

Serie 62 Geared Cam Limit Switches



 **Stromag**[®]
Altra Industrial Motion

Stromag

Founded in 1932, Stromag has grown to become a globally recognized leader in the development and manufacture of innovative power transmission components for industrial drivetrain applications. Stromag engineers utilize the latest design technologies and materials to provide creative, energy-efficient solutions that meet their customer's most challenging requirements.

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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Altra Motion

Altra is a leading global designer and producer of a wide range of electromechanical power transmission and motion control components and systems. Providing the essential control of equipment speed, torque, positioning, and other functions, Altra products can be used in nearly any machine, process or application involving motion. From engine braking systems for heavy duty trucks to precision motors embedded in medical robots to brakes used on offshore wind turbines, Altra has been serving customers around the world for decades.

Altra's leading brands include **Ameridrives**, **Bauer** Gear Motor, **Bibby** Turboflex, **Boston** Gear, **Delevan**, **Delroyd** Worm Gear, **Deltran**, **Formsprag** Clutch, **Guardian** Couplings, **Huco**, **Jacobs** Vehicle Systems, **Kilian**, **Kollmorgen**, **Lamiflex** Couplings, **Marland** Clutch, **Matrix**, **Nuttall** Gear, **Portescap**, **Stieber**, **Stromag**, **Svendborg** Brakes, **TB Wood's**, **Thomson**, **Twiflex**, **Warner** Electric and **Wichita** Clutch.

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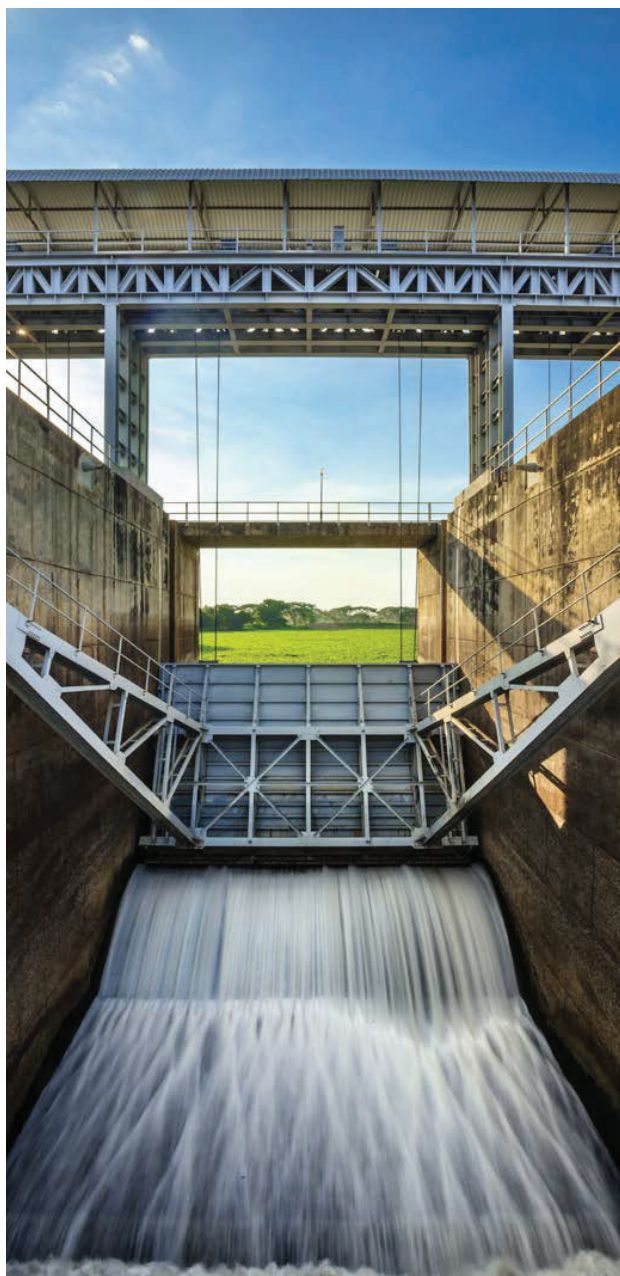
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Stromag Geared Cam Limit Switches

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

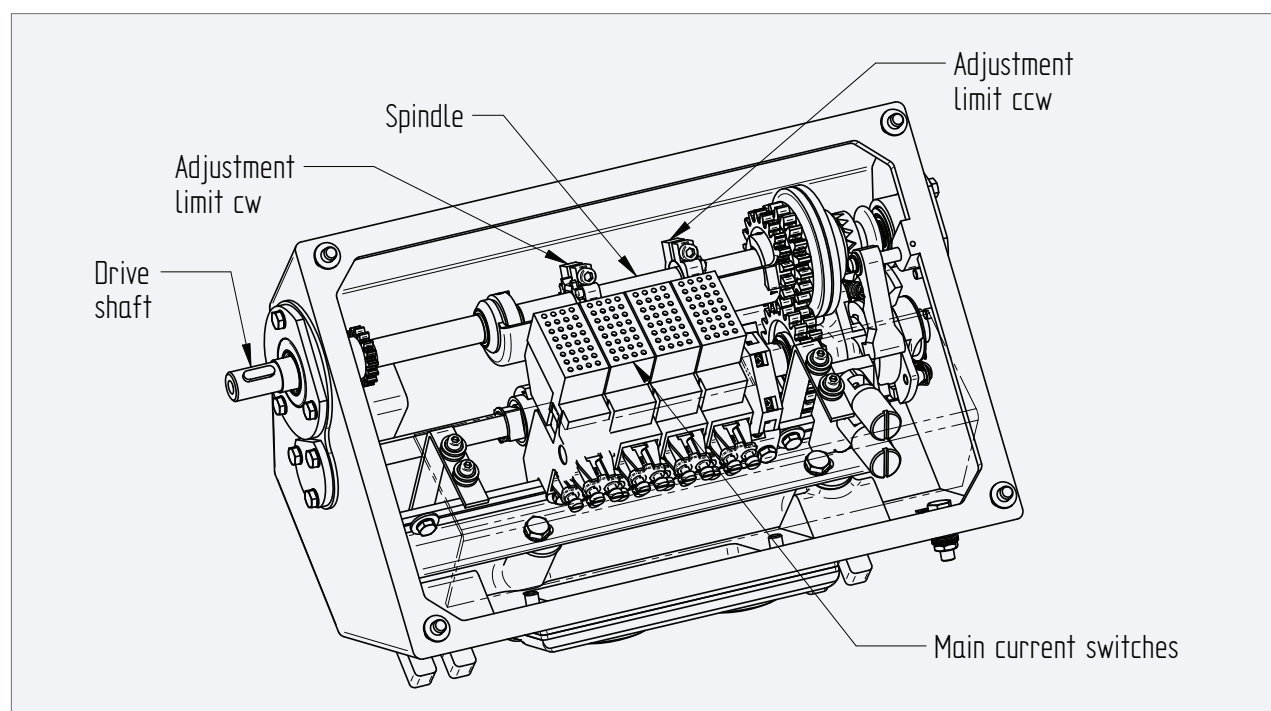
- Main current limit switch for direct switching of three phase-motors
- For 42 and 62 usable revolutions
- Main current contacts for 40 and 200 A permanent available

