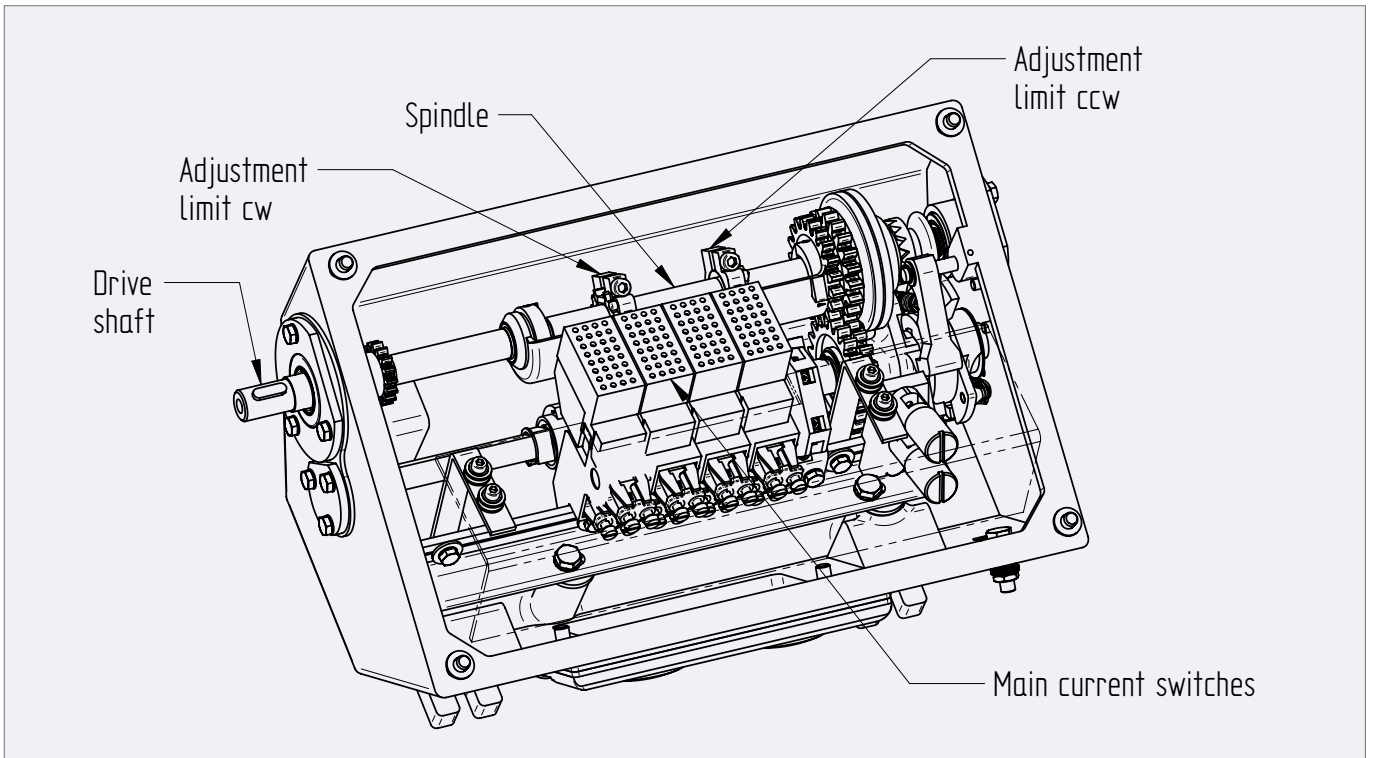
- Main current limit switch for direct switching of three phase-motors
- For 42 and 62 usable revolutions
- Main current contacts for 40 and 200 A permanent available

**Application**

- Steel plants and barrages

**Additional information**

- Also available in combination with installed auxiliary current contacts



Housing size without control switches			
Housing size	Max. rev range	Main current switches	
		Max. No.	Type
2	42	2 ... 8	11 / 21
3	62	2 ... 10	11 / 21
4	62	2 ... 8	22
4	62	2 ... 6	13 / 23

Housing size with fixed control switches				
Housing size	Max. rev range	Main current switches		Max. no. aux. switches
		Max. No.	Type	
2	42	2 ... 4	11 / 21	4
2	42	5 ... 6	11 / 21	2
3	62	2 ... 6	11 / 21	4
3	62	6 ... 8	11 / 21	2
4	62	7 ... 8	11 / 21	4
4	62	2 ... 6	22	4
4	62	2 ... 4	13 / 23	4
4	62	5 ... 6	13 / 23	2

Housing size with fixed control switches				
Housing size	Max. rev range	Main current switches		Max. no. aux. switches
		Max. No.	Type	
2	42	2 ... 3	11 / 21	2
3	62	2 ... 3	11 / 21	4
3	62	4	11 / 21	2
4	62	4 ... 6	11 / 21	4
4	62	7 ... 8	11 / 21	2
4	62	2 ... 4	22	4
4	62	2 ... 3	13 / 23	4
4	62	4	13 / 23	2

