

Correction chart for admissible current

A - ambient temperature effect.
B - mutual temperature effect.

In conditions where both conditions are combined (ambient temperature > 20°C and 3 juxtaposed phases simultaneously on load) both coefficients A and B are applicable.

Type fuse size	L 31 8.5x31.5	L 38 10,3 x 38	L 51 14 x 51	L 58 22 x 58
In for Un 400 V~	20A	32 A	50 A	125 A
In for Un 500 V~	16A	20 A	40 A	80 A
A				
20°	1	1	1	1
30°	0.95	0.95	0.95	0.95
40°	0.9	0.90	0.90	0.90
50°	0.8	0.80	0.80	0.80
B				
1 to 3 Ph	1	1	1	1
4 to 6 Ph	0.8	0.8	0.8	0.8
7 to 9 Ph	0.7	0.7	0.7	0.7
> 10 Ph	0.6	0.6	0.6	0.6

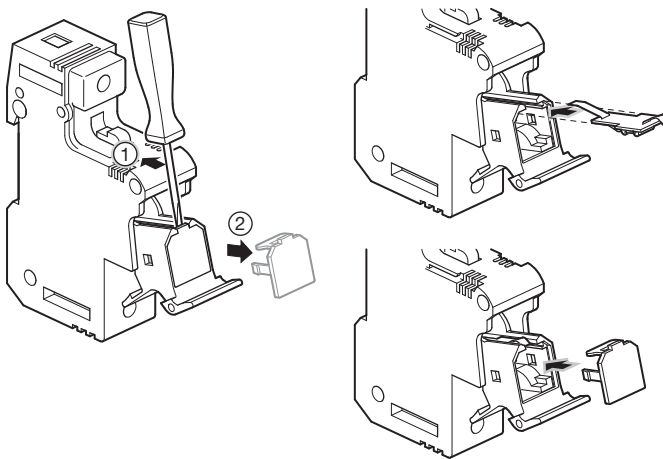
Function of auxiliary contact

- possible to disconnect the supply to the motor by wiring the auxiliary to the coil of the contactor.
- remote indication of the fuse blown status by wiring the auxiliary to an indicating lamp

Note :

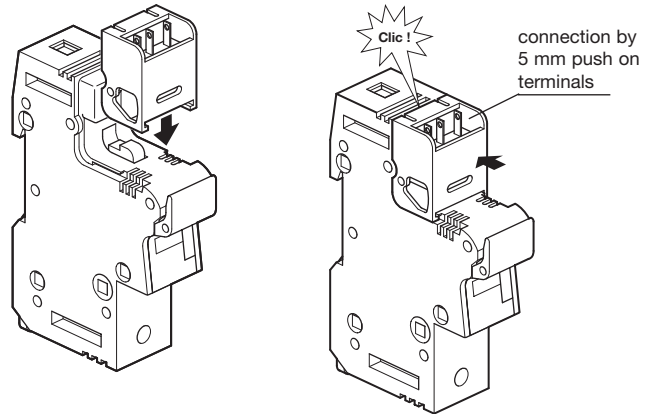
to use the auxiliary for remote indication it is necessary to use fuse links with striker pins.

Indicating light mounting on L 51 and L 58

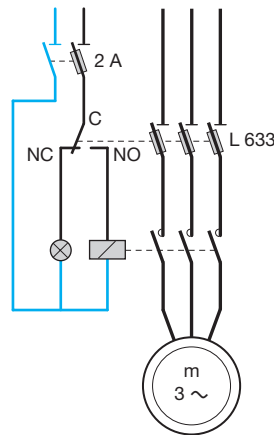


Auxiliary changeover contact

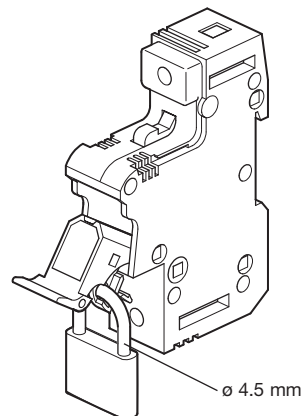
Identical mounting on L 51 and L 58 - SP and multipole type LS



