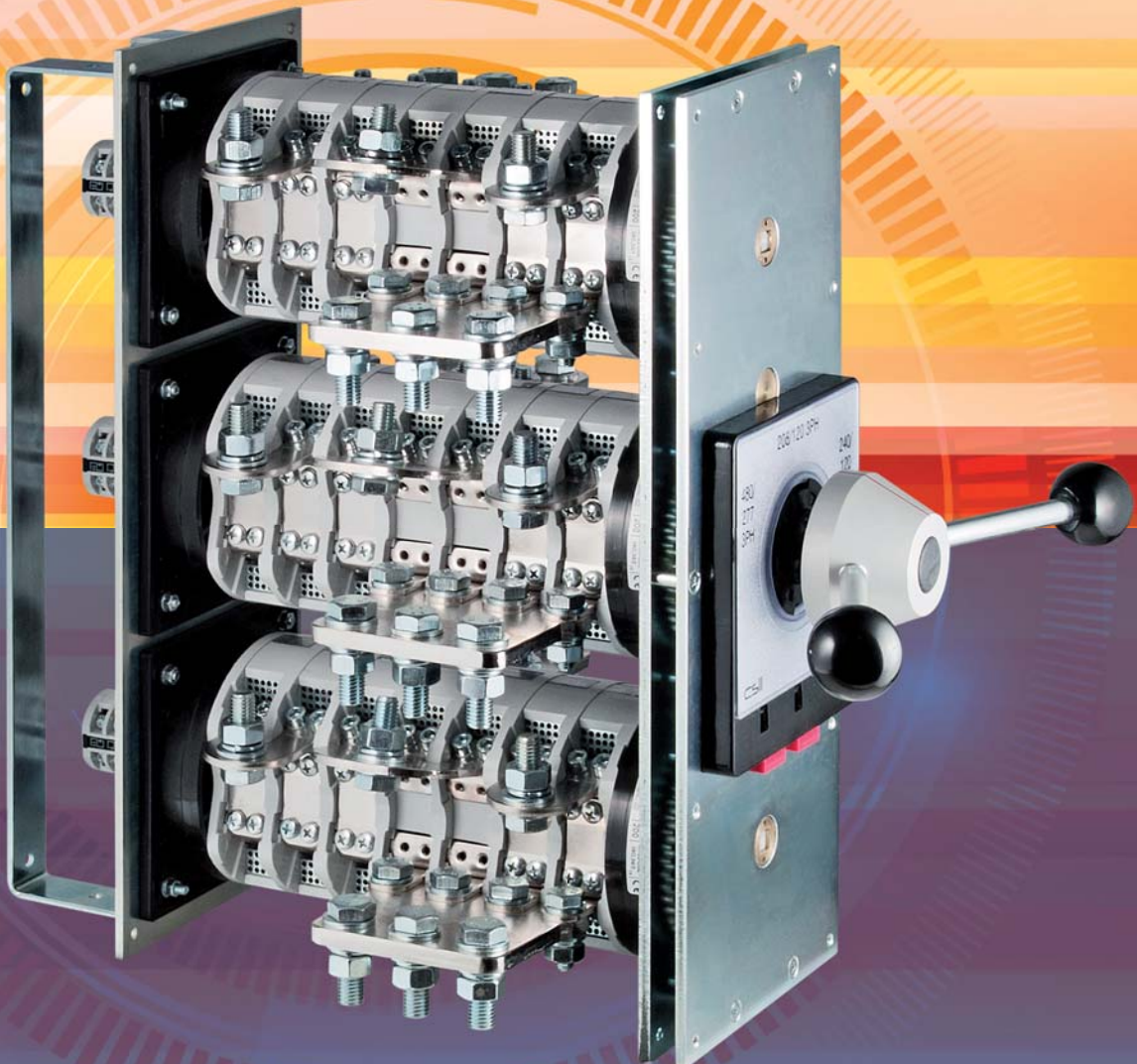




Rotary cam switches

A&Z *series*



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ROTARY CAM SWITCHES

series **A200**, **Z315**

Rotary cam switches **A&Z** series have been developed to the new achievements in the field of switching devices through the application of high quality insulation materials and contacts made with silver alloys. Their advantages are: high making and breaking capacities, electrical and mechanical endurance. They can withstand short time overload and in combination with fuses are highly resistant to short circuit peak currents. These rotary cam switches are intended for multiple switching operations in main as well as in auxiliary circuits:




- as **motor switches** they are designed for direct-online starting and stopping of single-phase and three-phase motors. They are also used as star-delta switches, reversing switches, multi-pole changeover motor switches
- **switches, selector switches and step switches** e.g. for transformers and welding apparatuses
- **group switches** e.g. for switching operations of resistors and heaters

Rotary cam switches **A&Z** series are built in accordance with the following standards UL 508, IEC 947, IEC 204, VDE 0660, VDE 0630, as well as many other national standards. The switching element's body is made of melamine-based material exceptionally resistant to leakage currents and effect of electric arc. By the application of double pole breaking and contact elements plated with a special silver alloy resistant to the electric arc, breaking capacities and electric durabilities are obtained.

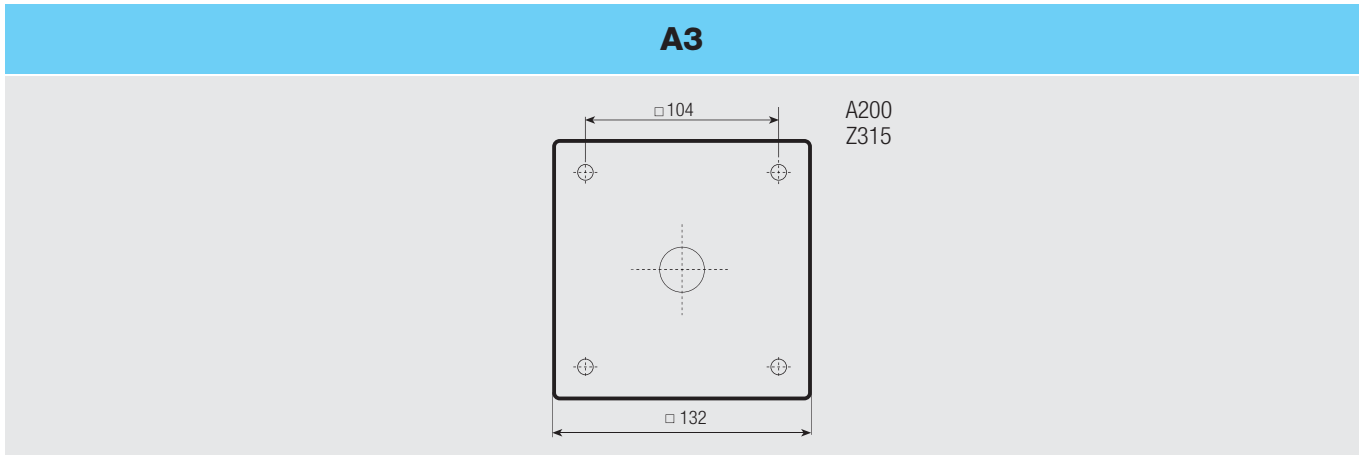
Standard switches can have maximum twelve switching elements. At special request the switches consisting of more than 12 elements may be supplied. Higher amperages can be obtained by paralleling the contacts on the A200 and Z315 switches. The switch can be executed, as it is desired, with the following turning angle:

Switch size	A3	max. possible number of positions
Turning angle		
30°	•	12
45°	•	8
60°	•	6
90°	•	4

STANDARD MOUNTING FORMS

Mounting form	Marking	Protection		Type	Size	Outlook
		Front	Rear			
Front mounting	U	IP 40	IP 00	A200 Z315	A3	
Rear mounting	O					
Switch in steel casing	L	IP 54		A200 Z315	A3 A3	