## Limit Switches Main Current

# Series 62 SNE – Housing Sizes 2 / 3

Revision number: 3.2.1.2-01

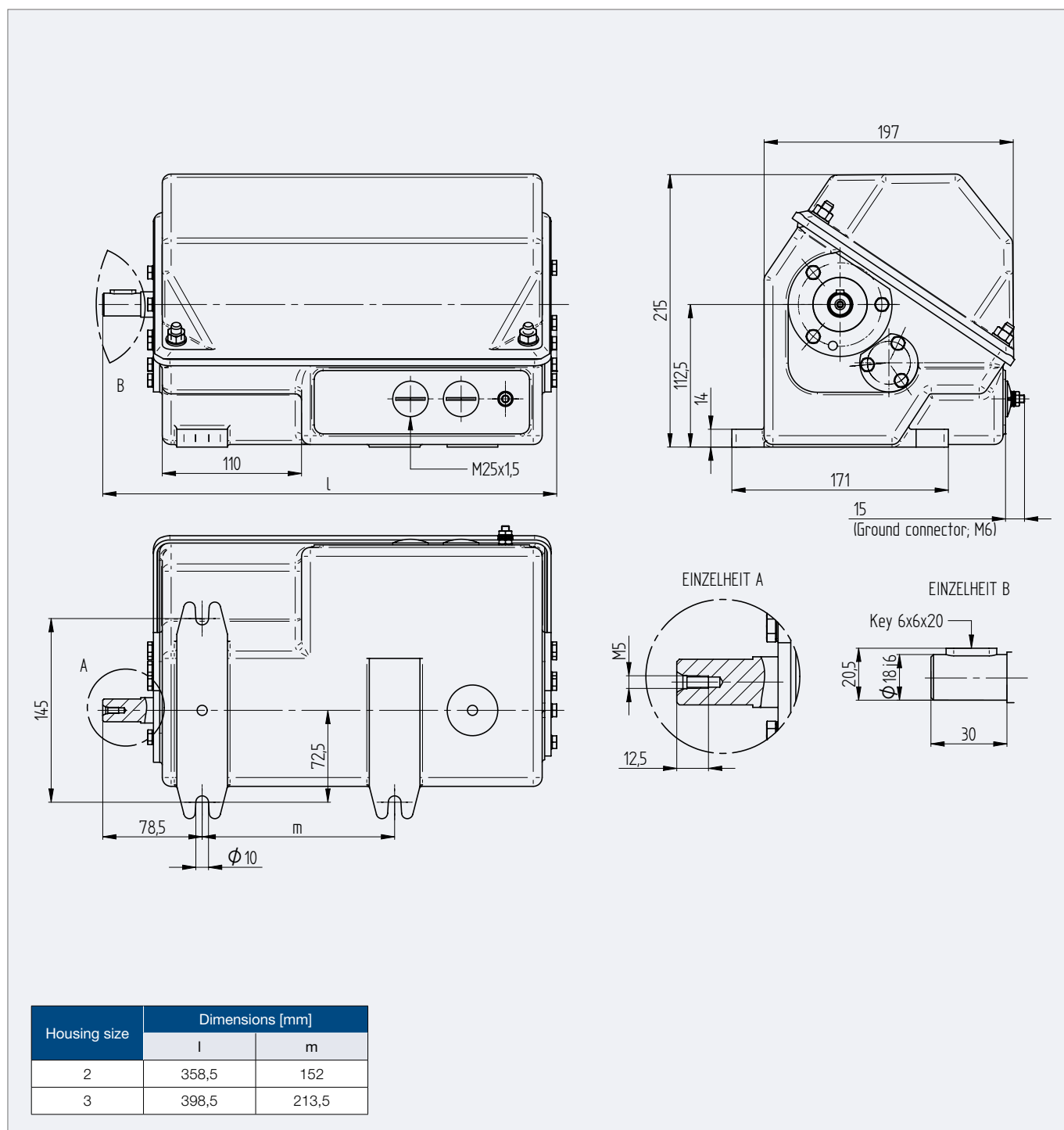
Revision date: 19.11.2019

### Features

- Housings in the size 2 and 3 made of aluminum protection rate IP65

### Additional information

- Made of sea water resistant aluminum



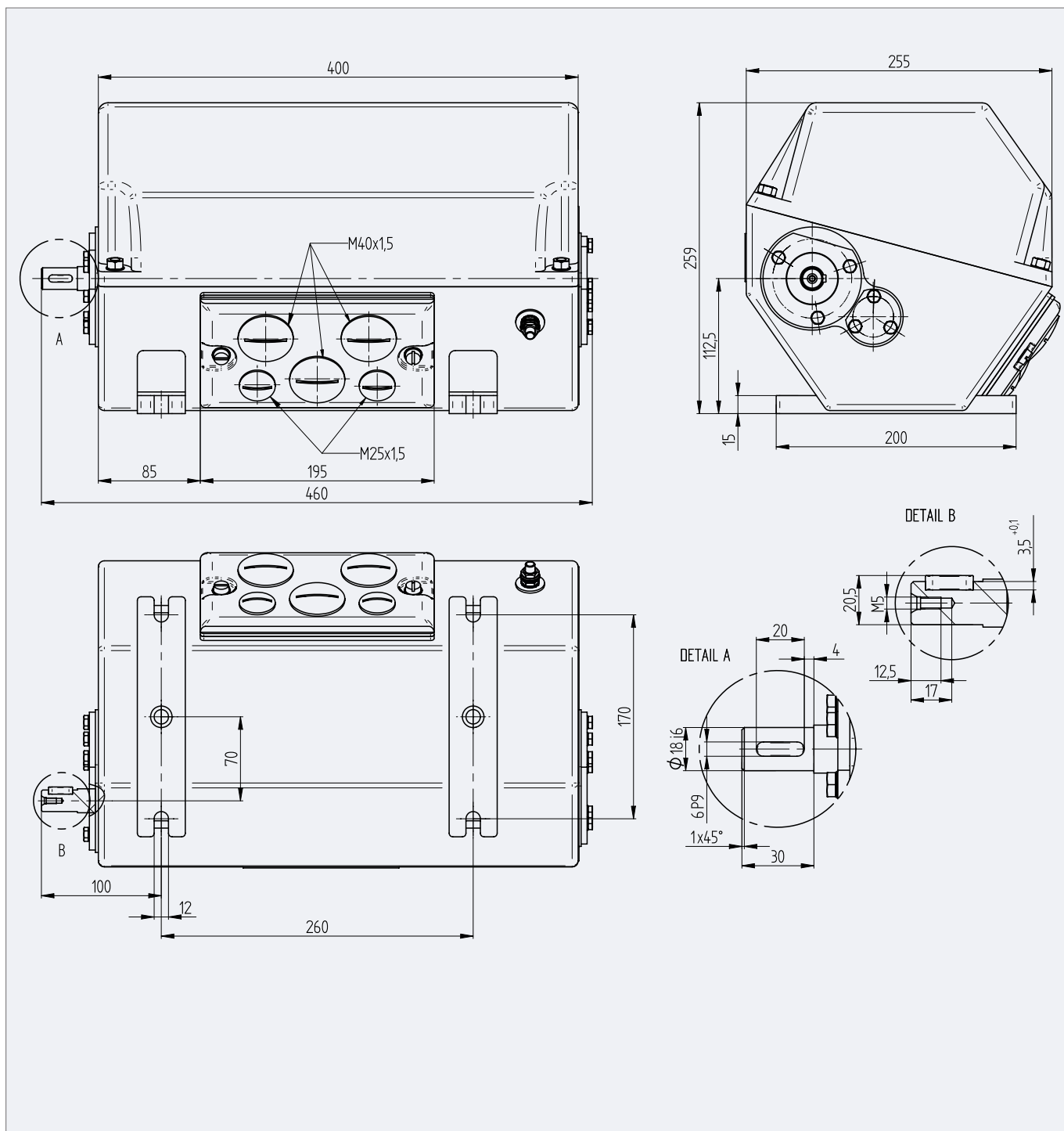
## Series 62 SNE – Housing Size 4

Revision number: 3.2.1.3-01

Revision date: 19.11.2019

### Features

- Housing size 4 made of cast iron protection rate IP54



## Limit Switches Main Current

# Series 62 SNE – Drive Flanges

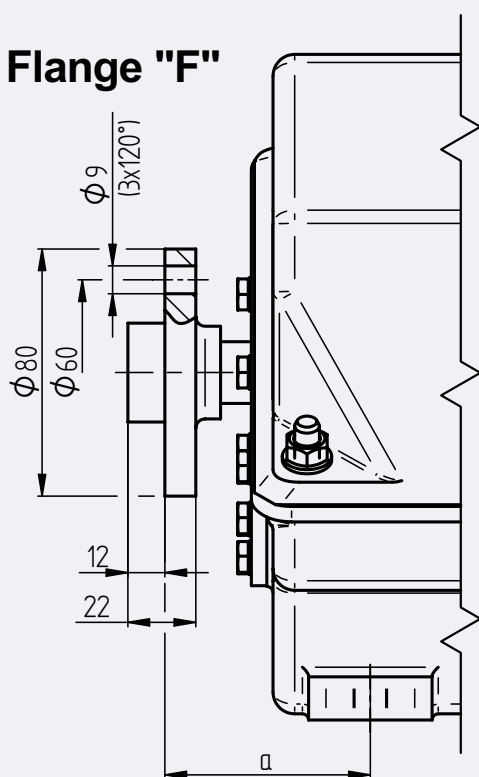
Revision number: 3.2.1.4-01

Revision date: 19.11.2019

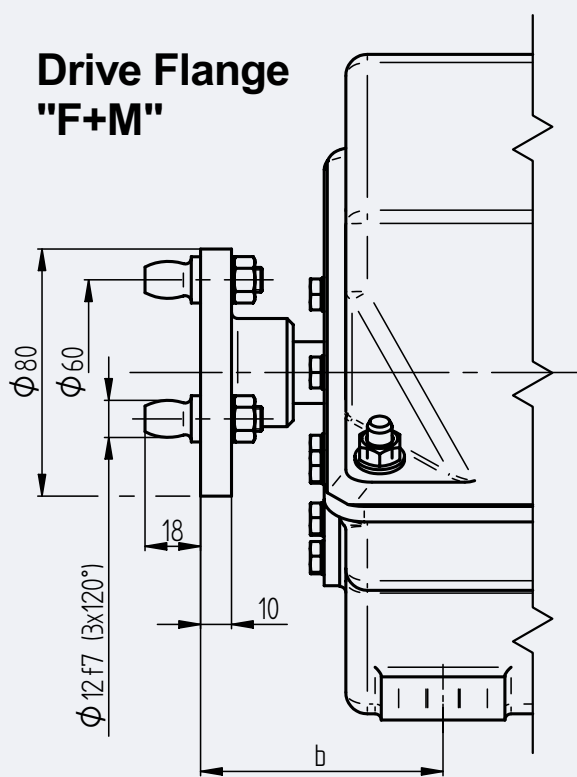
### Features

- Drive flanges F and F+M on request

### Drive Flange "F"



### Drive Flange "F+M"



Housing size	Dimensions [mm]		
	a	b	c
2	66,5	78,5	118,5
3	66,5	78,5	118,5
4	88	100	140



### Series 62 HNE – Basic Design Lever Switch

Revision number: 3.2.1.5-01

Revision date: 19.11.2019

#### Features

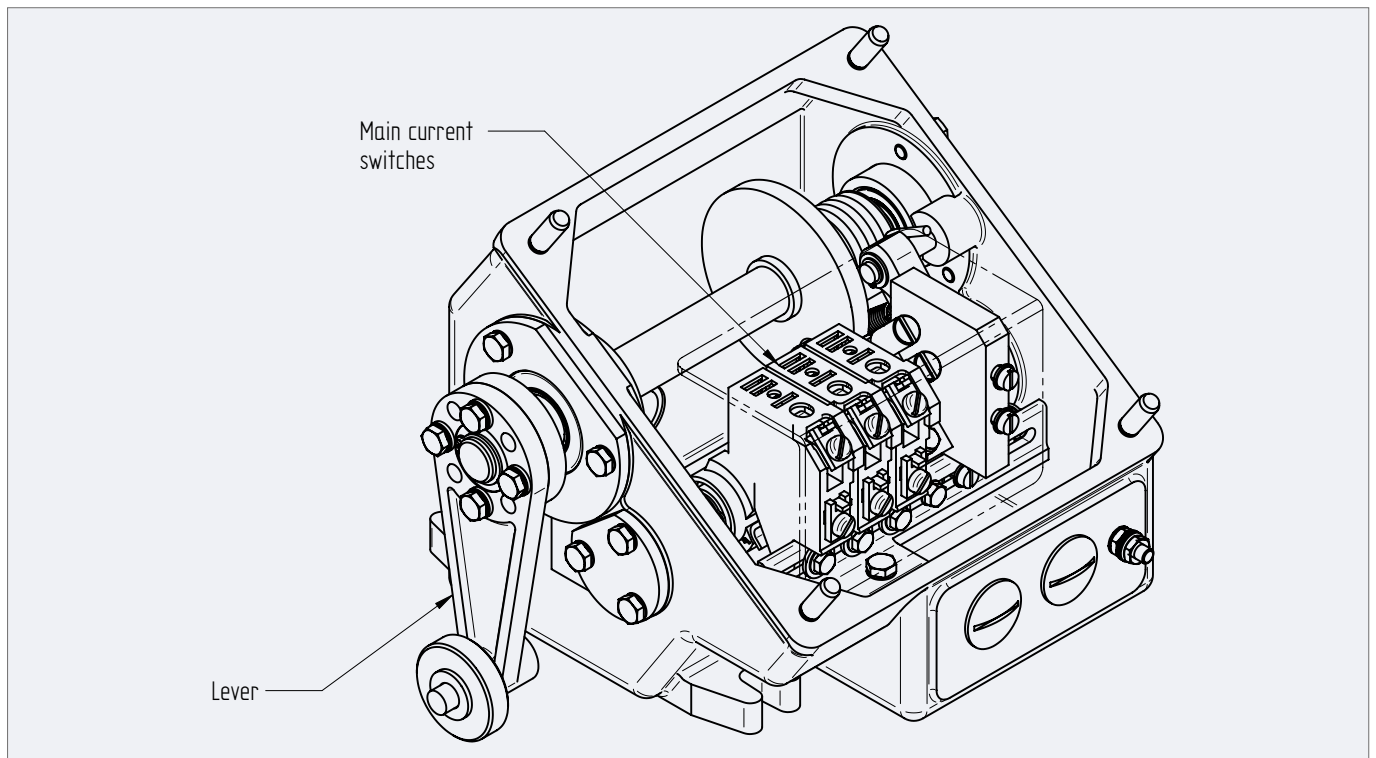
- Main current limit switch for direct switching of three phase-motors
- Main current contacts for 40 and 200 A permanent available