Application drawing



Isolation and padlocking in open position

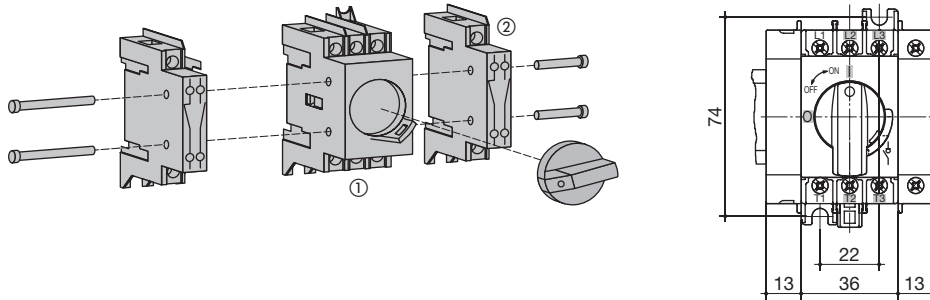


Accessories for HA302 and HA303

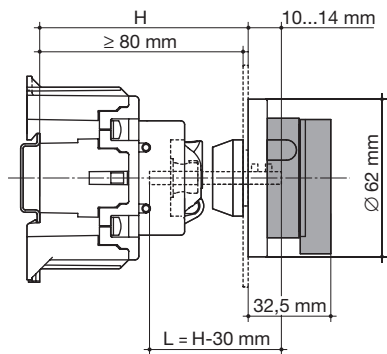
- Auxiliary contact HZ021, 1 open, 1 closed
- A 3 pole earthing device can be fitted on each side of the auxiliary contact HZ021

Fitting example

- ① 3 Pole earthing device
- ② Auxiliary contact 1 open, 1 closed



Dimensional picture of rotary drive HZ001 for door mounting



IP Rating remains at IP54 with fitting of rotary drive

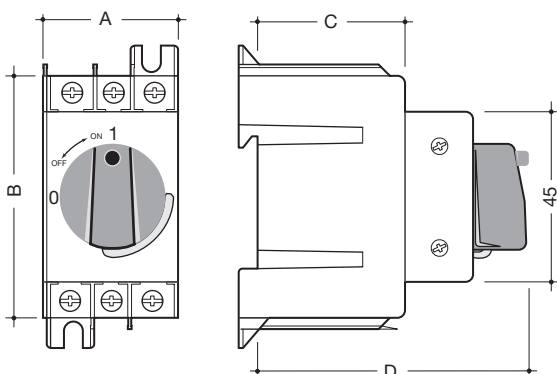
H_{min} = 80 mm
 H_{max} = 230 mm

OFF position lockable by:

- lockable direct frontal drive (with a 5mm lock)
- lockable door drive (with up to three 8mm locks)
 Door locking in Position 1 with handle; in Position 0 the handle is separated from the shaft

Standard IEC 947-3	Cat. ref. HA302	HA303
Thermal current I _{th} , 40°C	40 A	63 A
Rated Insulation voltage U _i	800 V	800 V
Withstand Voltage 50 Hz 1 min	3 kV	3 kV
Rated impulse withstand voltage U _{imp}	8 kV	8 kV
Rated operating current I_e (1)		
400 V AC 21 A - AC 22 A AC 23 A	40 A 32 A	63 A 63 A
500 V AC 21 A - AC 22 A AC 23 A	40 A 32 A	63 A 50 A
690 V AC 21 A - AC 22 A AC 23 A	40 A 20 A	63 A 50 A
Power output (2)		
400 V AC - AC 3	11 kW	18.5 kW
500 V AC - AC 3	15 kW	18.5 kW
690 V AC - AC 3	11 kW	18.5 kW
400 V AC - AC 23 A	18,5 kW	30 kW
500 V AC - AC 23 A	18,5 kW	30 kW
690 V AC - AC 23 A	15 kW	45 kW
Surge protection		
Fuse size gL-gG	40 A	63 A
Rated short circuit capacity gL-gG	50 kA	50 kA
Rated short time current capacity 1 s - I_{cw}	1260 A	1500 A
Switching on and off details		
Breaking capacity 400 V AC 23 A	320 A	630 A
Making capacity 400 V AC 23 A	256 A	504 A
Life span		
Mechanical (number of switching cycles)	100000	30000
Electrical (number of switching cycles)	1500	1500
Connection		
Min. and max. cross section copper cable by I_{th}	6/16 mm ²	10/50 mm ²
Weight	0.13 kg	0.25 kg