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

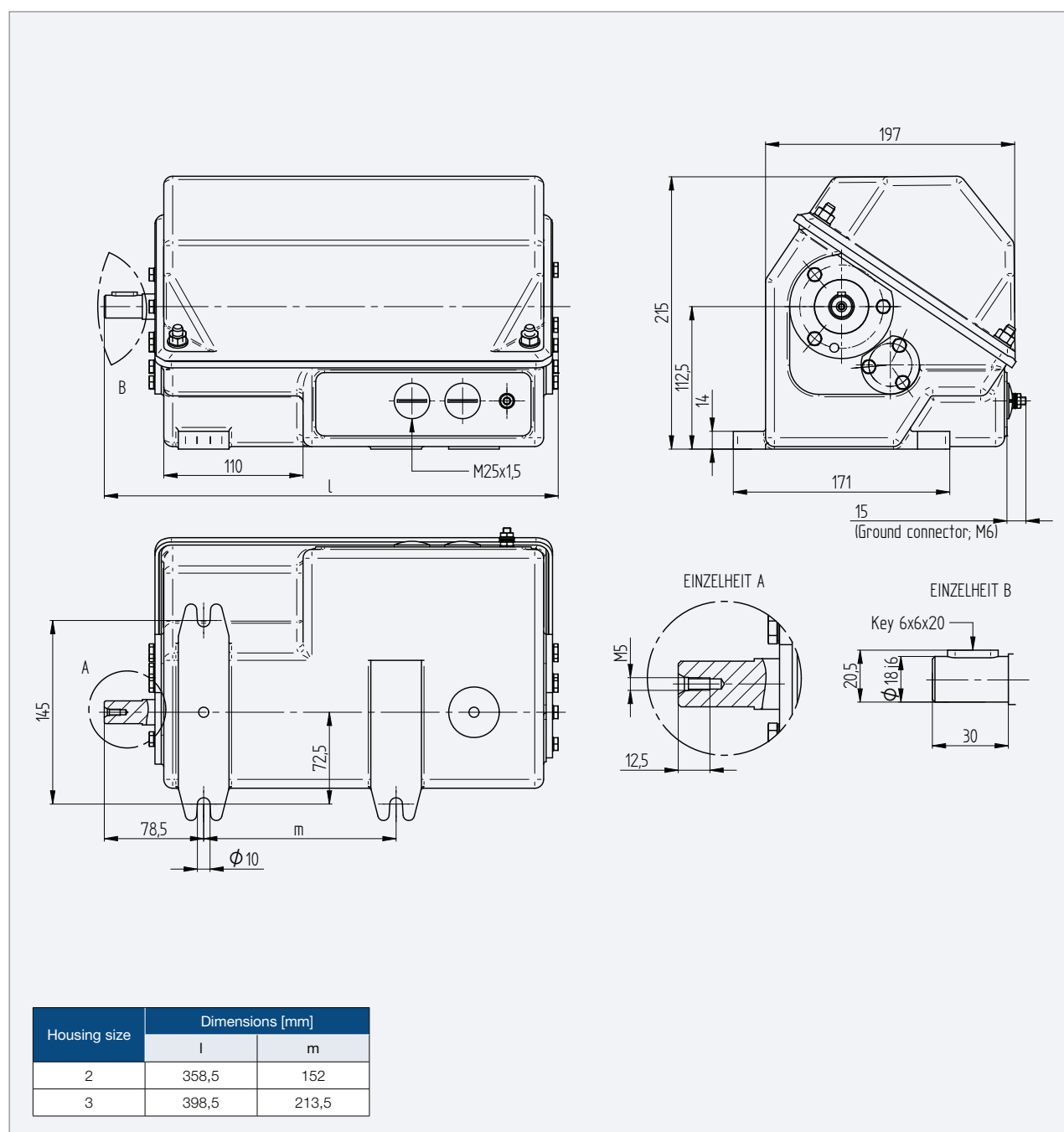
Revision date: 19.11.2019

Features

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

Additional information

- Made of sea water resistant aluminum



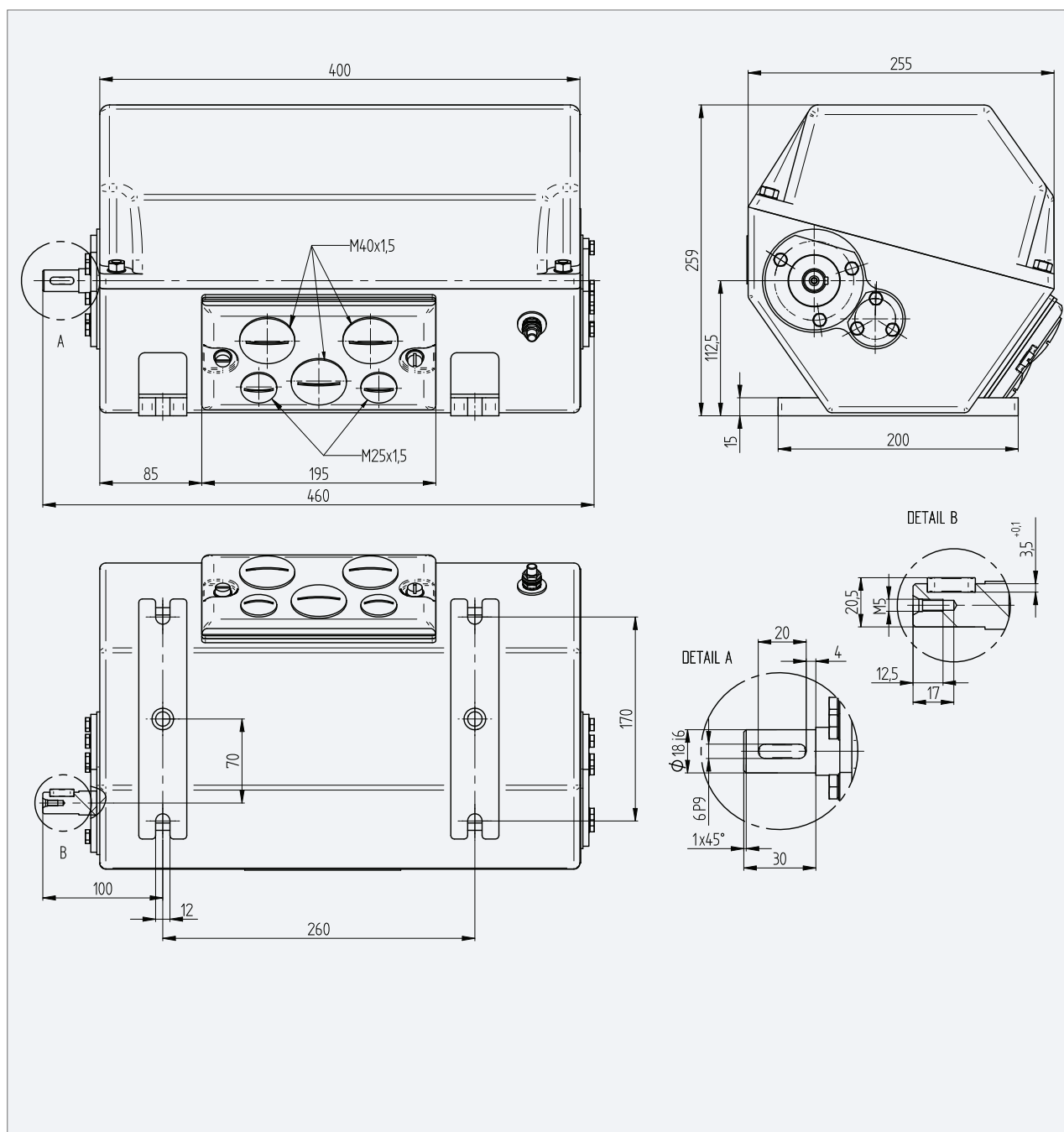
Series 62 SNE – Housing Size 4

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