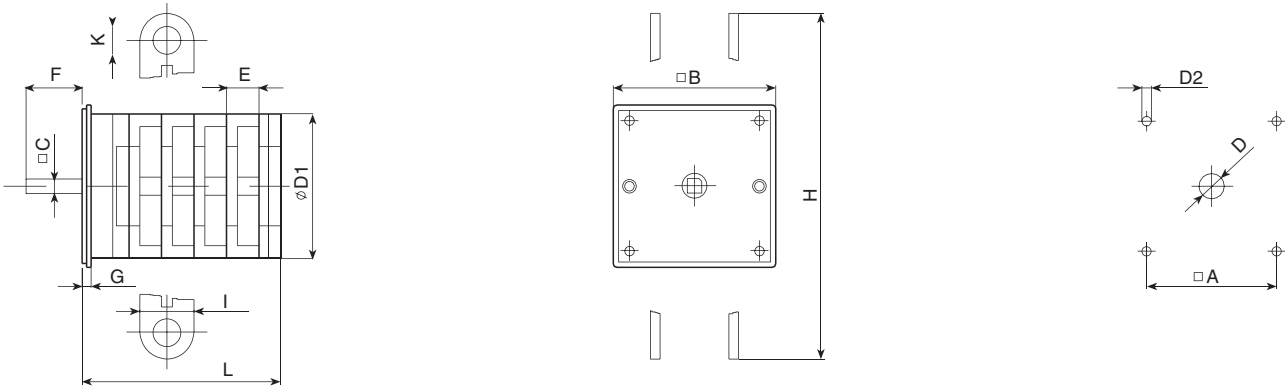
MOUNTING SIZES



DIMENSIONAL DRAWINGS (mm)

U - Front mounting

Drilling plan

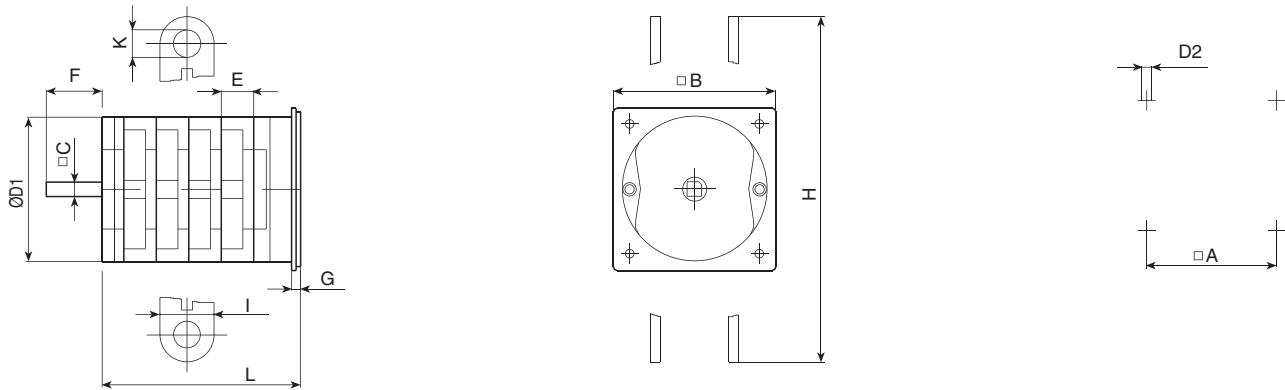


Type	Marking											Number of elements												
	□A	□B	□C	∅D	∅D ₁	∅D ₂	E	F	G	H	I	∅K	1	2	3	4	5	6	7	8	9	10	11	12
A200 Z315	104	132	10	16	120	5,3	29	37,5	6	140	20	10,5	77	107	136	166	196	226	284	314	343	373	402	432

Switches with 7 or more elements will include 2 latching devices.