Isolator 40 to 63A with rotary drive HA
Isolator HA302/HA303

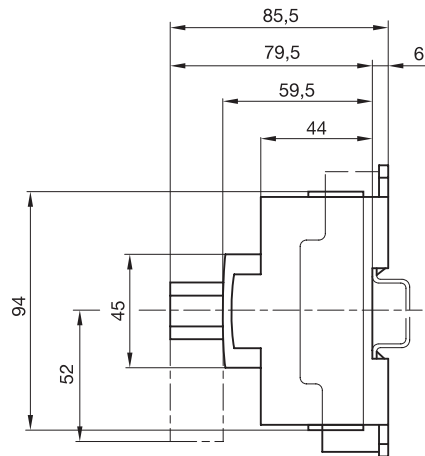
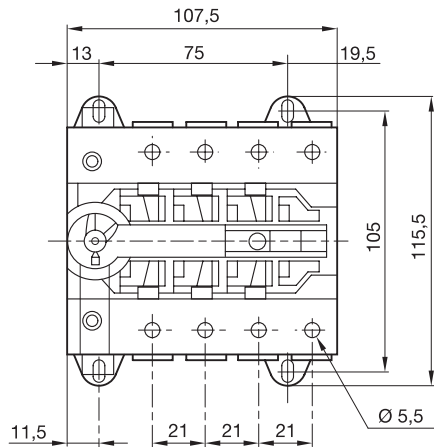


Dimensions in mm	Cat. ref. HA302	HA303
I _n	40 A	63 A
A	36	52
B	65	77
C	39	44
D	74.5	74.5

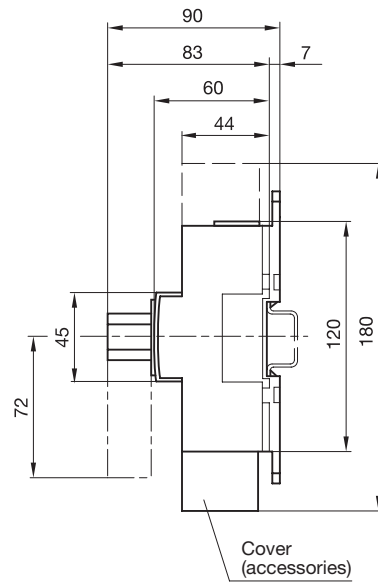
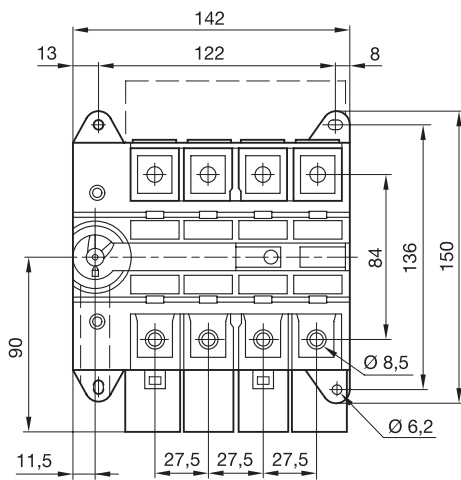
Isolators 80 to 160A with rotary drive HA
Isolators HA304 / HA305 / HA306 / HA307

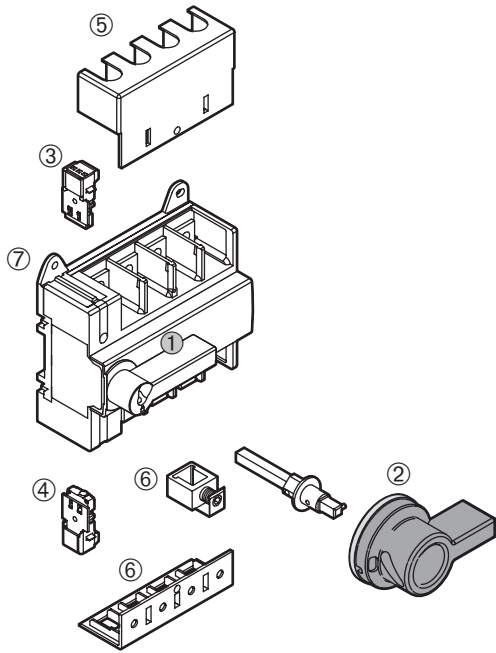
Cat. ref.	I _n
HA304	80 A
HA305	100 A
HA306	125 A
HA307	160 A