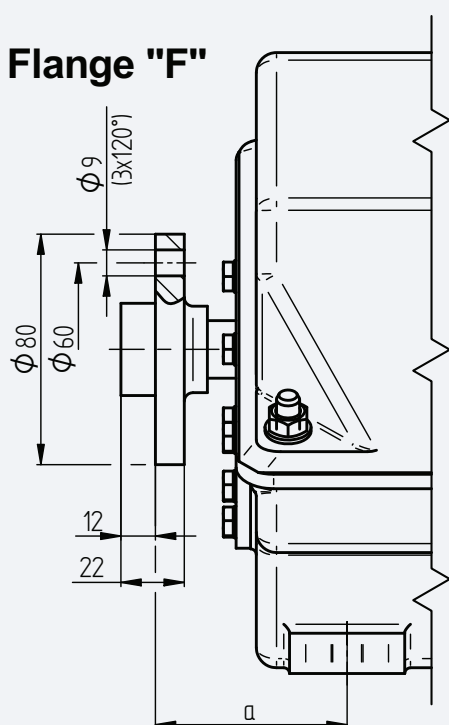
Revision number: 3.2.1.4-01

Revision date: 19.11.2019

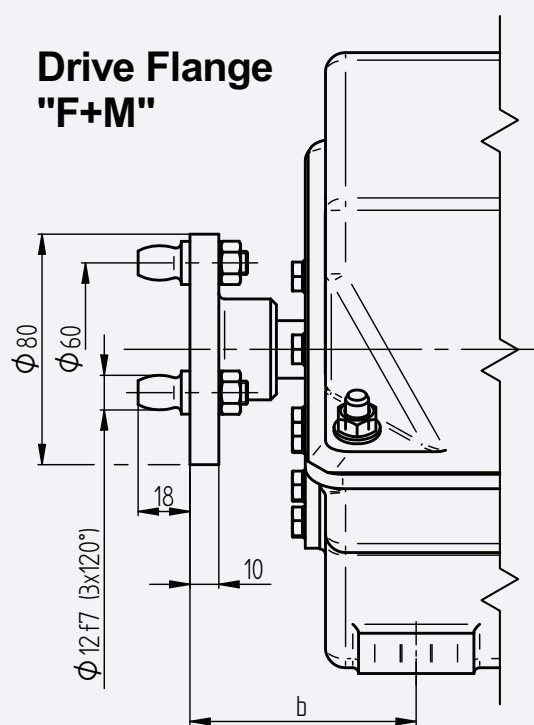
Features

- 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

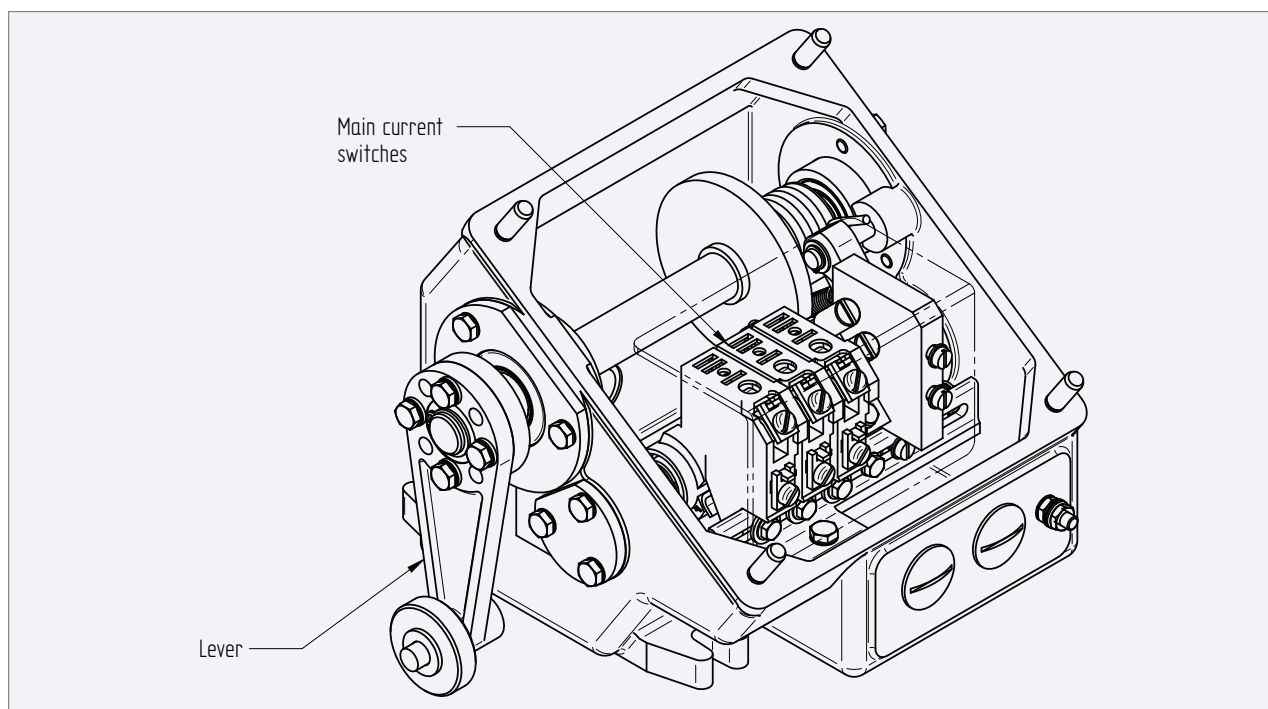
- Main current limit switch for direct switching of three phase-motors
- Main current contacts for 40 and 200 A permanent available