O - Rear mounting

Drilling plan

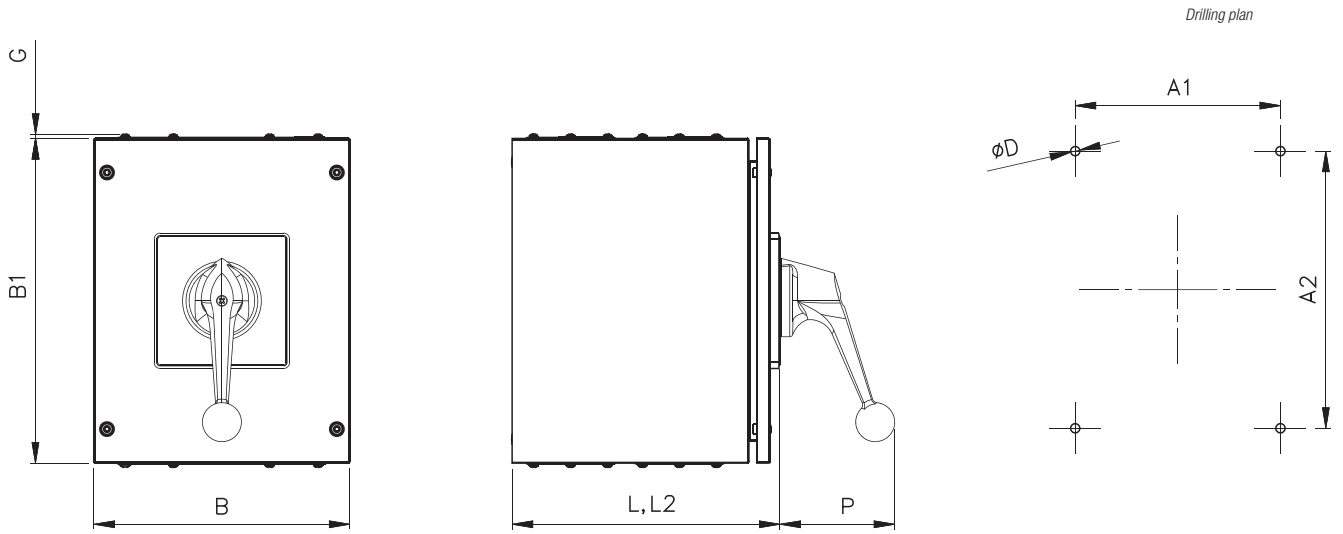


Type	Marking											Number of elements												
	□A	□B	□C	∅D	∅D ₁	∅D ₂	E	F	G	H	I	∅K	1	2	3	4	5	6	7	8	9	10	11	12
A200 Z315	104	132	10	16	120	5,3	29	50	6	140	20	10,5	77	107	136	166	196	226	284	314	343	373	402	432

Drilling plan of front panel as at front mounting switches (U)

DIMENSIONAL DRAWINGS (mm)

L - Switch in steel enclosure



Type	Housing size	Number of elements		L	L2	A1	A2	B	B1	D	G	P
		L	L2									
A200 Z315	250 x 316	1 - 3	4 - 6	162	252	200	270	250	316	9	4,5	98

Contact Control Switches for other enclosure options/sizes. CSii can also provide enclosed control packages in their UL508 shop.

OPTIONAL EXTRAS

CODE

INCREASED PROTECTION DEGREE



01

Front protection IP54

1	2	OR	4
A200 Z315	- -	U 0	01

EXTENDED SHAFT



02

It is necessary to define the board depth

A200 Z315	- -	0	02
--------------	----------	---	----

AUXILIARY CONTACTS



04

It is necessary to define switch type and switching diagram of the auxiliary contacts

A200 Z315	- -	U	04
--------------	----------	---	----

SWITCHES WITH LOCKING



05

In a standard manner locking is in "0" (off) - possible in other positions, too (please define). The key can be pulled out only in locked position.

A200 Z315	- -	U	05
--------------	----------	---	----



06

Locking only in "0" (off). For off/on switches (60°, 90°). Possible use (60°) with several positions (max. 6). Standard version - black handle, cover plate and front panel. Special request - grey color or red/yellow combination of colors.

A200 Z315	- -	U 0 L	06
--------------	----------	-------	----

OPTIONAL EXTRAS

CODE

DOOR COUPLING



**07
08**

Door-opening in any position (07) or only in "0" (off) (08). Minimal distance to the door-hinge is 150 mm .

1	2	OR	4
A200 Z315	-	0	07 08

SIGNAL LAMPS



15

In a standard manner, the red lamp (220V) is built in the right bottom corner. Possible voltages are 110 or 380V (please define). Green lamp also available. On special request second lamp can be built in left bottom corner

1	2	OR	4
A200 Z315	-	U 0 L	15

BLOCKADE OF POSITIONS



**16
26**

Blockade of positions-two hands operating, against an accidental switching-on (16), + locking by one padlock (26).