HA304, HA305, HA306



HA307





Accessories for HA304 to HA307

- ① direct frontal drive (incl. in delivery)
- ② Door drive HZ002
- ③ and ④ auxiliary contact HZ022, max. 2 auxiliaries can be fitted
- ⑤ IP 2-Terminal covers HZ062 for HA307
- ⑥ Cage terminals HZ072 for HA307
(Accessories for switches HA304, HA305, HA306 incl.)
- ⑦ Can be fitted onto mounting plates or DIN Rail

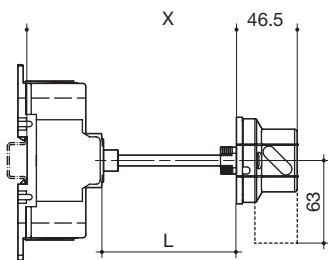
Lockable in OFF Position:

- lockable direct frontal drive (with a 5mm lock)
- lockable door drive (with up to three 8mm locks)
 - Door locking in Position 1 with handle; in Position 0 the handle is separated from the shaft

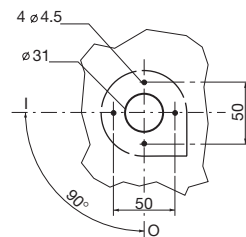
Auxiliary contact HZ022

- 1 open, 1 closed, 5 A, 250 V~
- advanced
- max. connection cross section: 2 x 1.5 mm²
- gilded contact surface
- min. contact current: 1 mA with 4 V DC

Dimensional picture of rotary drive for door mounting – Indirect door drive



Door drill holes for indirect rotary drive



Fit with screws

IP rating IP54 maintained when drive is fitted

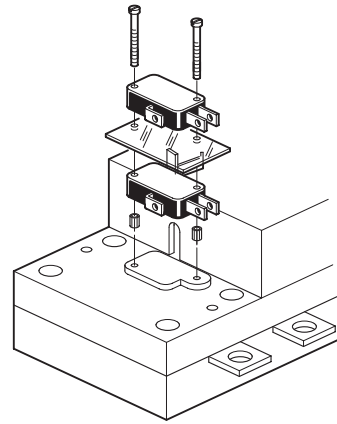
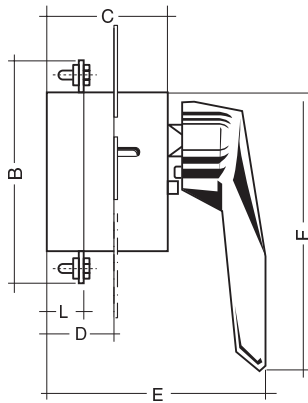
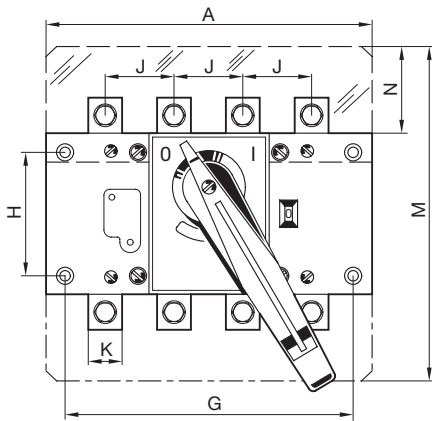
	HA304 - HA306	HA307
X min.	118 mm	103 mm
X max.	286 mm	254 mm
Shaft length	X - 49 mm	