#### Application

- Steel plants and barrages

#### Additional information

- Also available in combination with installed auxiliary current contacts



Housing size without control switches		
Housing size	Main current switches	
	Max. No.	Type
1	2 ... 4	11 / 21
2	2 ... 6	11 / 21
4	2 ... 6	13 / 22 / 23

Housing size with fixed control switches			
Housing size	Main current switches		Max. no. aux. switches
	Max. No.	Type	
1	2	11 / 21	2
2	2 ... 6	11 / 21	2
4	2 ... 6	13 / 22 / 23	2

## Limit Switches Main Current

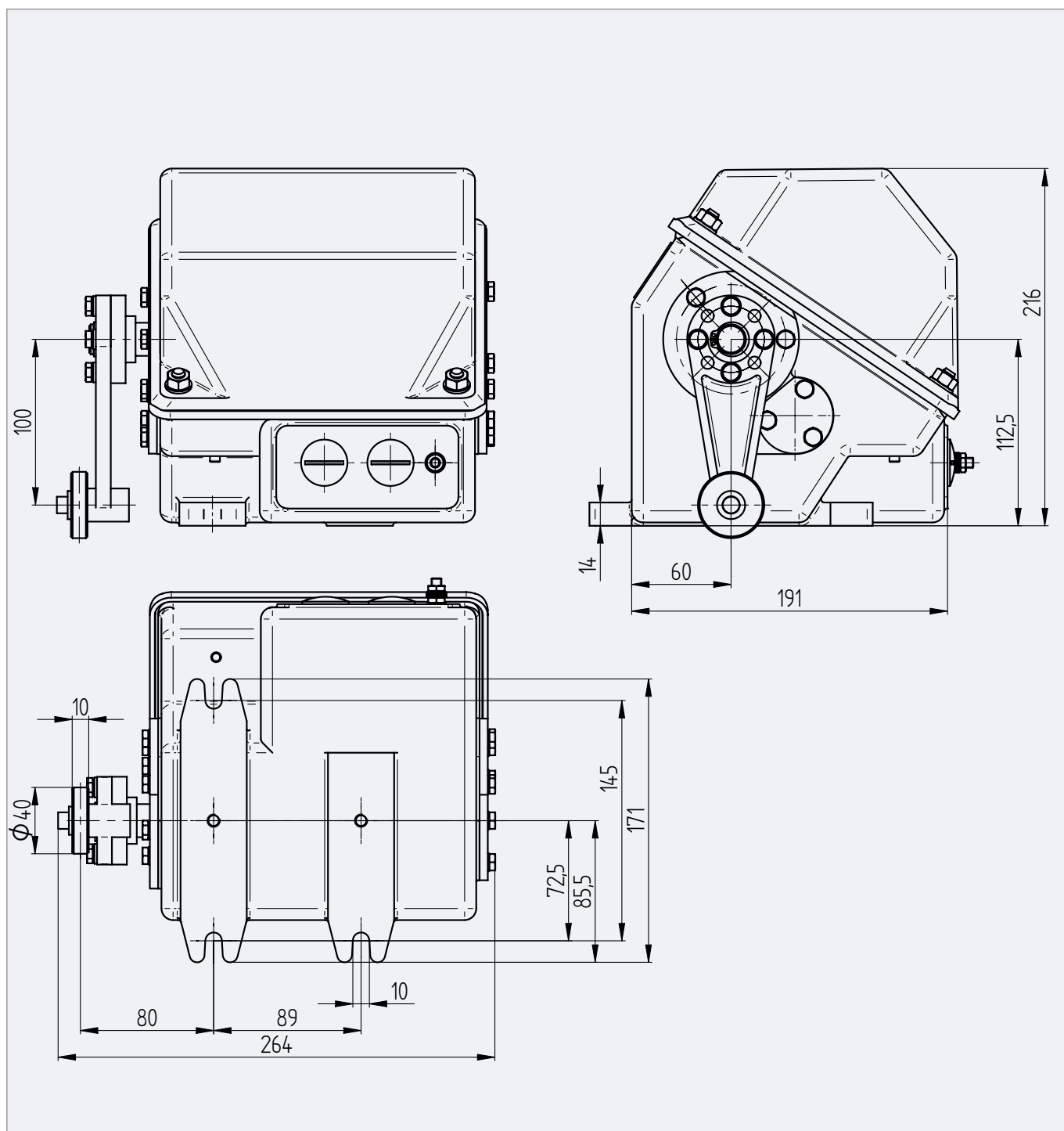
# Series 62 HNE – Housing Size 1

Revision number: 3.2.1.6-01

Revision date: 19.11.2019

### Features

- Housings in the size 1 and 2 made of aluminum, protection rate IP65



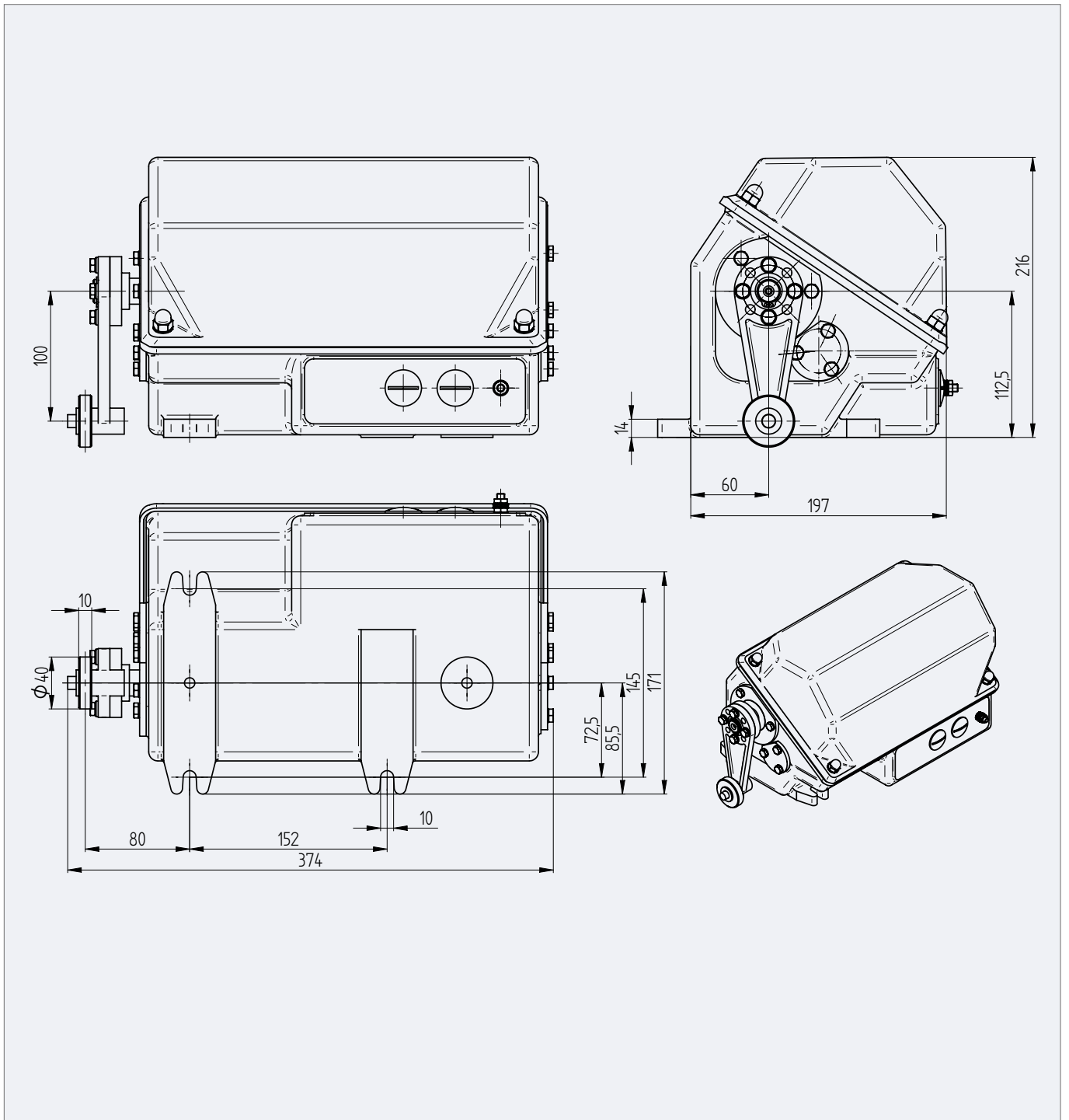
### Series 62 HNE – Housing Size 2

Revision number: 3.2.1.7-01

Revision date: 19.11.2019

#### Features

- Housings in the size 1 and 2 made of aluminum, protection rate IP65