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

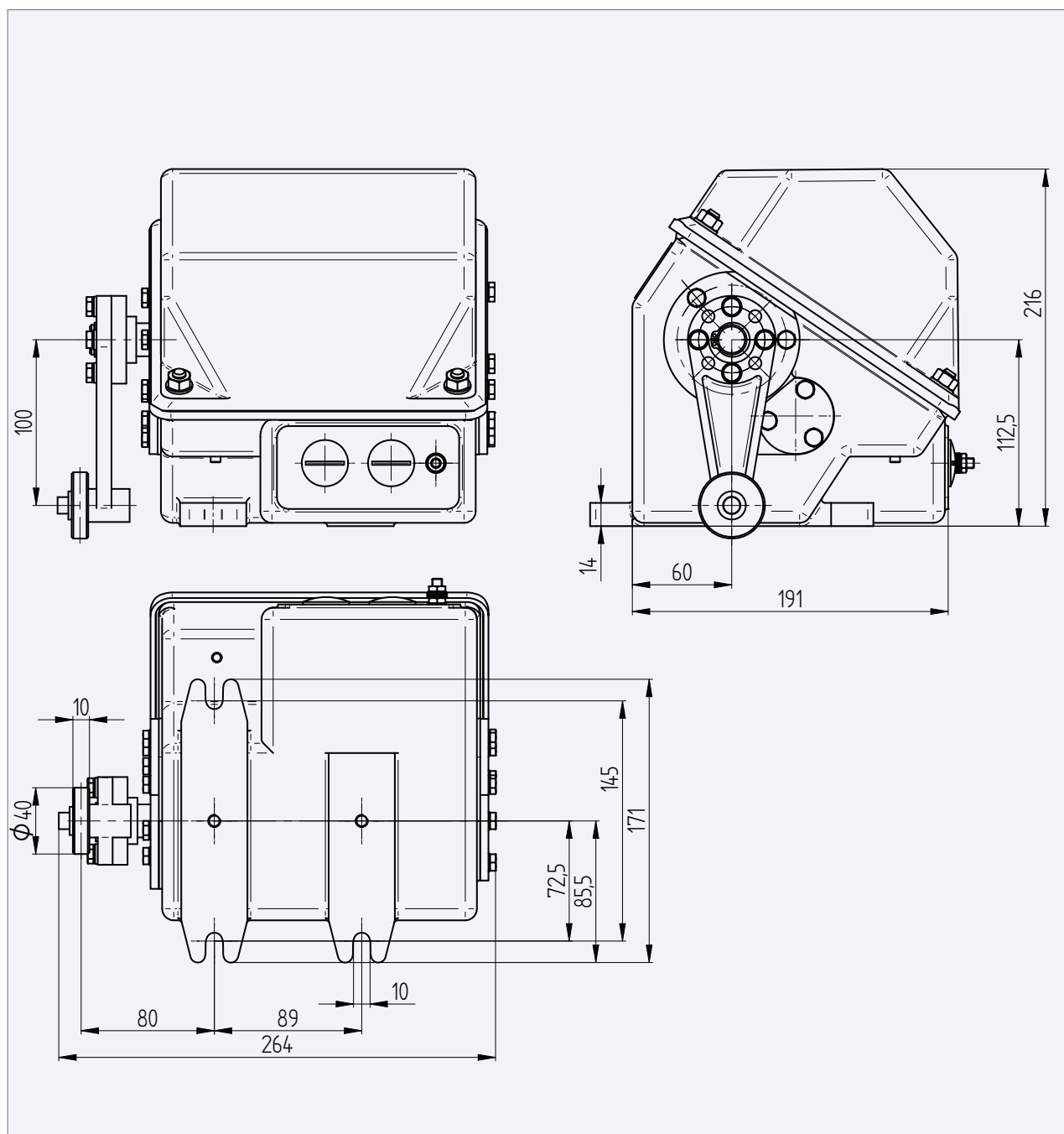
Series 62 HNE – Housing Size 1

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



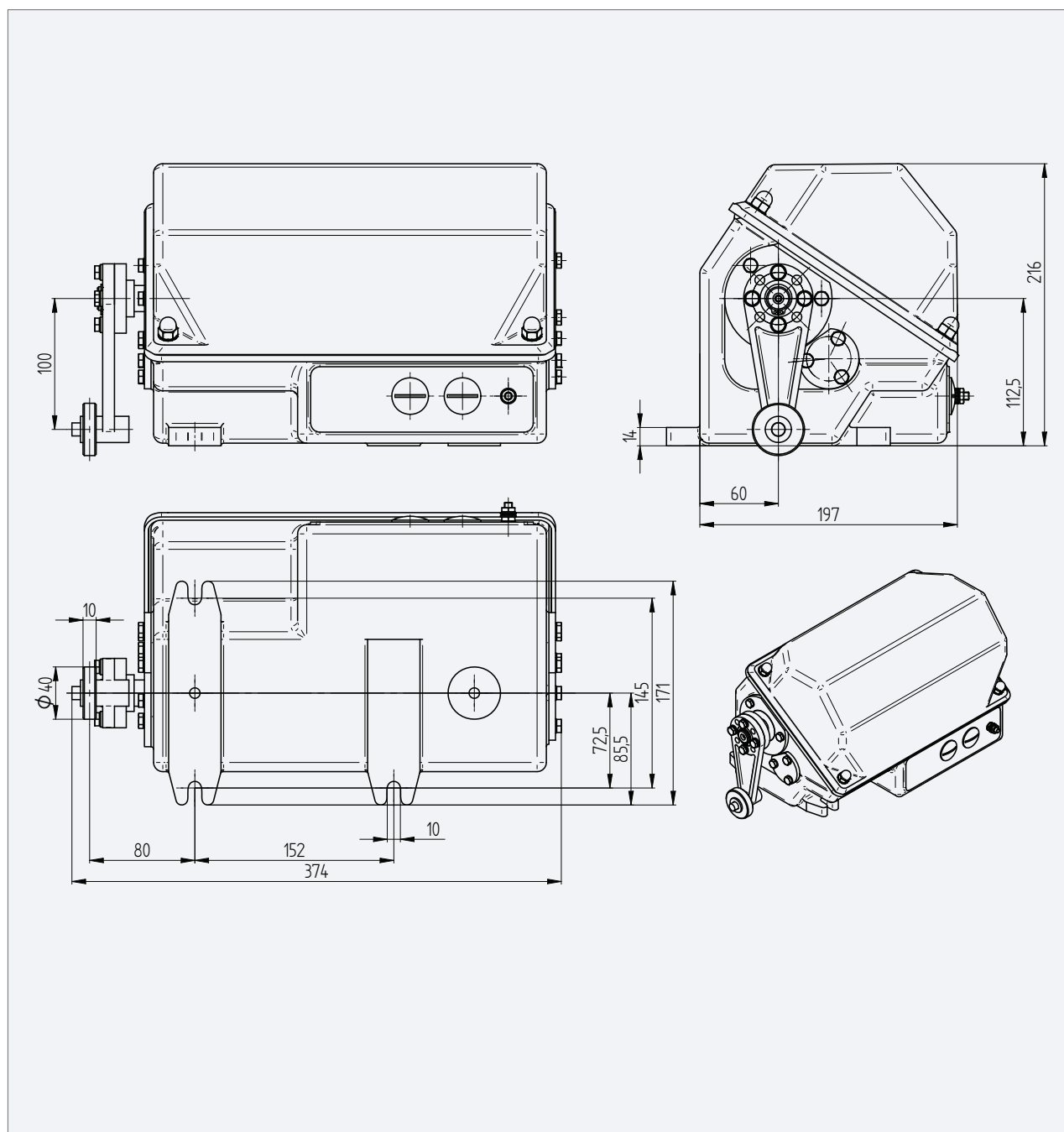
Series 62 HNE – Housing Size 2

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

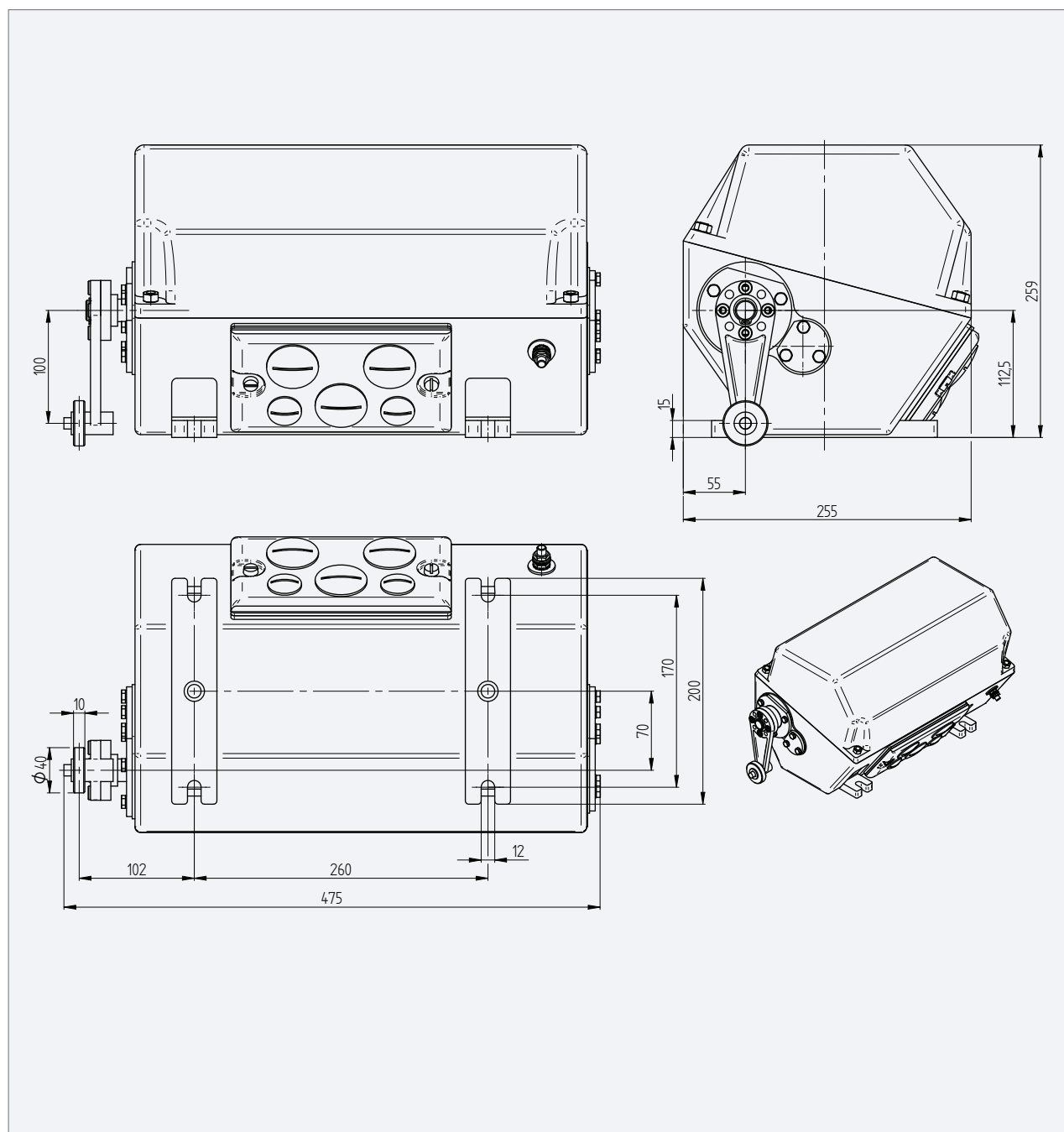
Series 62 HNE – Housing Size 4

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