Standards IEC 947-3 VDE 0660 Part 107	HA304	HA305	HA306	HA307	
Thermal current I_{th} (40°C)	80 A	100 A	125 A	160 A	
Rated insulation voltage U_i	690 V	690 V	690 V	750 V	
Withstand voltage 50 Hz 1 min	4 kV	4 kV	4 kV	4 kV	
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV	
Rated operating current	A / B	A / B	A / B	A / B	
400 V AC	AC 21 A / AC 21 B AC 22 A / AC 22 B AC 23 A / AC 23 B	80 / 80 A 80 / 80 A 63 / 63 A	100 / 100 A 100 / 100 A 63 / 63 A	125 / 125 A 125 / 125 A 63 / 63 A	160 / 160 A 160 / 160 A 160 / 160 A
500 V AC	AC 21 A / AC 21 B AC 22 A / AC 22 B AC 23 A / AC 23 B	80 / 80 A 80 / 80 A 50 / 50 A	100 / 100 A 100 / 100 A 50 / 50 A	125 / 125 A 100 / 100 A 50 / 50 A	160 / 160 A 160 / 160 A 160 / 160 A
690 V AC	AC 20 AC 21 A / AC 21 B AC 22 A / AC 22 B AC 23 A / AC 23 B	80 / 80 A 80 / 80 A 40 / 40 A 25 / 25 A	100 / 100 A 80 / 80 A 40 / 40 A 25 / 25 A	125 / 125 A 80 / 80 A 40 / 40 A 25 / 25 A	160 / 160 A 160 / 160 A 160 / 160 A 63 / 80 A
260 V DC	DC 20 DC 21 A / DC 21 B (2) DC 22 A / DC 22 B (2) DC 23 A / DC 23 B (2)	80 / 80 A 80 / 80 A 80 / 80 A 63 / 63 A	100 / 100 A 100 / 100 A 100 / 100 A 63 / 63 A	125 / 125 A 125 / 125 A 100 / 100 A 63 / 63 A	160 / 160 A 160 / 160 A 160 / 160 A 160 / 160 A
400 V DC	DC 20 DC 21 A / DC 21 B (2) DC 22 A / DC 22 B (2) DC 23 A / DC 23 B (2)	80 / 80 A 40 / 40 A 32 / 32 A -	100 / 100 A 40 / 40 A 32 / 32 A -	125 / 125 A 40 / 40 A 32 / 32 A -	160 / 160 A 160 / 160 A 100 / 100 A 63 / 63 A
Power output (3)					
400 V AC without advanced auxiliary	30 / 30 kW	30 / 30 kW	30 / 30 kW	90 / 90 kW	
690 V AC without advanced auxiliary	22 / 22 kW	22 / 22 kW	22 / 22 kW	55 / 75 kW	
400 V AC without advanced auxiliary	37 / 37 kW	55 / 55 kW	55 / 55 kW	90 / 90 kW	
690 V AC without advanced auxiliary	37 / 37 kW	37 / 37 kW	37 / 37 kW	132 / 132 kW	
Surge protection					
Rated short circuit capacity with fuses gL - gG	100 kA _{eff}	100 kA _{eff}	50 kA _{eff}	50 kA _{eff}	
Fuse size	80 A	100 A	125 A	160 A	
Dynamic current capacity	12 kA	12 kA	12 kA	16 kA	
Rated short circuit capacity (1 s) I_{cs}	2.5 kA _{eff}	2.5 kA _{eff}	2.5 kA _{eff}	5 kA _{eff}	
Short circuit making capacity I_{cm} (uninfluenced peak value)	10 kA _{eff}	10 kA _{eff}	10 kA _{eff}	13 kA _{eff}	
Switching data					
Breaking capacity 400 V AC AC23	504 A	504 A	504 A	1280 A	
Making capacity 400 V AC AC23	630 A	630 A	630 A	1600 A	
Life Span					
Mechanical (number of switch cycles)	20000	20000	20000	10000	
Electrical (number of switch cycles) (1)	1500 / 300	1500 / 300	1000 / 200	1000 / 200	
Operation power	3 Nm	3 Nm	3 Nm	6 Nm	
Connection (copper cable)					
Min. wire cross section	4 mm ²	4 mm ²	4 mm ²	10 mm ²	
max. wire cross section, (multi wire)	35 mm ²	35 mm ²	35 mm ²	95 mm ² (4)(5)	
max. wire cross section (single wire)	50 mm ²	50 mm ²	50 mm ²	95 mm ² (5)	
Max. rail cross section	-	-	-	20 mm ²	
Weight					
3-Pole	0.6 kg	0.7 kg	0.7 kg	0.9 kg	
4-Pole	0.7 kg	0.8 kg	0.8 kg	1 kg	

(1) A: frequent use
B: occasional use
(2) 2 pole in range per pole
(3) Power output: the height of current is different between different manufacturers