## Limit Switches Main Current

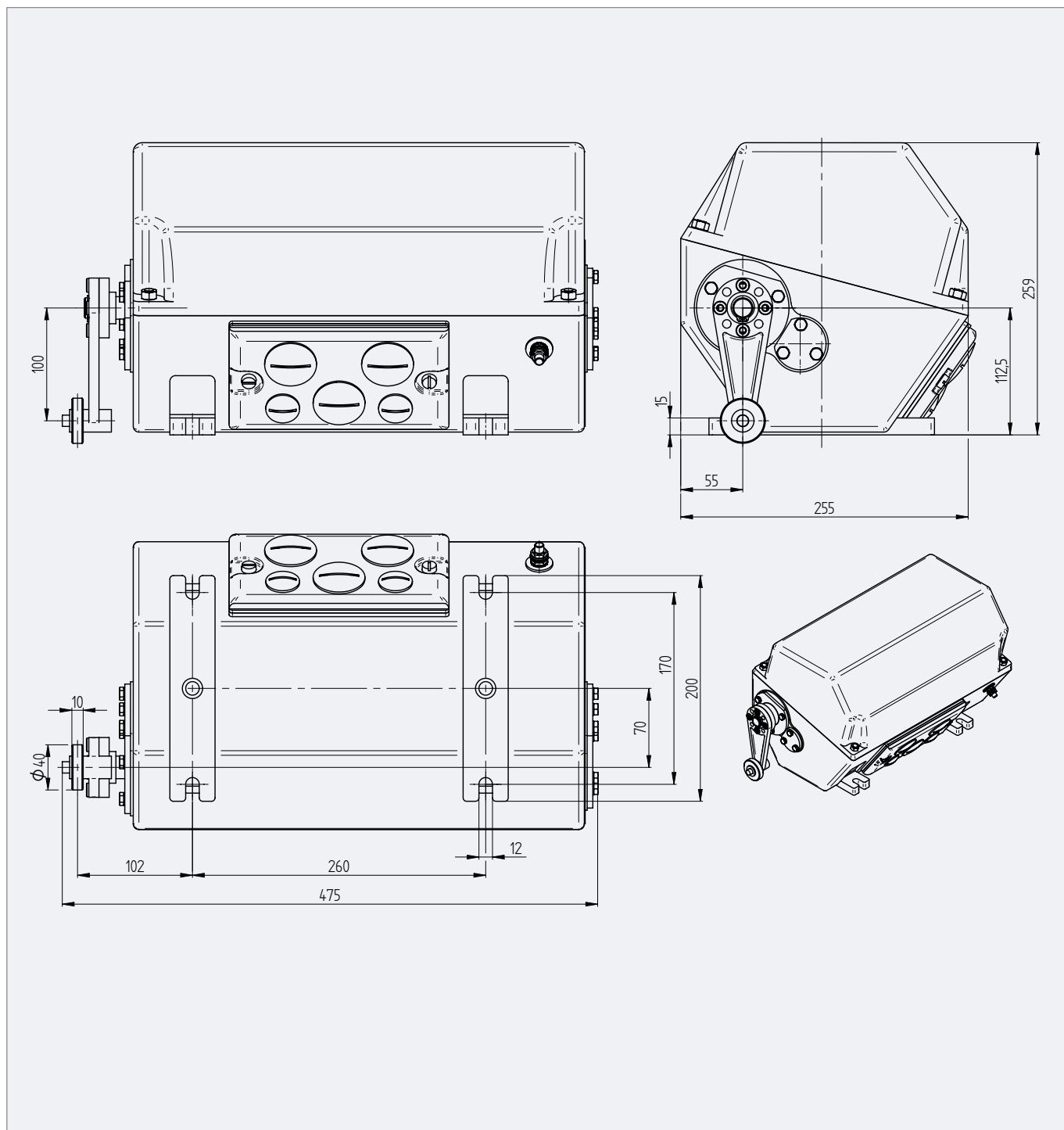
# Series 62 HNE – Housing Size 4

Revision number: 3.2.1.8-01

Revision date: 19.11.2019

### Features

- Housings in the size 4 made of cast iron, protection rate IP54



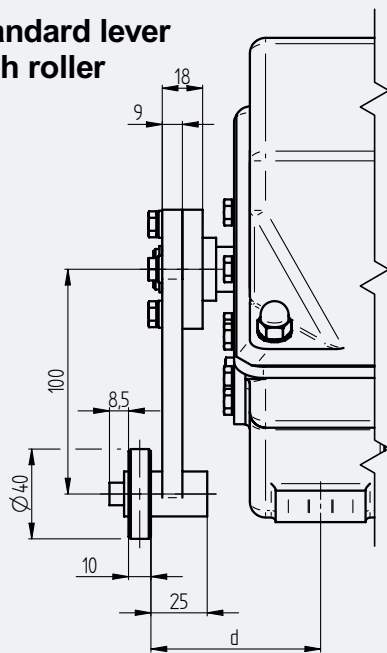


### Series 62 HNE – Available Levers

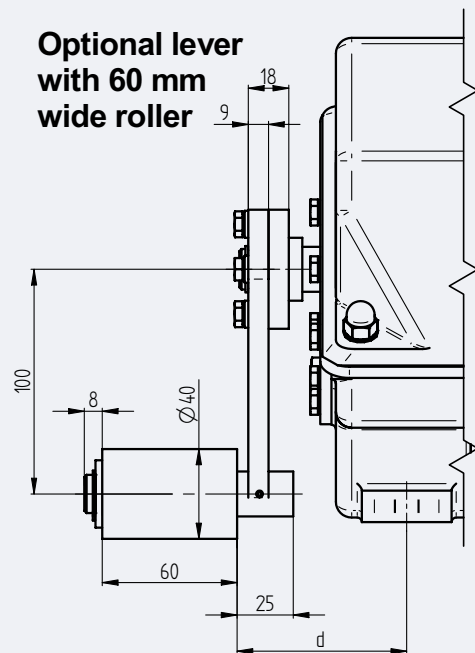
Revision number: 3.2.1.9-01

Revision date: 19.11.2019

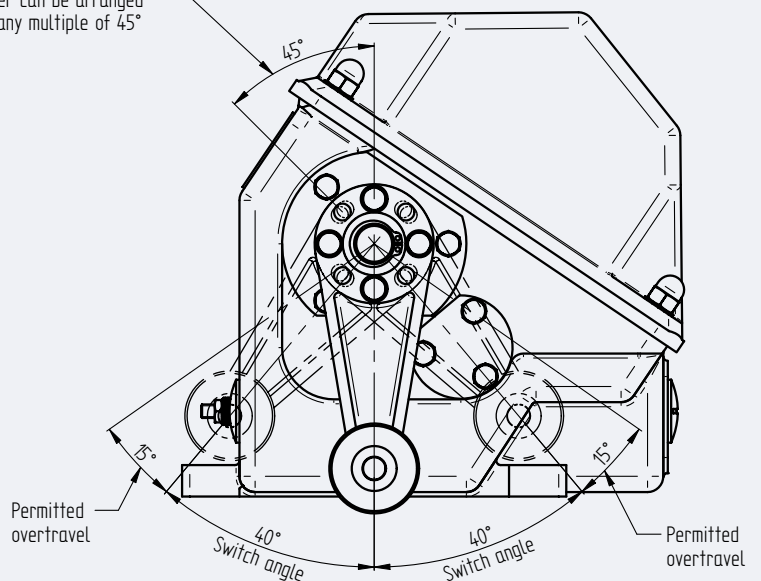
**Standard lever with roller**



**Optional lever with 60 mm wide roller**



Lever can be arranged at any multiple of 45°



Housing size	Dimension [mm] d
1	75
2	75
4	97

## Limit Switches Main Current

# Series 62 GNE – Basic Design Counterweight Switch

Revision number: 3.2.1.10-01

Revision date: 19.11.2019

### Features

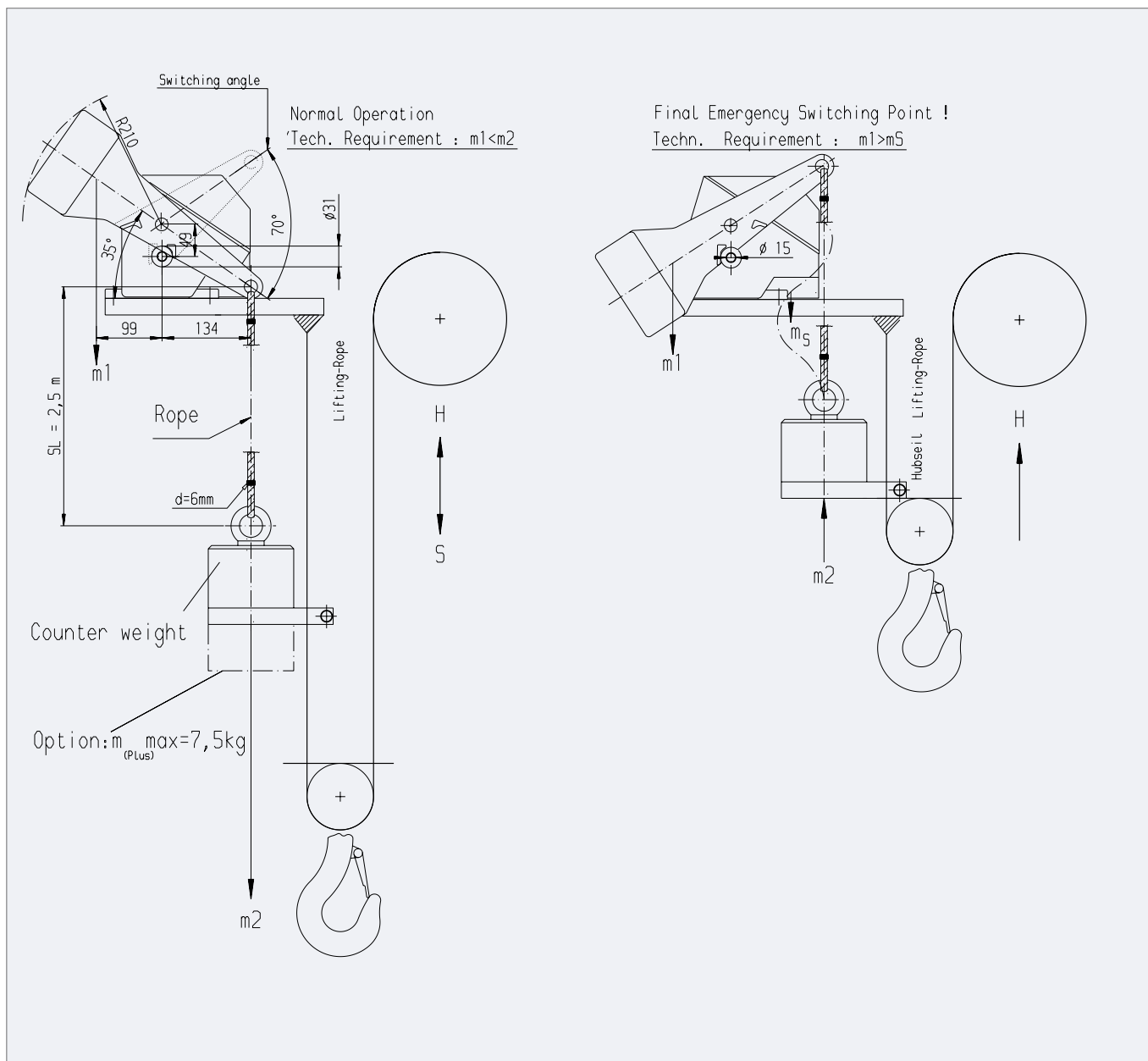
- Main current limit switch for direct switching of three phase-motors
- Main current contacts for 40 and 200 A permanent available