1	2	OR	4
A200 Z315	-	U	16 26



**17
27**

Blockade of positions-two hands operating, against an accidental switching-on + auxiliary contacts (17), + locking by one padlock (27). Operating of contacts is being realized before switch function.

1	2	OR	4
A200 Z315	-	U	17 27

EMERGENCY OFF SWITCH



24

In a standard manner locking is in "0" (off) - possible in other positions, too (please define). The key can be pulled ou only in locked position.

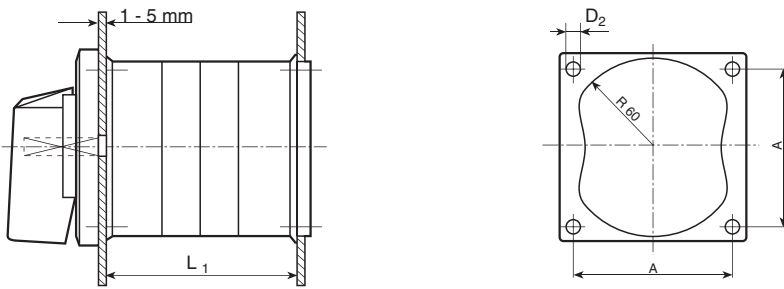
1	2	OR	4
A200 Z315	-	U 0 L	24

Switch type			A200	Z315	
Rated insulation voltage IEC	U_j	V	690	690	
	UL/CSA	U_j	600	600	
Rated impulse withstand voltage IEC	U_{imp}	kV	8	8	
Switch disconnector IEC (III/3) ¹⁾ (Main switch)		V	690	690	
Rated operational voltage	$U_e^{1)}$				
Rated impulse withstand voltage	$U_{imp}^{1)}$	kV	6	6	
Rated thermal current IEC	I_{th}	A	200	315	
	UL/CSA	I_{th}	200	255	
Max. fuse size for short circuit protection	I_n (aR-characteristic) IEC	15 kA	A	200	
	I_n (RK5 fuse) UL/CSA	10 kA	A	200	
Rated short-time withstand current IEC	I_{cw}	1 sec	A	3300	
		3 sec	A	2000	
		10 sec	A	1100	
		30 sec	A	640	
		60 sec	A	460	
Rated short-circuit making capacity IEC	I_{cm} at 400V	A	5500	5500	
Rated operational current I_e IEC	AC21/AC1 at 690 V	A	200	315	
General Use UL/CSA (similar AC- 1)	3 phase at 600V	A	200	255	
Motor switch in IEC utilization category AC23B	3 phase	230 V	kW	63	75
		400 V	kW	110	132
	3 pole	500 V	kW	110	132
		690 V	kW	55	75
	2 pole	120 V	kW	15	15
		230 V	kW	30	37
		400 V	kW	55	55
	Across the line AC Motor starting (similar AC- 3) UL/CSA	3 phase	120 V	Hp	30
240 V			Hp	50	50
3 pole		480 V	Hp	100	100
		600 V	Hp	75	75
1 phase		120 V	Hp	15	15
		240 V	Hp	30	30
2 pole		480 V	Hp	40	40
		600 V	Hp	50	50
Terminals	Cable lug or copper bus				
	Connection screw	M	10	10	
	Width of terminal	mm	20	20	

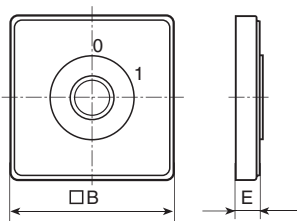
1) Valid for lines with grounded common neutral termination, overload category III, pollution degree 3.

DIMENSIONAL DRAWINGS (mm)