(4) with cable lugs
(5) with additional cage terminal HZ072

Isolators HA352, HA354, HA357, HA358, HA360, HA362, HA364



Dimensions switches 160 bis 630 A

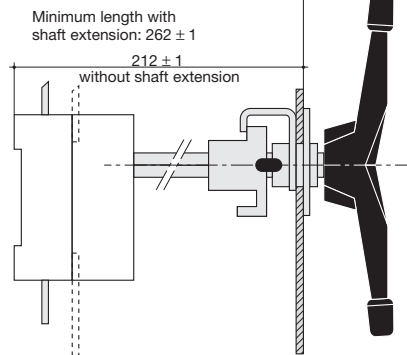
Dim. in mm	Cat. ref. HA352	HA354	HA357	HA358	HA360	HA362	HA364
In/A	160 A	250 A	400 A	630 A	800 A	1250 A	1600 A
A	140	180	180	230	280	372	372
B	135	160	170	260	320	330	360
C	65	75	75	110	140	140	140
D	35	39	39	65	86	86	86
E	120	130	130	165	234	234	234
F	148	150	150	170	330	330	330
G	120	160	160	210	255	347	347
H	65	80	80	140	175	175	175
J	36	50	50	65	80	120	120
K	20	25	35	40	50	63	80
L	20.5	22.5	22.5	36.5	47	47	51
M	174	210	210	420	460	460	460
N	45	55	55	130	130	130	130

Auxiliary contact HZ023, 2 changeover contacts

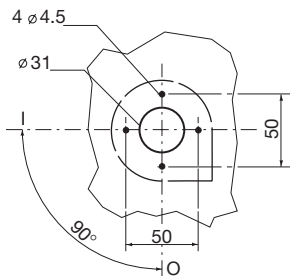
Technical Data:

- Rated current 16 A 250 V~ cos φ = 0.8
250 V~ cos φ = 0,35 I_n = 12 A
400 V~ cos φ = 0,35 I_n = 8 A
- Operational temperature -20°C + 125°C
- Connection with Fast on contact pin 6.35mm
- Life span (electrical) 30000 switch cycles
- IP Rating IP 20

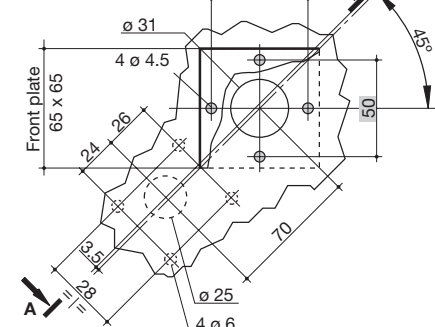
HA360-64



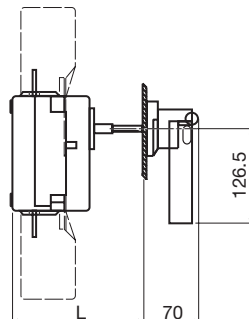
Door drill holes HA352-358



HA360-64



Door drill holes HA352-358



Isolator	HA352 / 354 / 357		HA358	HA360-64	
Rotary drive	HZ003	HZ003 + HZ013	HZ003	HZ003 + HZ013	HZ004
L _{min}	109	103	138	138	212
L _{max}	246	366	280	400	262