### Application

- Steel plants

### Additional information

- For the upper position of the hook, additionally to the geared cam limit switch at the drum, for diversity and redundancy



Housing size without control switches		
Housing size	Main current switches	
	Max. No.	Type
1	2 ... 4	11 / 21
4	2 ... 6	13 / 22 / 23

Housing size with fixed control switches			
Housing size	Main current switches		Max. no. aux. switches
	Max. No.	Type	
1	2	11 / 21	2
4	2 ... 6	13 / 22 / 23	2

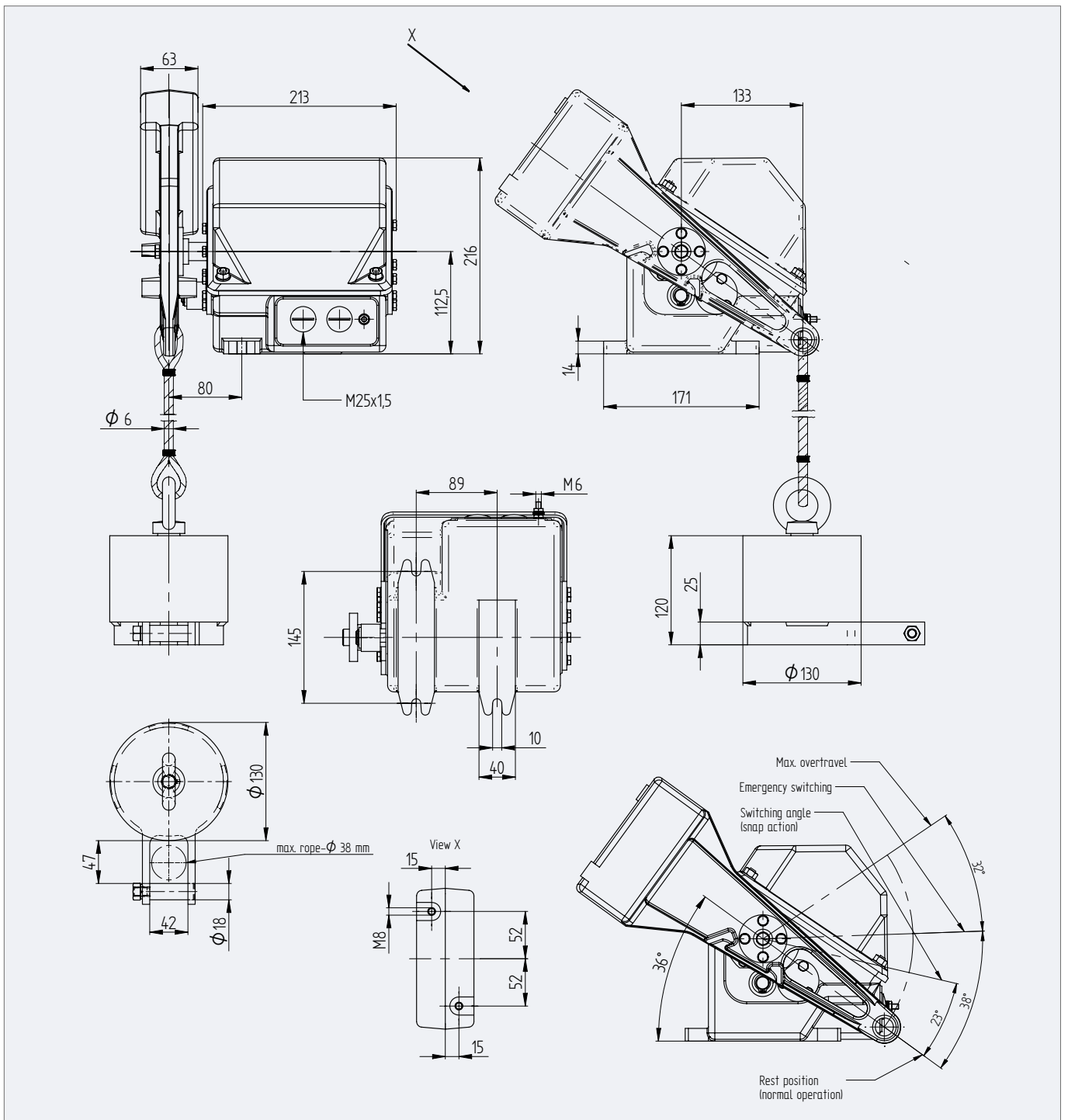
# Series 62 GNE – Housing size 1

Revision number: 3.2.1.11-01

Revision date: 19.11.2019

## Features

- Housings in the size 1 and 2 made of aluminum, protection rate IP65



## Limit Switches Main Current

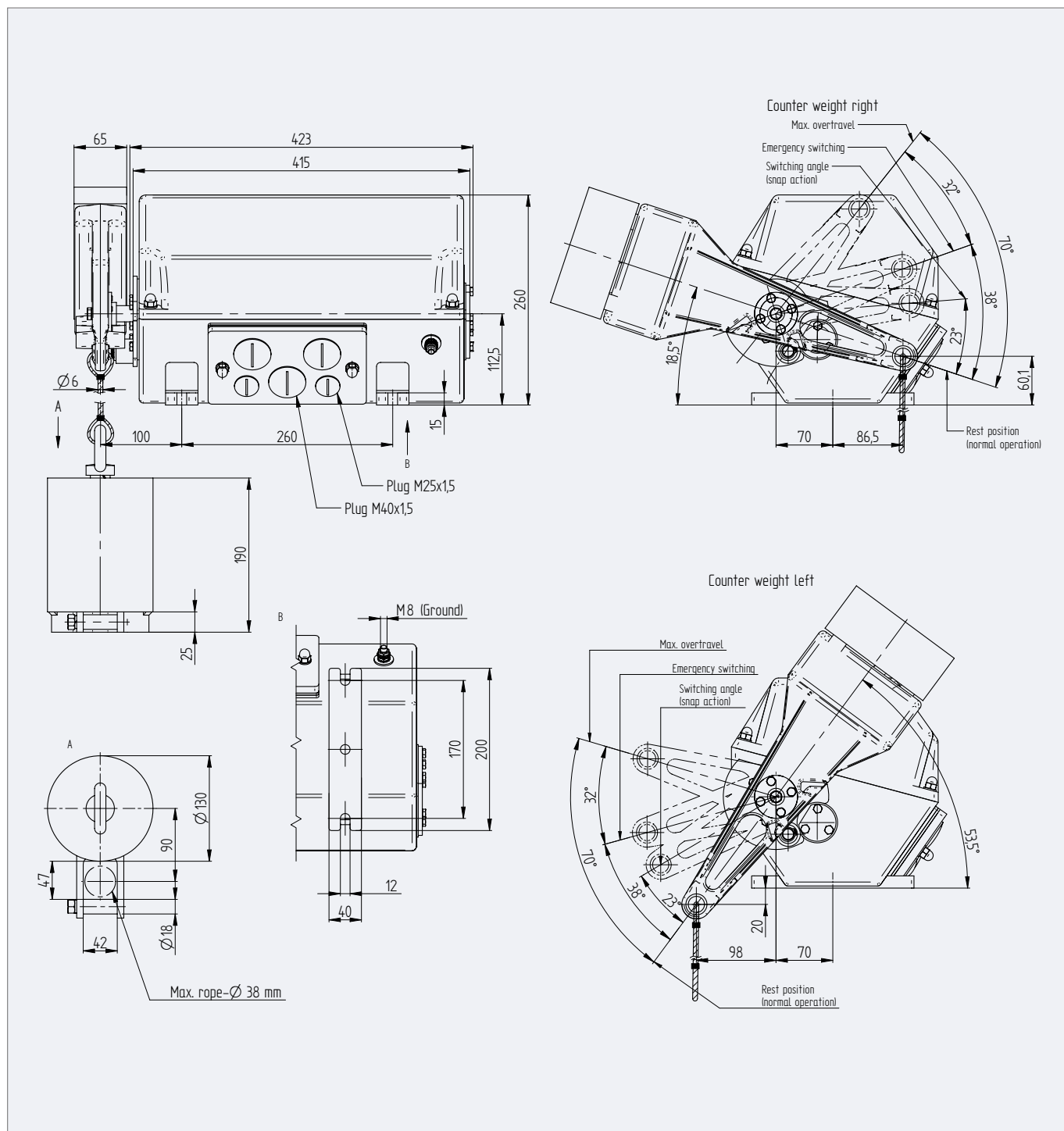
# Series 62 GNE – Housing size 4

Revision number: 3.2.1.12-01

Revision date: 19.11.2019

### Features

- Housings size 4 made of cast iron protection rate IP54





### Series 62 – Main Current Switches

Revision number: 3.2.1.13-01

Revision date: 19.11.2019

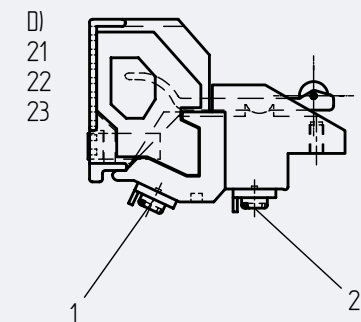
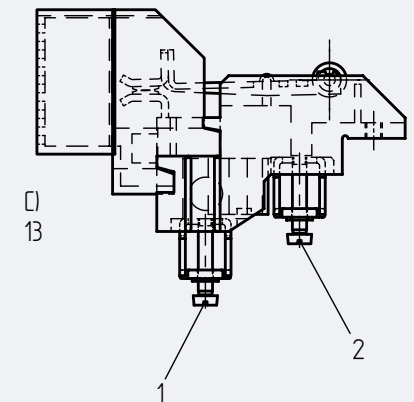
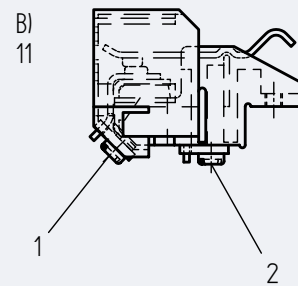
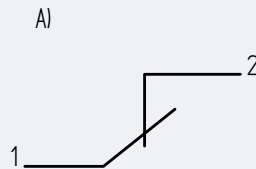
**Features**