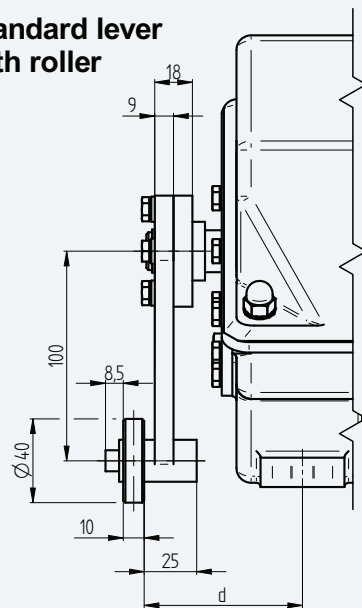


Series 62 HNE – Available Levers

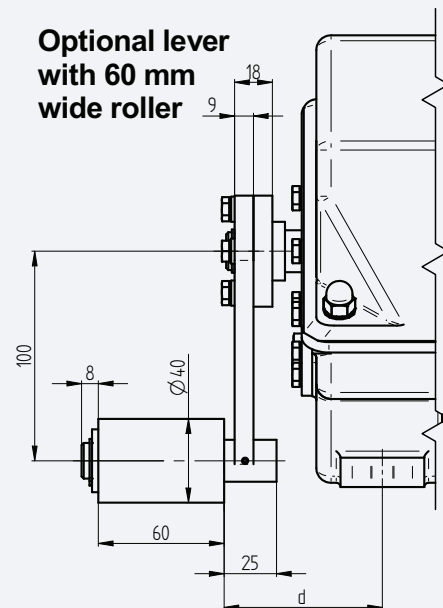
Revision number: 3.2.1.9-01

Revision date: 19.11.2019

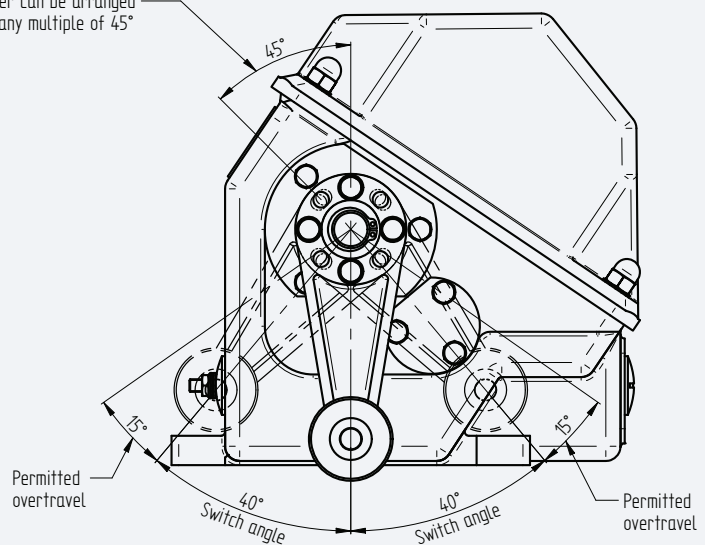
**Standard lever
with roller**



**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

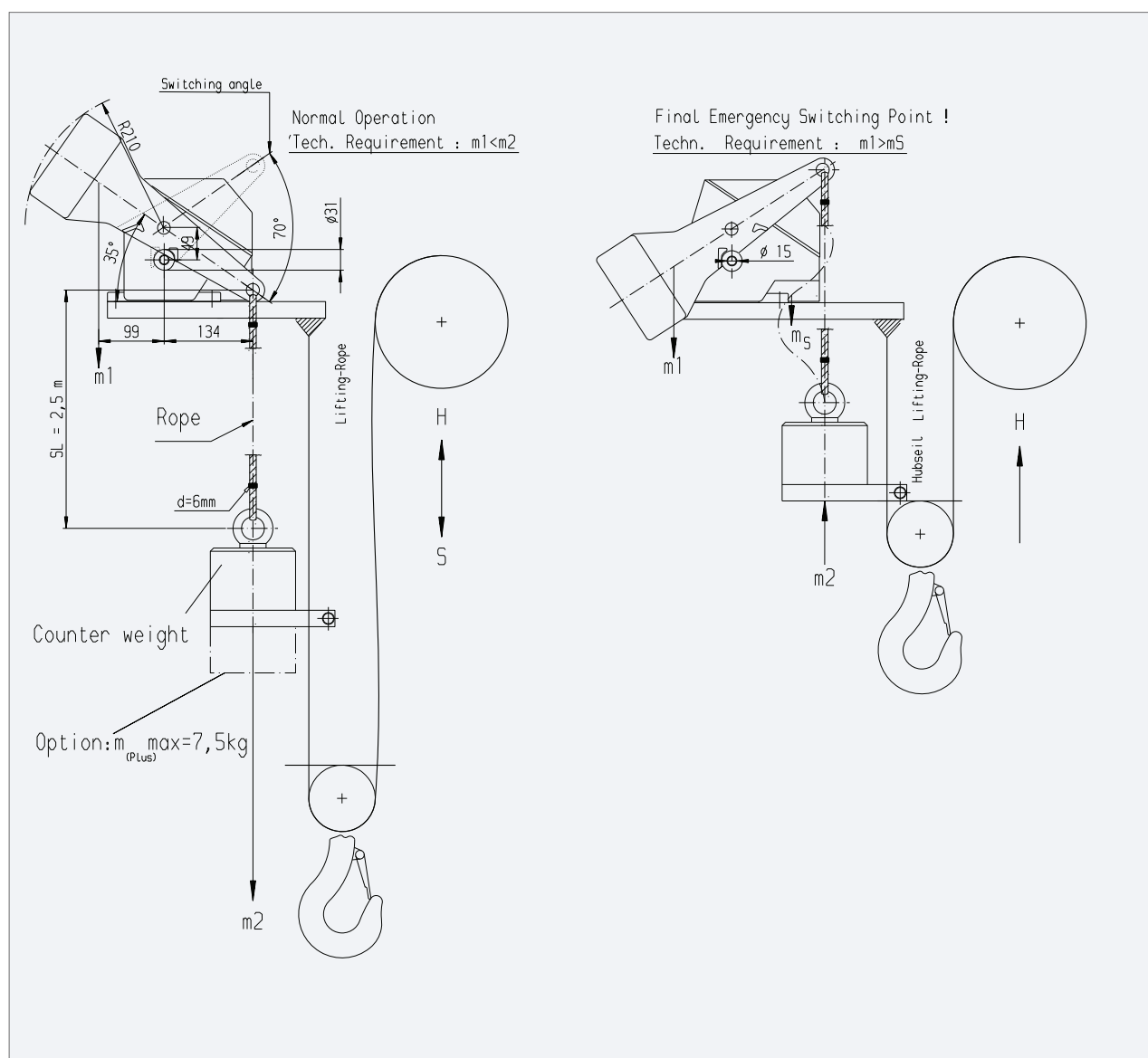
- Main current limit switch for direct switching of three phase-motors
- Main current contacts for 40 and 200 A permanent available