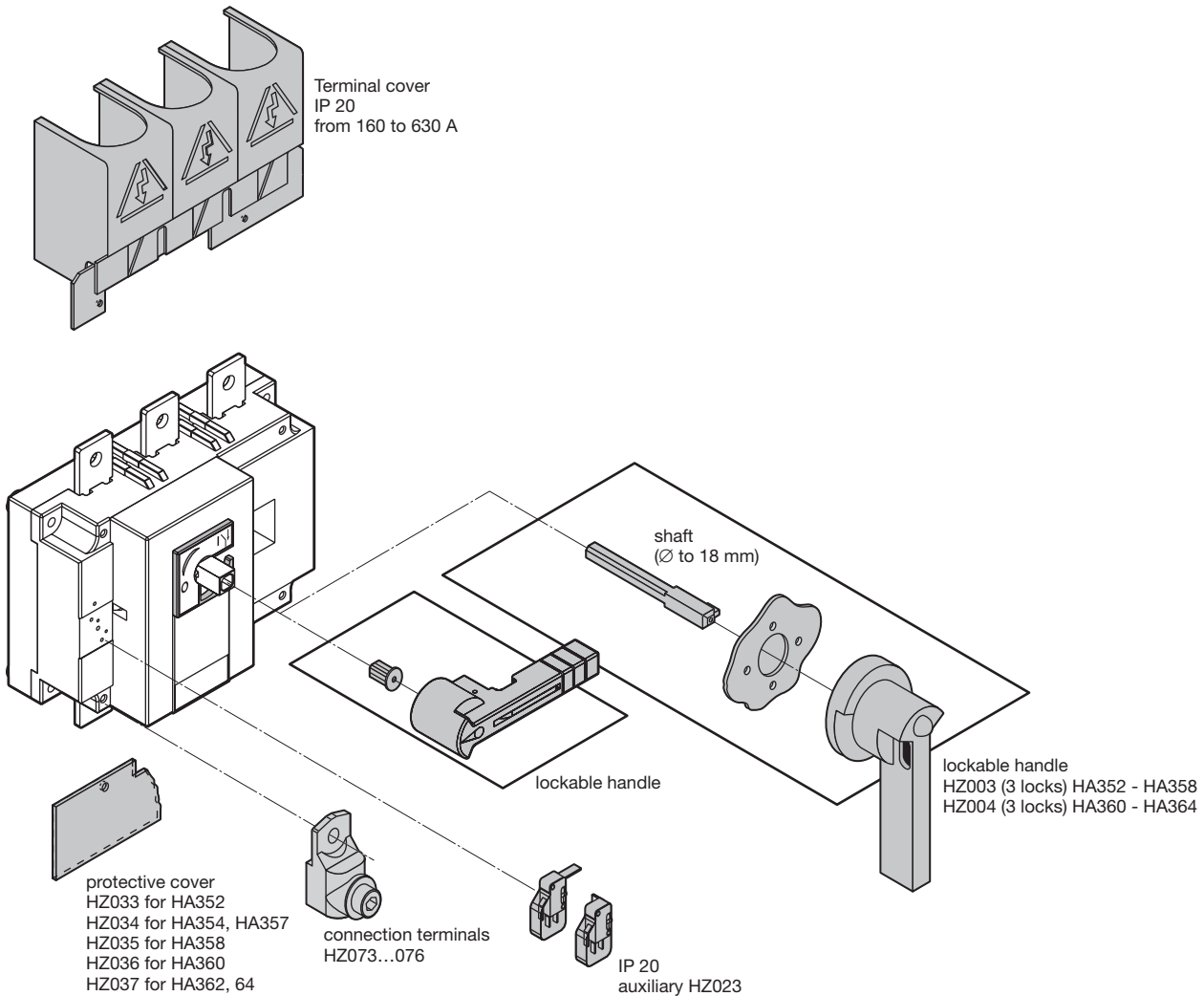
Accessories for HA352, HA354, HA357, HA358, HA360, HA362, HA364

Operation types:

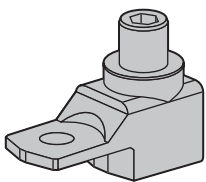
- direct: the lockable handle is fixed to the switch

- indirect: the lockable handle is fixed frontally on the door.

The indirect frontal drive can be separated from the operating shaft in position 0, in Position 1 it allows for the locking of the door (an "out of order" of the locking is possible)

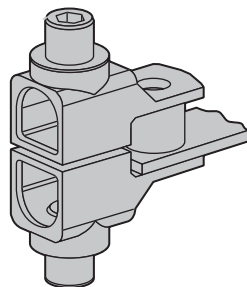


Connection cage terminals up to 630 A



- designed for direct connection of copper and aluminium wires (without cable lugs)

Cage terminal with extension terminal up to 630 A



- can be integrated in cover

I_n / A	Cable connection		Flex rails width	Blank on
	flexible	rigid		
160A	16 to 95 mm ²	16 to 95 mm ²	13 mm	22 mm
250A	16 to 185 mm ²	16 to 185 mm ²	18 mm	27 mm
400A	50 to 240 mm ²	50 to 300 mm ²	20 mm	34 mm
630A	70 to 300 mm ²	70 to 300 mm ²	24 mm	34 mm
800A	2 x 300 mm ²			63 mm
1250A	4 x 185 mm ²			100 mm
1600A	6 x 240 mm ²			100 mm