- Main current switches for alternating current (50 Hz / 60Hz)
- DC contacts may still be possible on request

**Additional information**

- The performance data of the switches is related to temperatures from -30°C up to + 45°C

- A) Curcuit diagram (NC)
- B) Contact 11
- C) Contact 13
- D) Conacts 21, 22, 23



Switching Contact			Switching System		Electrical Data						Connection	
Designation	Three phase current	Direct curreent	Snap action	Push action	Permanent current	Slip ring rotor 1), 2) $I_a = 2 \times I_N$ $\cos\phi = 0,7$			Squirrel-cage rotor 1), 2) $I_a = 2 \times I_N$ $\cos\phi = 0,6$			Screw terminals for cable cross section [mm <sup>2</sup> ]
					A	230V	400V	500V	230V	400V	500V	
11 <sup>3)</sup>	•			•	40	15	28	28	12	20	20	1x10 or 2x6
13	•			•	200	60	100	130	60	100	100	1x70 or 2x50

Designation	Three phase current	Direct curreent	Snap action	Push action	Permanent current	DC motor			Blow-out coils available for the following currents [A]	Screw terminals for cable cross section [mm <sup>2</sup> ]
DC contacts may still be possible on request					A	220V	440V	600V		
21		•		•	25	4	8	8	1, 2, 4, 8 und 25	1x10 or 2x6
22		•		•	90	16	20	20	30, 60 und 90	1x35 or 2x25
23		•		•	160	28	40	40	120 und 160	1x70 or 2x50

- 1) Breaking capacity in [kW] at 60% duty factor (ED) when switching off ... [V]
- 2) If the same contacts for both directions of rotation of the motors are current transversed, the stated output is adm. Only up to 40% ED
- 3) When used as control current contact, load capacity up to 10A, 500 VAC

## Limit Switches Main Current

# Series 62 – Option: Fixed Control Switches

Revision number: 3.2.1.14-01

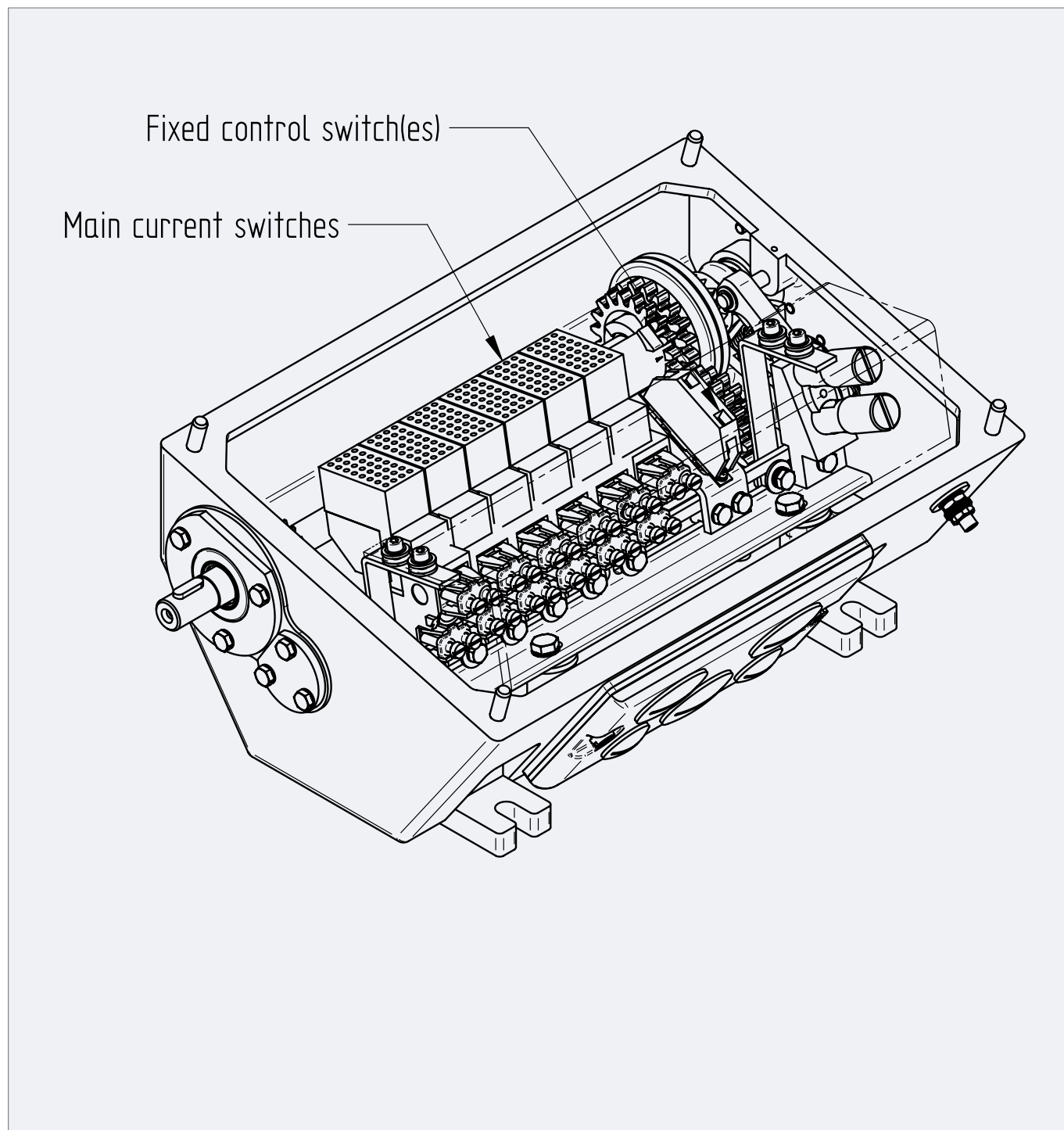
Revision date: 19.11.2019

### Features

- Additionally to the main current switches
- Only for auxiliary current

### Additional information

- Adjustment of the fixed control switches is not possible, switching is done 20° before the main current switches