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

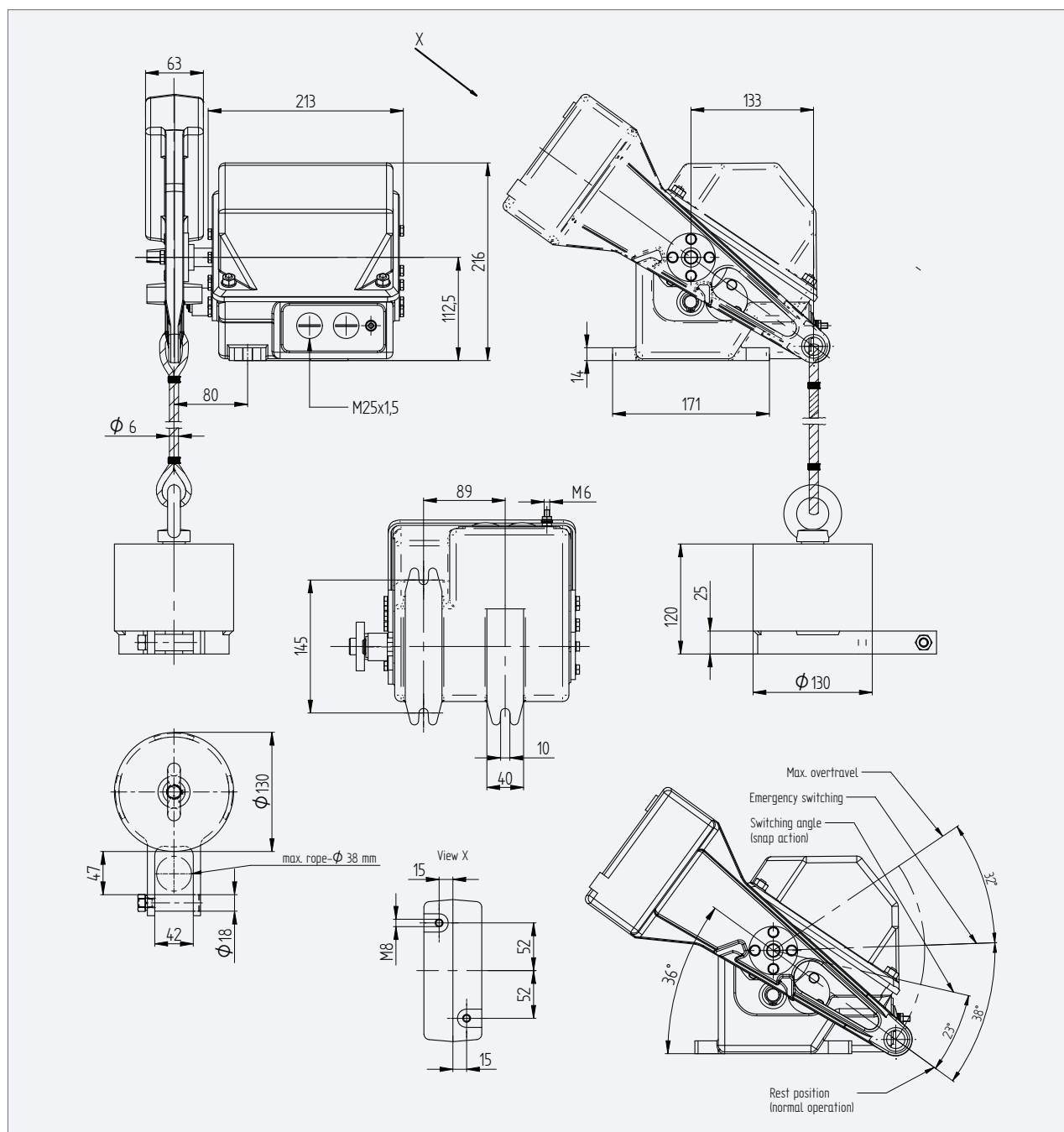
Series 62 GNE – Housing size 1

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

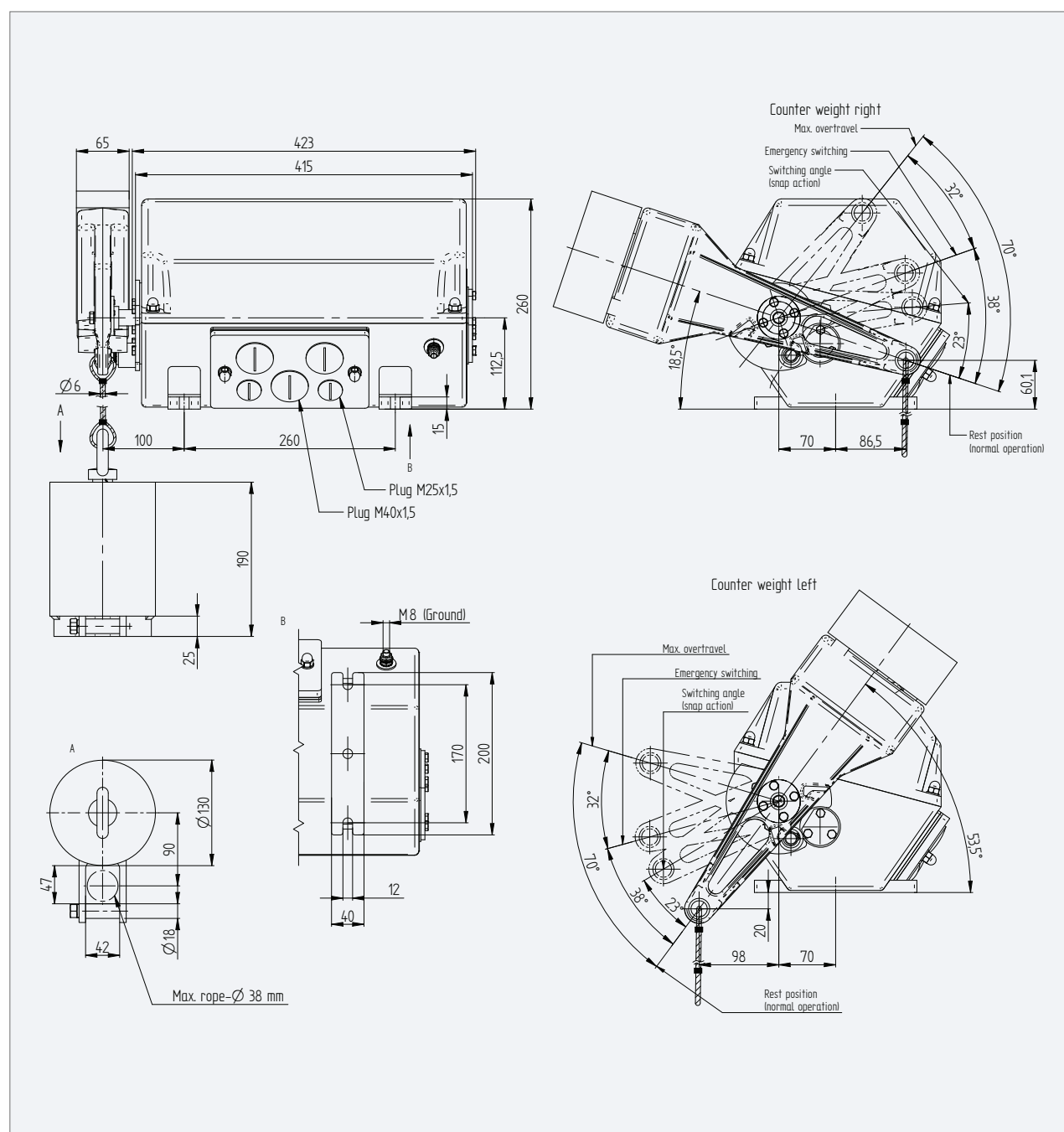
Series 62 GNE – Housing size 4

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

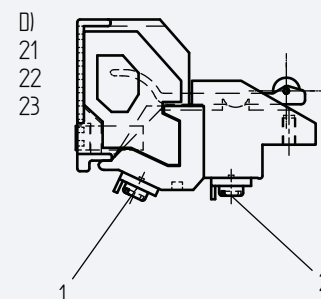
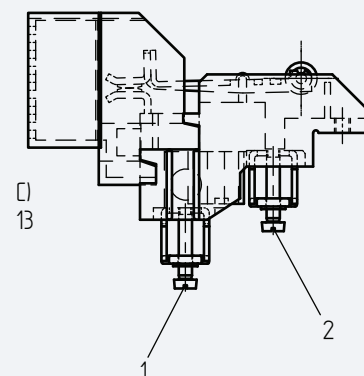
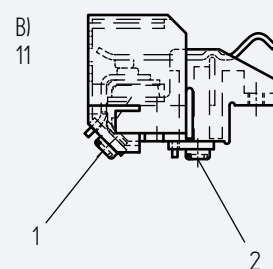
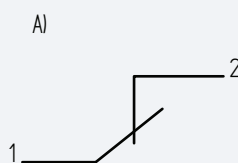
- The performance data of the switches is related to temperatures from -30°C up to + 45°C

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 current	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 [mm²]
					A	230V	400V	500V	230V	400V	500V	
11 ³⁾	•			•	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 current	Snap action	Push action	Permanent current	DC motor			Blow-out coils available for the following currents [A]		Screw terminals for cable cross section [mm²]
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