*MOUNTING OF THE SWITCH A200 & Z315
For the switch with more than 6 elements*

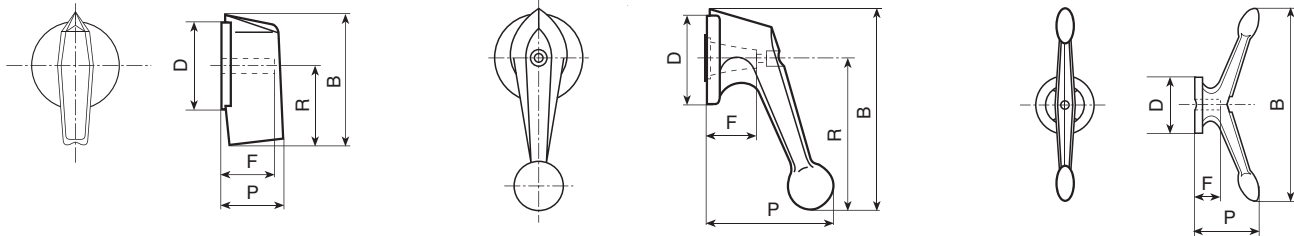


SIZE	A(mm)	D ₂ (mm) ∅	NO. OF ELEMENTS - L(mm)					
			7	8	9	10	11	12
A3	104	5,3	271	301	330	360	389	419



SIZE	□B	E
A3	132	10

Handles



SIZE	D ∅	P	R	B	F
A3	75	46,5	63,5	104	39

SIZE	D ∅	P	R	B	F
A3	75	88	115	155,5	28

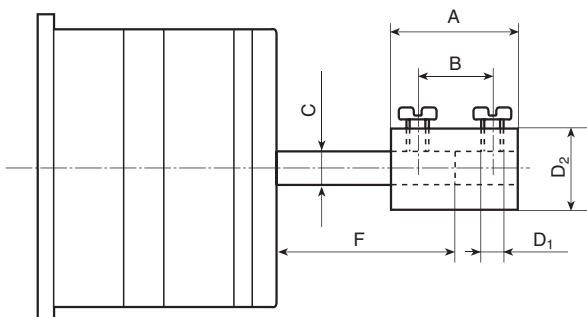
SIZE	D ∅	P	B	F
A3	75	87	262	28

	COLOR	ORDERING CODE
		SIZE
		A3
	gray red black yellow	R311 R312 R314 R315

	COLOR	ORDERING CODE
		SIZE
		A3
	gray red black yellow	R321 R322 R324 R325

	COLOR	ORDERING CODE
		SIZE
		A3
	gray red black yellow	R331 R332 R334 R335

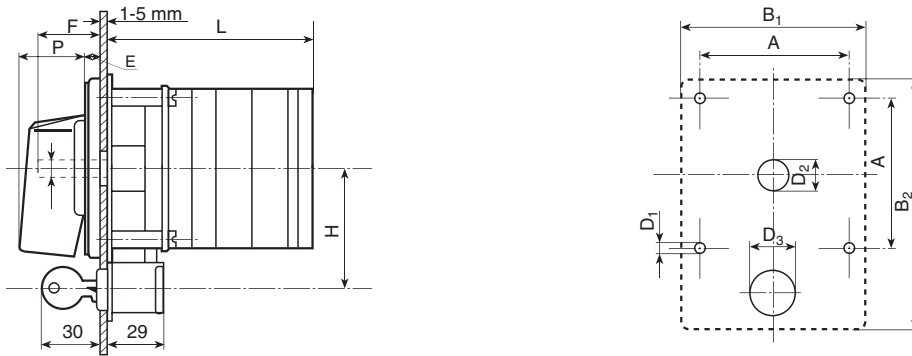
02 - Extended shaft



SIZE	A	B	C	D ₁	D ₂ ∅	F
A3	25	15	10	3,9	20	50

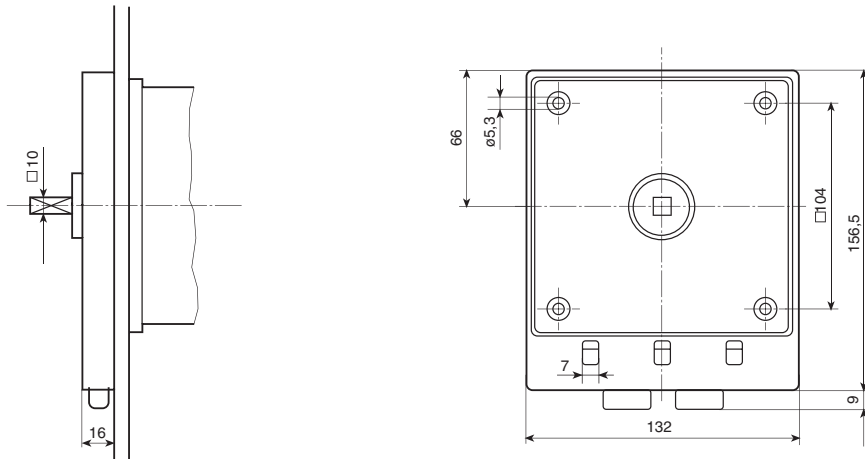
DIMENSIONAL DRAWINGS (mm)