## Series 62 – Option: Adjustable Control Switches (SNE only)

Revision number: 3.2.1.15-01

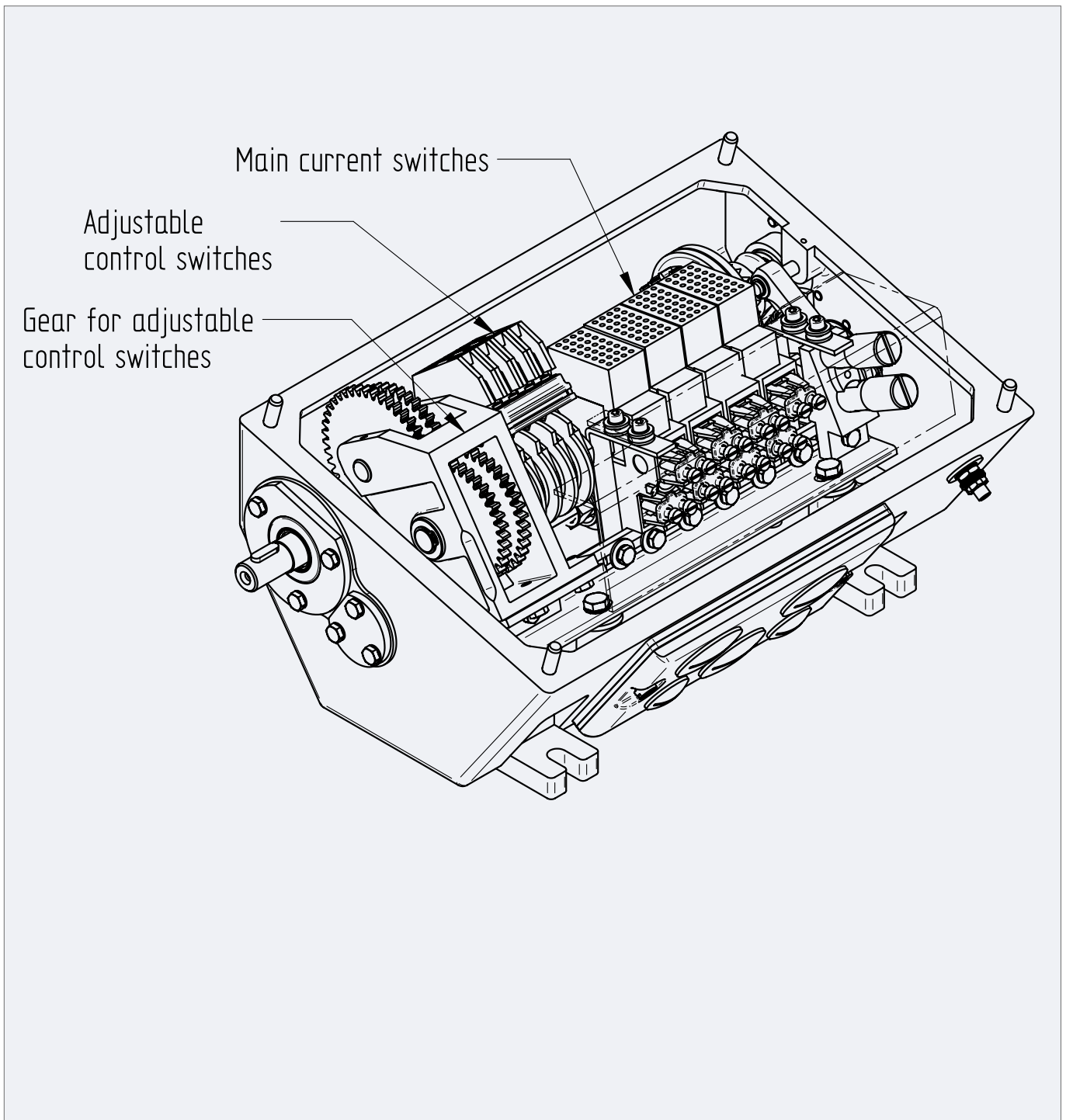
Revision date: 19.11.2019

### Features

- Additionally to the main current switches
- Only for auxiliary current

### Additional information

- Cam discs for this switches can be infinitely adjusted



## Limit Switches Main Current

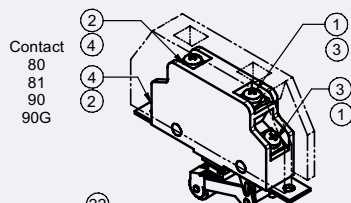
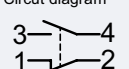
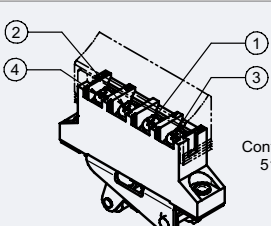
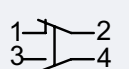
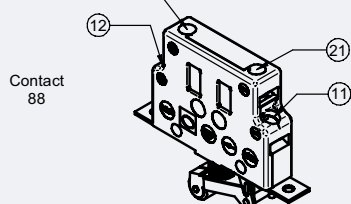
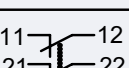
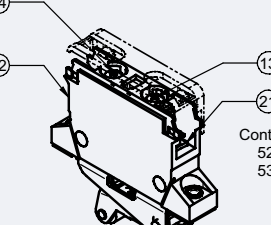
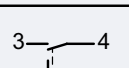
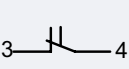

# Series 62 – Control Current Switches

Revision number: 3.2.1.16-01

Revision date: 19.11.2019

### Features

- Different types of switches available for control current
- Gold plated types for PLC applications

	Circuit diagram	Type of contact	
 <p>Contact 80 81 90 90G</p>		80 90 90G	 <p>Contact 51</p>
		81	
 <p>Contact 88</p>		88	 <p>Contact 52 53</p>
		51	
	51		
	52 53		

Switching contact			Contact material		Switching system		Connection	Functionality			Electrical data			Utilization data
Designation	Circuit as a changeover	Circuit as an NC contact	Silver	Gold (PLC-Application)	Snap action switch	Push action switch	Screw terminals; 0,75 - 2,5 mm <sup>2</sup> / AWG 14 ... 20	Positive opening acc. to EN 60947-5-1 Annex K	Short circuit protection	Utilization category acc. to IEC 60947	Conventional thermal current I <sub>th</sub>	Rated Insulation Voltage U <sub>i</sub>	Mechanical Lifetime	
51	•			•	•		•		10A gL/gG	AC-15: 230V, 2,5A DC-13: 24V, 4A	6A	250V	30x106	
52	•			•	•		•		6A gL/gG	AC-15: 230V, 2,5A DC-13: 24V, 6A	10A	250V	1x106	
53	•			•			•		6A gL/gG	AC-15: 230V, 2,5A DC-13: 24V, 6A	10A	250V	1x106	
54		•	•						10A gL/gG	AC-15: 230V, 2,5A DC-13: 24V, 1A	6A	250V	30x106	
80	•		•		•		•		6A gG	AC-15: 230V, 3A DC-13: 110V, 1A	10A	400V	10x106	
81	•		•			•			6A gG	AC-15: 230V, 3A DC-13: 110V, 1A	10A	400V	10x106	
90	•		•		•		•		6A gR	AC-15: 230V, 1A DC-13: 110V, 0,5A	10A	400V	10x106	
90G	•			•	•		•		2A gG	AC-12: 230V, 0,25A, DC-12: 110V, 0,25A	10A	400V	10x106	
88		•		•	•		•		10A gG	AC-15: 230V, 1,5A DC-13: 24V, 1,5A	10A	400V	1,5x106	



### Series 62 – Contact Arrangement

Revision number: 3.2.1.17-01

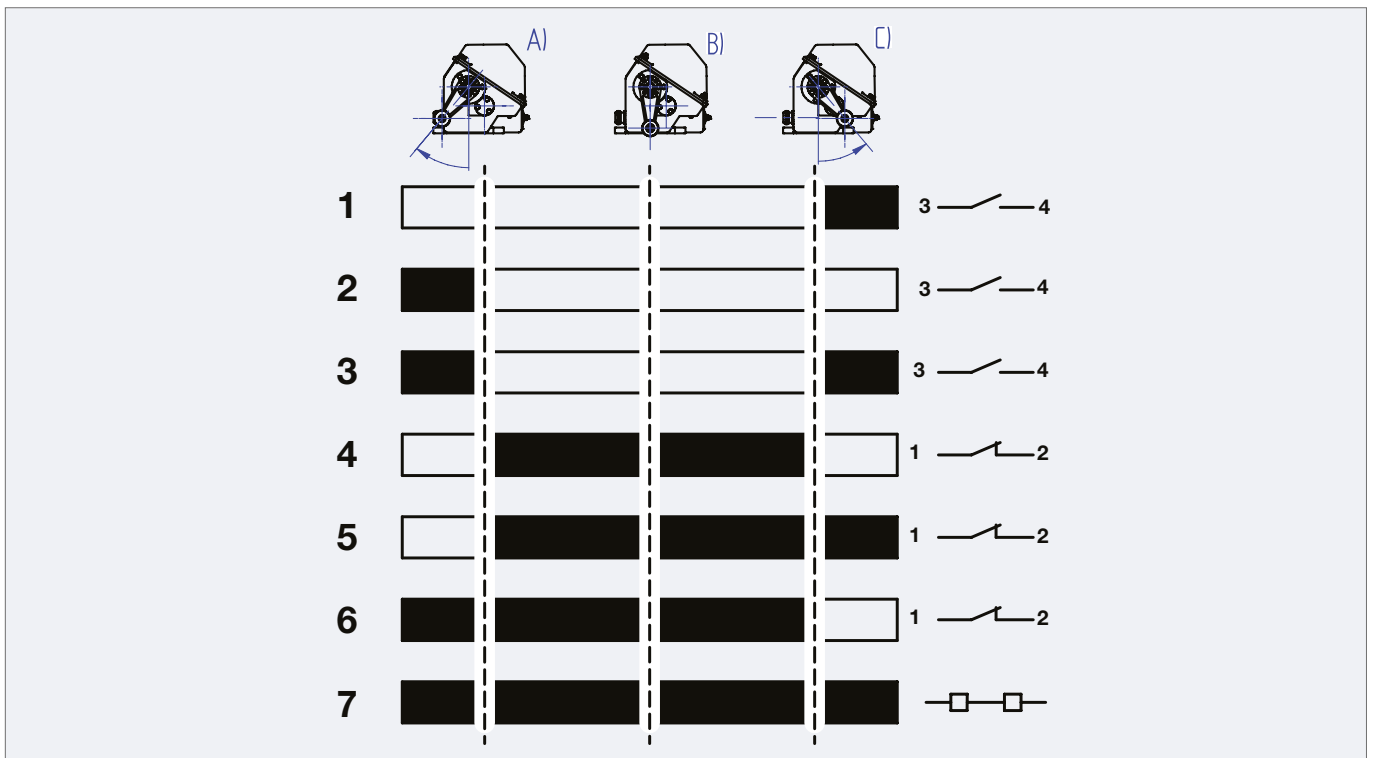
Revision date: 19.11.2019

**Features**

- Contact arrangement only for main current switches

**Additional information**

- Contact arrangement of the main current switches must be specified by the customer



Contact Arrangement		Contact state		
Arrangement	Description	Position A clockwise (cw)	Position B neutral	Position C counter-clockwise (ccw)
1	NO - closes in ccw direction	opened	opened	closed
2	NO - closes in cw direction	closed	opened	opened
3	NO - closes in cw & ccw direction	closed	opened	closed
4	NC - opens in cw & ccw direction	opened	closed	opened
5	NC - opens in cw direction	opened	closed	closed
6	NC - opens in ccw direction	closed	closed	opened
7	bridge - always remains closed	closed	closed	closed