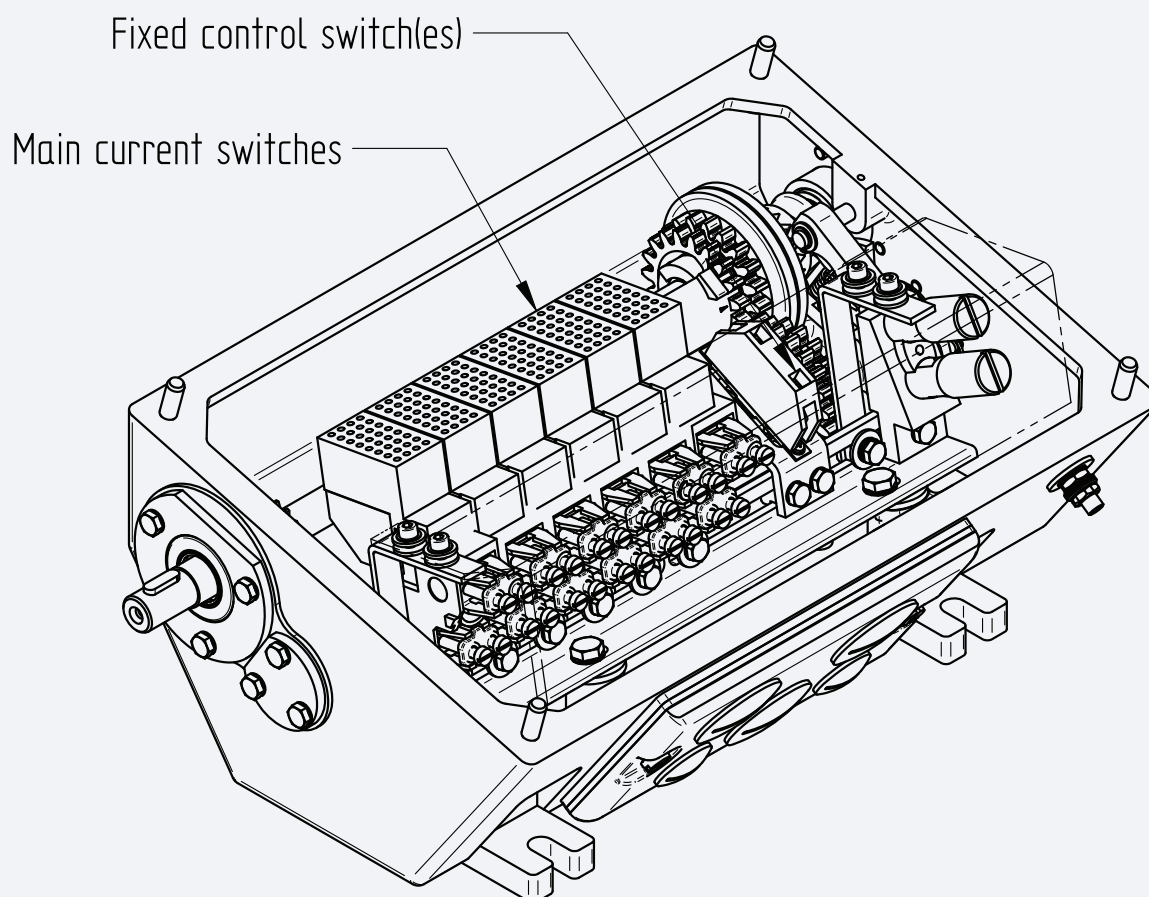
Revision date: 19.11.2019

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

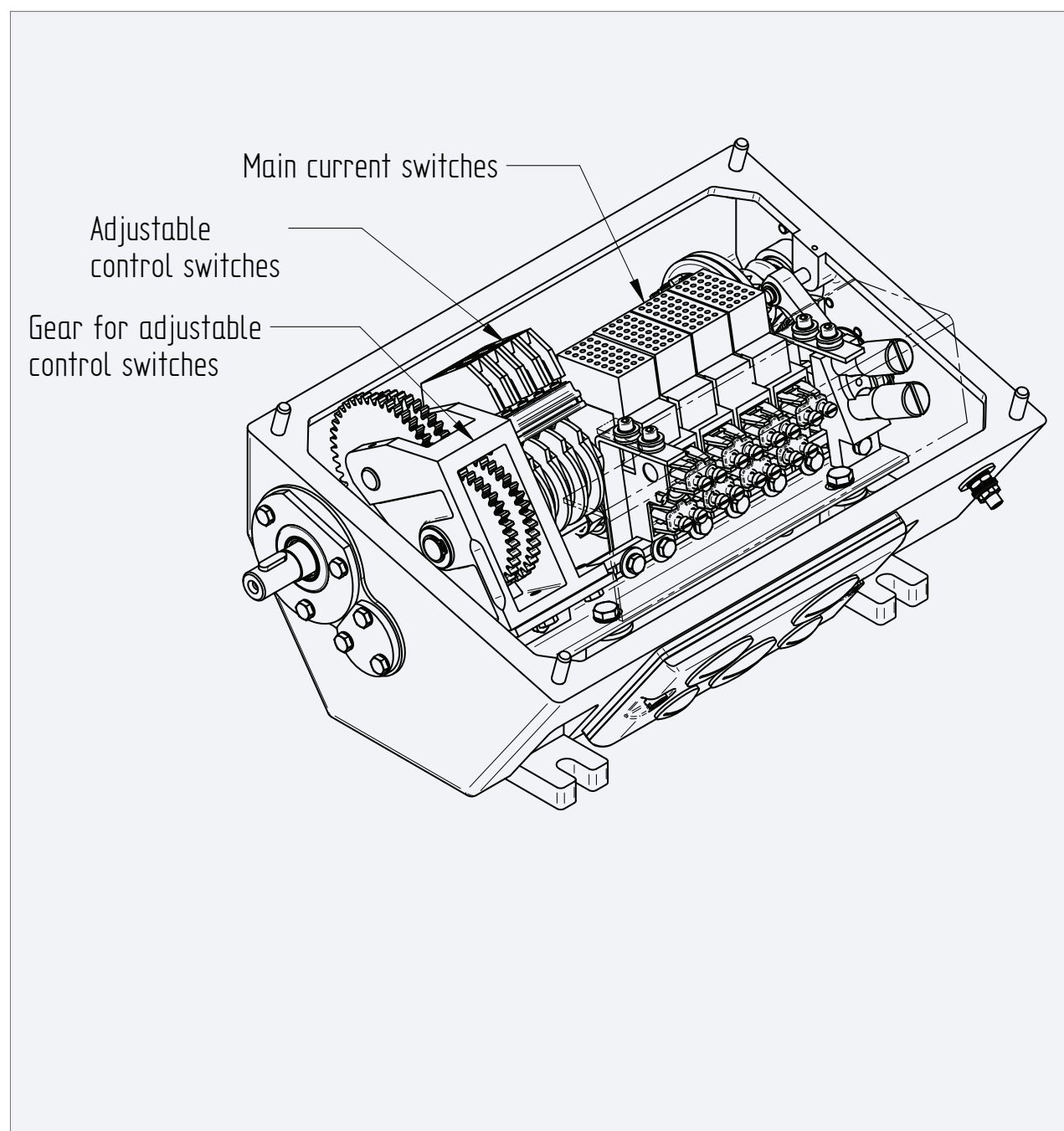
Revision date: 19.11.2019

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

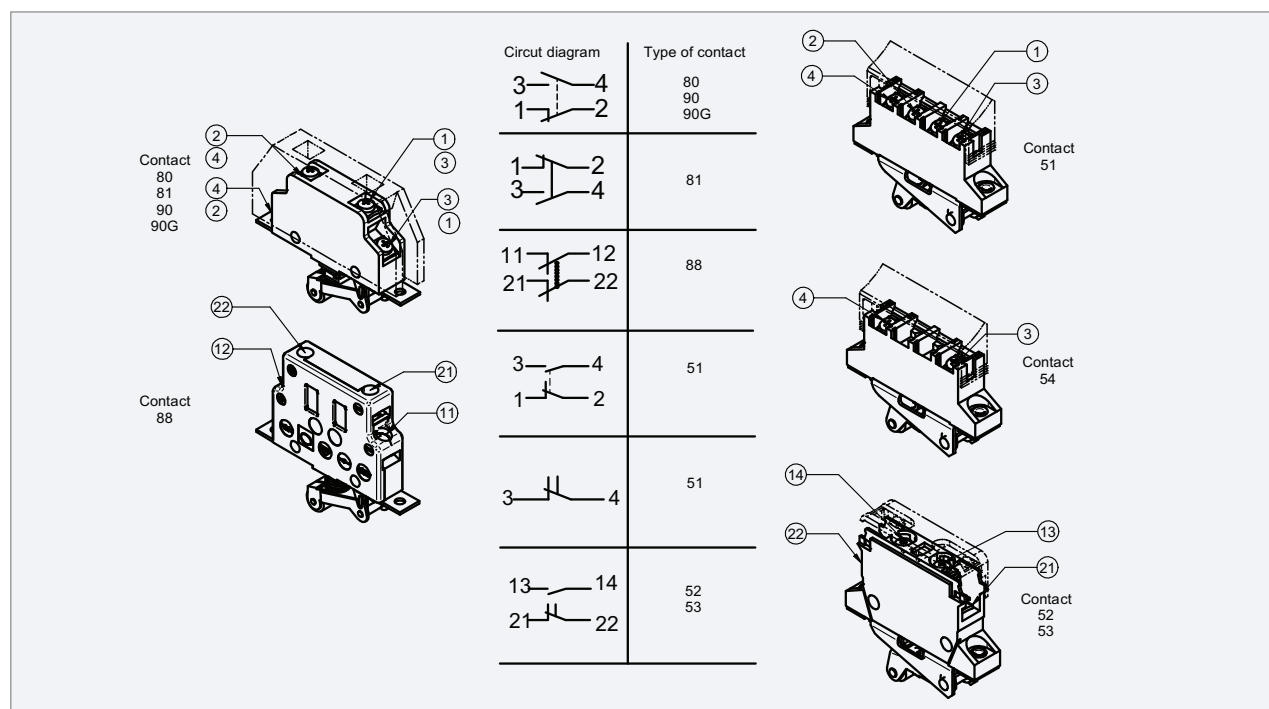
Series 62 – Control Current Switches

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



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 mm²/ 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 _{th}	Rated Insulation Voltage U _i	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