05 - Locking with the key

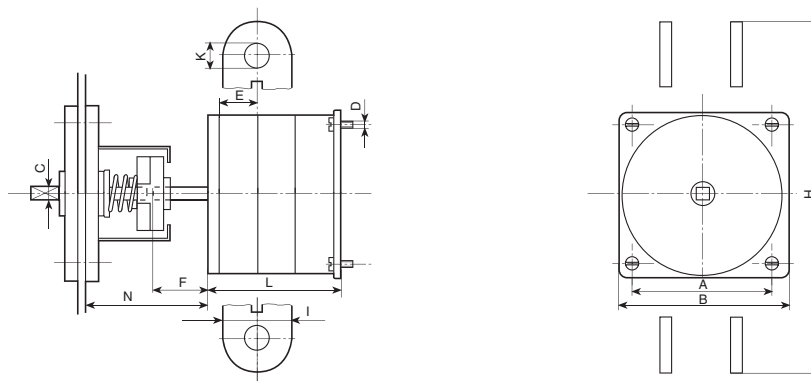


SIZE	D ₁	D ₂	D ₃	A	B ₁	B ₂	C	E	F	H	P	NO. OF ELEMENTS - L(mm)											
	∅	∅	∅									□	1	2	3	4	5	6	7	8	9	10	11
A3	6	18	21,5	104	132	168	10	10	37,5	85	46,5	103	133	162	192	222	252	310	340	369	499	428	458

06 - Padlocking - for the switches A200 & Z315



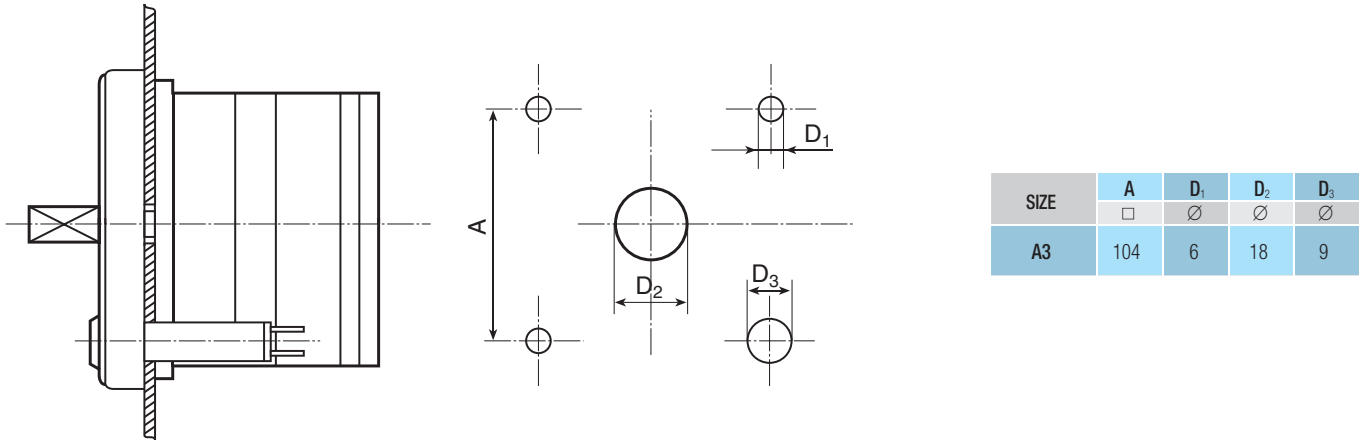
08 - Door coupling with the blockade



SIZE	D ₁	D ₂	D ₃	C	E	F	H	I	K	min N*	NO. OF ELEMENTS - L(mm)											
	∅	□	□	□							1	2	3	4	5	6	7	8	9	10	11	12
A3	5	104	132	10	29	30	**	**	**	77	77	107	136	166	196	226	284	314	343	373	402	432