## Limit Switches Main Current

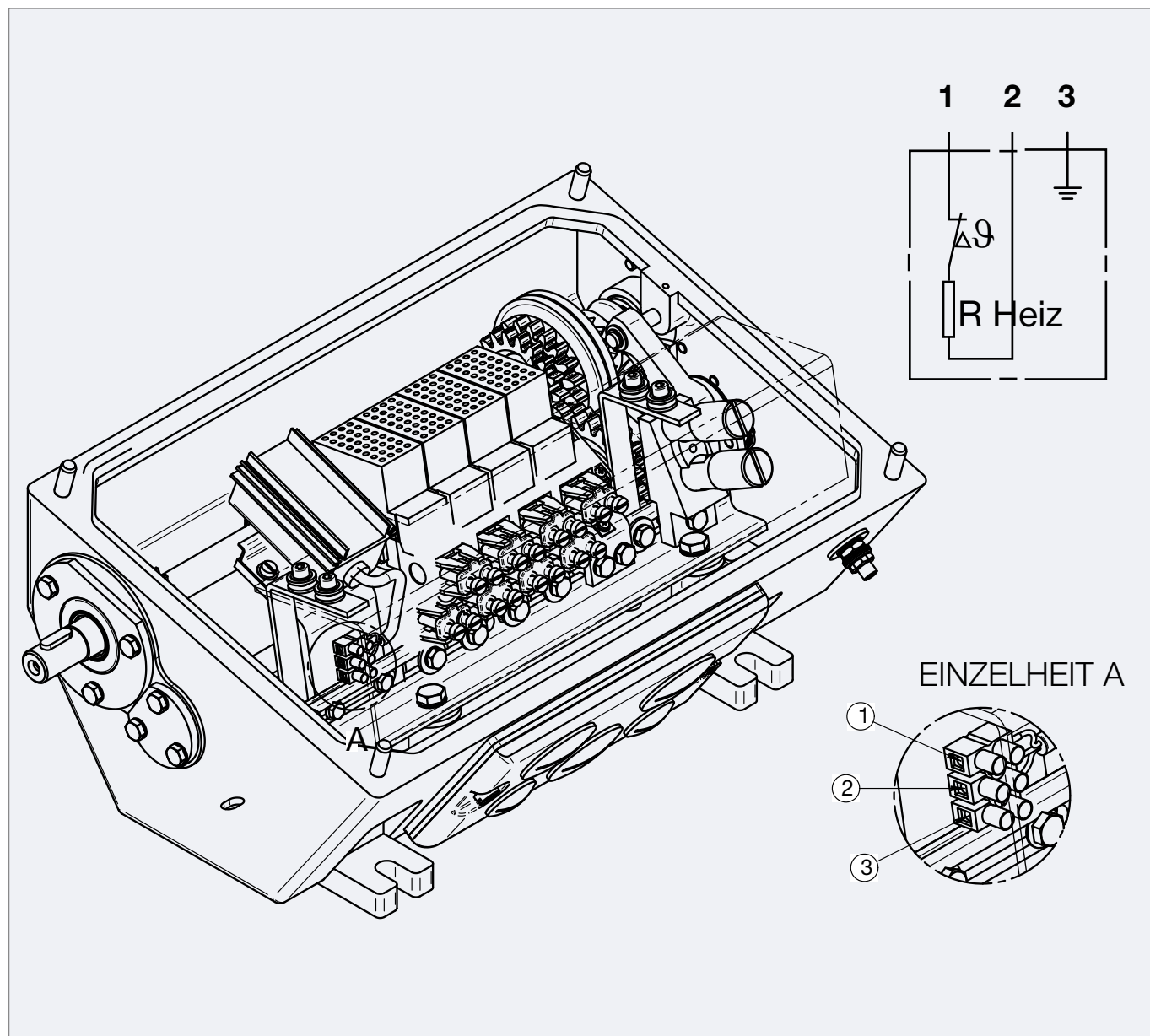
# Series 62 – Anti-Condensation-Heating

Revision number: 3.2.1.18-01

Revision date: 19.11.2019

### Features

- To prevent the generation of condensation water due to quick temperature drops



Heating Technical Data				
Supply Voltage	Power	Power on	Power off	Connection
24 V AC	10 W	< 25 ° C	> 55 ° C	3 x 0,75 mm <sup>2</sup>
110 - 265 V AC	10 W	< 25 ° C	> 55 ° C	3 x 0,75 mm <sup>2</sup>

### Series 62 – Key Of Types

Revision number: 3.2.1.19-01

Revision date: 19.11.2019

<b>Stromag GmbH</b> Hansastr.120 Tel.: 02303 / 102-0 59425 Unna		Reihe	62	Auftr.- Nr.	123456 / 10	Bauj.	12/18	
Typ	62-2_42_SNE_311_281FV		Kontakt- anordnung	444B		Gr.	2	
Schaltumdreh. (Schaltwinkel)	42	Nachlaufumdreh. (Nachlaufwinkel)	20	Vor- kontakt	10	A bei	400 V	
Abschaltbare Motornennleistung bei 60% ED in kW für							CE	
Schleifringläufer		Käfigläufer			Gleichstrommotoren			
230V	400V	500V	230V	400V	500V	220V	400-600V	
15	28	28	12	20	20			
							Blasspule	A

62		Switch type: Series 62	
62-1	Housing Size	62-1	Housing size 1, aluminum (HNE, GNE)
		62-2	Housing size 2, aluminum (HNE, SNE)
		62-3	Housing size 3, aluminum (SNE)
		62-4	Housing size 4, cast iron (HNE, GNE, SNE)
42	Usable Revolutions	0	For HNE, GNE
		42, 62	For SNE
SNE	Switch type	SNE	Spindle Switch
		HNE	Lever Switch
		GNE	Counterweight Switch
3	Number of main switches fitted	1 - 10	
11	Type of main switches fitted	11	Main current switches, 40 A AC
		13	Main current switches, 200 A AC
		21	Main current switches, 25 A DC
		22	Main current switches, 90 A DC
		23	Main current switches, 160 A DC
2	Number of control switches fitted	1 - 4	
81	Type of control switches fitted	11	Contact (push action) with screw connections, contact material: Silver
		80	Contact (changeover) with screw connections, contact material: Silver Ü
		81	Contact (push action) with screw connections, contact material: Silver Ü
		88	Contact (double action) with screw connections, contact material: Gold Ü
		90	Contact (changeover) with screw connections, contact material: Silver Ü
		90G	Contact (changeover) with screw connections, contact material: Gold Ü
		51	Snap-action with screw-terminals, contact material: gold
		52	Contact (changeover) with screw connections, contact material: Gold Ü
		53	Contact (push action) with screw connections, contact material: Gold Ü
		54	Contact (push action) with screw connections, contact material: Silver Ü
FV	Adjustability of control switches		Fixed control switches
		FV	Adjustable control switches

## Stromag Facilities

### Europe

#### Germany

Hansastraße 120  
59425 Unna - Germany  
+49 (0) 23 03 102 0

*Clutches & Brakes, Couplings,  
Geared Cam Limit Switches, Discs,  
Wind Brakes*

Dessauer Str. 10  
06844 Dessau-Roßlau - Germany  
+49 (0) 340 2190 0

*Electromagnetic Clutches & Brakes*

#### France

Avenue de l'Europe  
18150 La Guerche sur L'Aubois - France  
+33 (0)2 48 80 72 72

*Disc Brakes & Drum Brakes*

#### Great Britain

Amphill Road  
Bedford, MK42 9RD - UK  
+44 (0)1234 324347

*Electromagnetic Clutches & Brakes,  
Industrial Caliper Brakes*

### North America

#### USA

31 Industrial Park Road  
New Hartford, CT 06057 - USA  
860-238-4783

*Electromagnetic Clutches & Brakes*

300 Indiana Highway 212  
Michigan City, IN 46360 - USA  
219-874-5248

*Couplings*

2800 Fisher Rd.  
Wichita Falls, TX 76302 - USA  
940-723-3400

*Geared Cam Limit Switches,  
Industrial Caliper & Drum Brakes*

#### South America

##### Brasil

Avenida João Paulo Ablas, 2970  
Jardim da Glória, Cotia - SP,  
06711-250 - Brasil  
+55 (11) 4615-6300

*Flexible Couplings, Bearing  
Isolators, and Coupling Guards*

### Asia Pacific

#### China

T40B -5, No. 1765 Chuan Qiao Road  
Pudong 201206, Shanghai - China  
Tel +86 21-60580600

*Clutches & Brakes, Electromagnetic  
Clutches & Brakes, Couplings, Industrial  
Caliper & Drum Brakes, Discs, Geared  
Cam Limit Switches, Wind Brakes*

#### India

Gat No.: 448/14, Shinde Vasti, Nighoje  
Tal Khed, Pune- 410 501  
+91 2135 622100

*Clutches & Brakes, Electromagnetic  
Clutches & Brakes, Couplings, Industrial  
Caliper & Drum Brakes, Discs,  
Cam Limit Switches, Wind Brakes*

## The Brands of Altra Motion

### Couplings

**Ameridrives**  
www.ameridrives.com

**Bibby Turboflex**  
www.bibbyturboflex.com

**Guardian Couplings**  
www.guardiancouplings.com

**Huco**  
www.huco.com

**Lamiflex Couplings**  
www.lamiflexcouplings.com

**Stromag**  
www.stromag.com

**TB Wood's**  
www.tbwoods.com

### Linear Systems

**Thomson**  
www.thomsonlinear.com

### Geared Cam Limit Switches

**Stromag**  
www.stromag.com

### Engineered Bearing Assemblies

**Kilian**  
www.kilianbearings.com

### Electric Clutches & Brakes

**Matrix**  
www.matrix-international.com

**Stromag**  
www.stromag.com

**Warner Electric**  
www.warnerelectric.com

**Deltran**  
www.thomsonlinear.com

### Belted Drives

**TB Wood's**  
www.tbwoods.com

### Heavy Duty Clutches & Brakes

**Twiflex**  
www.twiflex.com

**Stromag**  
www.stromag.com

**Svendborg Brakes**  
www.svendborg-brakes.com

**Wichita Clutch**  
www.wichitaclutch.com

### Gearing & Specialty Components

**Bauer Gear Motor**  
www.bauergears.com

**Boston Gear**  
www.bostongear.com

**Delevan**  
www.delevan.com

**Delroyd Worm Gear**  
www.delroyd.com

**Nuttall Gear**  
www.nuttallgear.com

### Engine Braking Systems

**Jacobs Vehicle Systems**  
www.jacobsvehiclesystems.com

### Precision Motors & Automation

**Kollmorgen**  
www.kollmorgen.com

### Miniature Motors

**Portescap**  
www.portescap.com

### Overrunning Clutches

**Formsprag Clutch**  
www.formsprag.com

**Marland Clutch**  
www.marland.com

**Stieber**  
www.stieberclutch.com

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