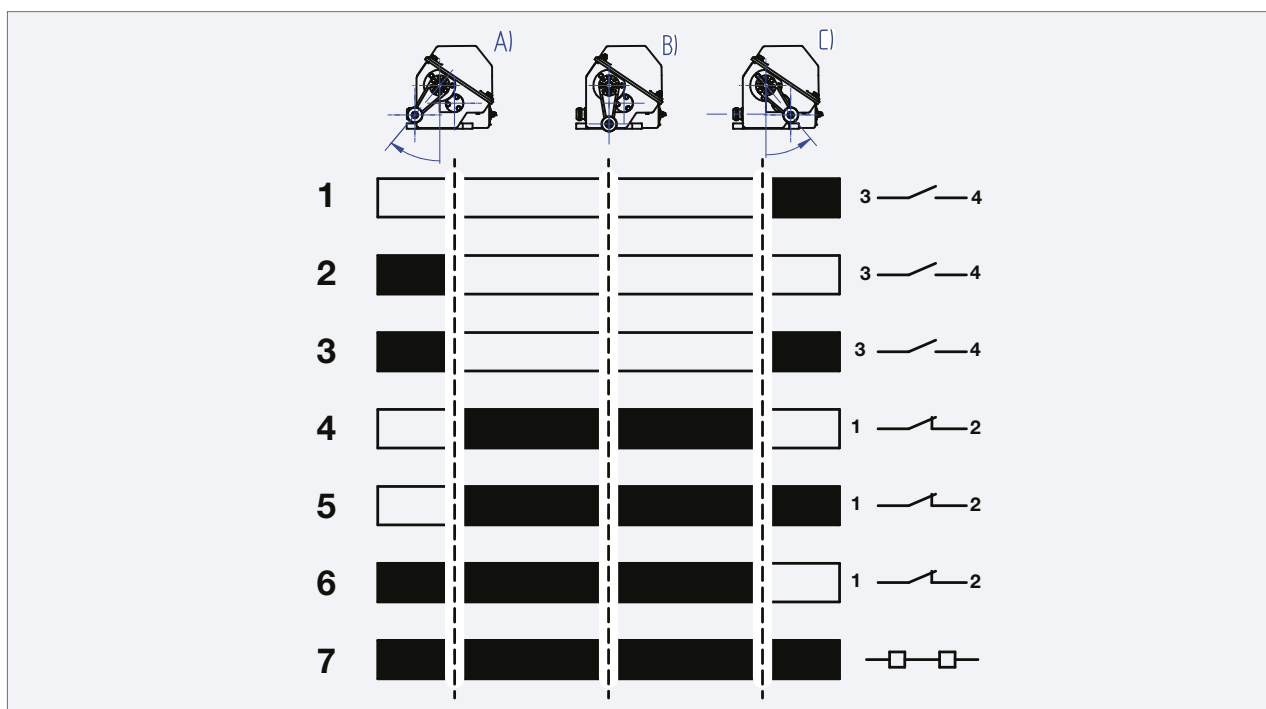
Revision date: 19.11.2019

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

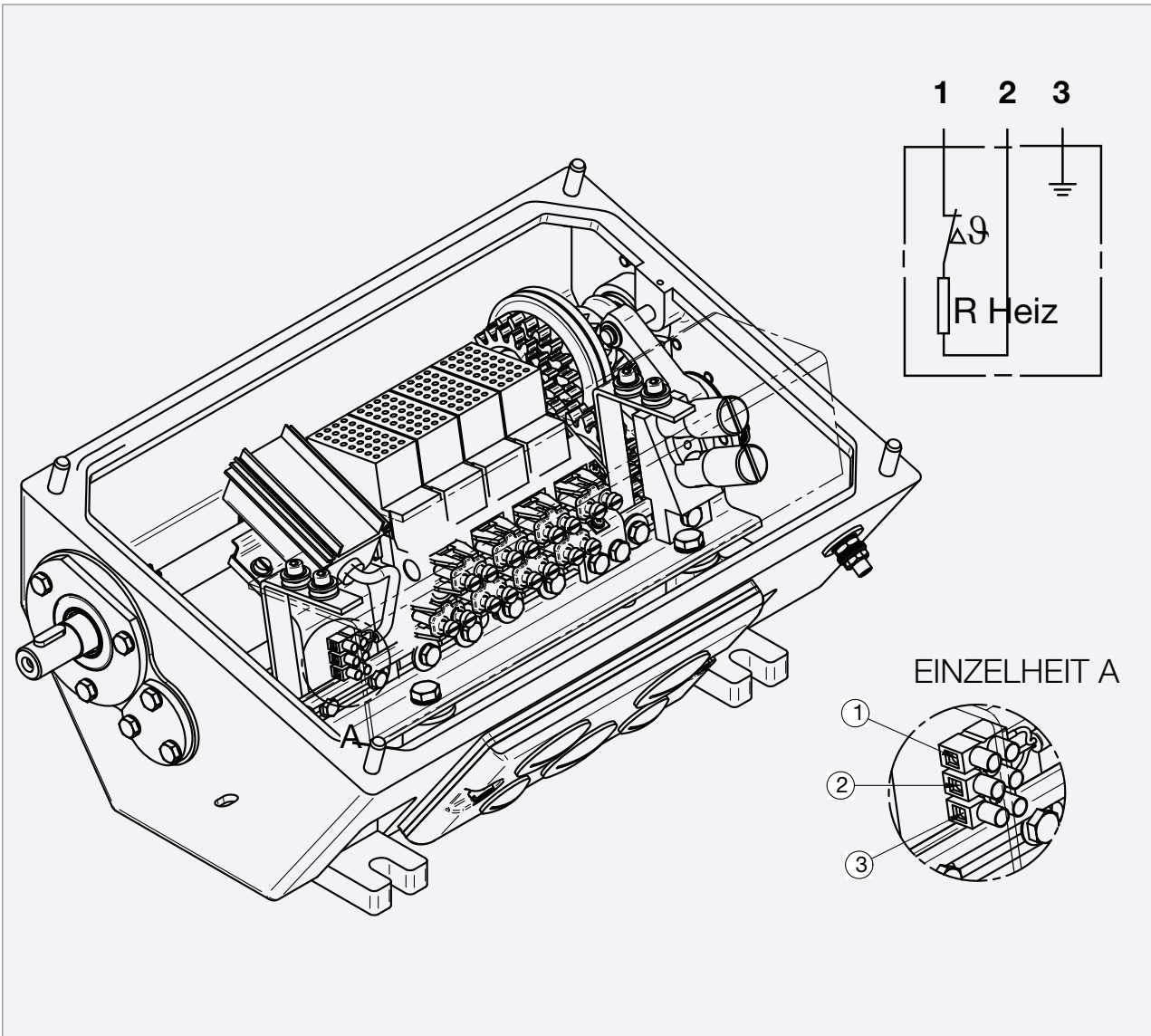
Limit Switches Main Current

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 mm²
110 - 265 V AC	10 W	< 25 °C	> 55 °C	3 x 0,75 mm²

Series 62 – Key Of Types

Revision number: 3.2.1.19-01

Revision date: 19.11.2019

Stromag GmbH 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				
Schleifringläufer		Käfigläufer		Gleichstrommotoren
230V 15	400V 28	500V 28	230V 12	400V 20
			500V 20	
			220V	400-600V
				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

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Caliper & Drum Brakes, Discs, Geared
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www.ameridrives.com

Bibby Turboflex
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Guardian Couplings
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Huco
www.huco.com

Lamiflex Couplings
www.lamiflexcouplings.com

Stromag
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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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