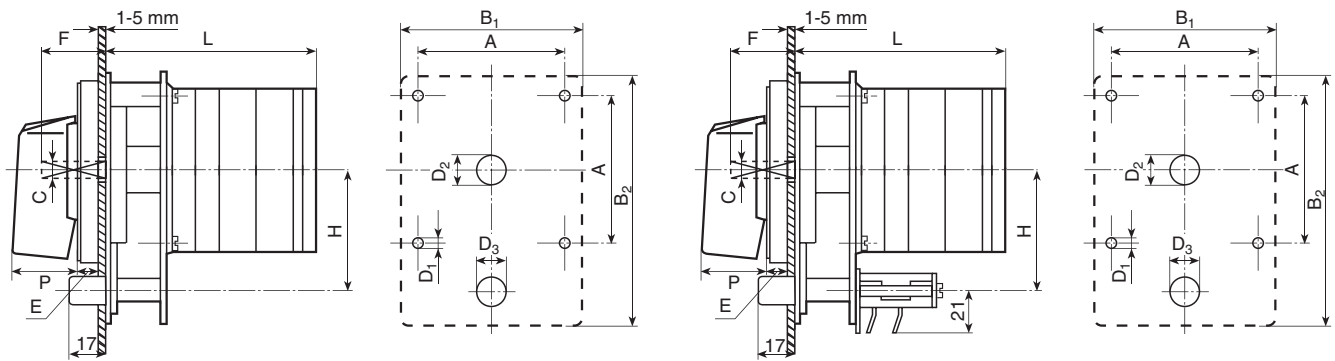
DIMENSIONAL DRAWINGS (mm)

15 - Switch with signal lamp



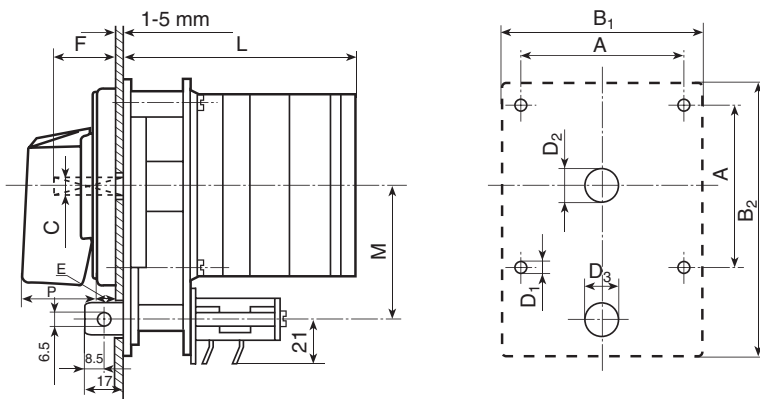
16 - Blockade of positions

17 - Blockade of positions + push button



SIZE	D ₁ ∅	D ₂ ∅	D ₃ ∅	A	B ₁	B ₂	C □	E	F	H	P	NO. OF ELEMENTS - L(mm)											
												1	2	3	4	5	6	7	8	9	10	11	12
A3	6	18	15	104	132	168	10	10	37,5	85	46,5	105	135	164	194	224	254	312	342	371	401	430	460

27 - Blockade of positions + push button + locking



SIZE	D ₁ ∅	D ₂ ∅	D ₃ ∅	A	B ₁	B ₂	C □	E	F	H	P	NO. OF ELEMENTS - L(mm)											
												1	2	3	4	5	6	7	8	9	10	11	12
A3	6	18	15	104	132	168	10	10	37,5	85	46,5	105	135	164	194	224	254	312	342	371	401	430	460

Order sheet for special switches

Purchaser _____

Phone _____

Telefax _____

Date _____

Switch type:

A or
Z

Switch data:

Voltage _____ V

Current _____ A

Power _____ kW

Description of the equipment to be switched:

Mounting form:

U - Front

O - Rear

L - Metal casing

Front part:

Black

Grey

Red

Yellow

White

Optional extra:

Additional requirements:

Form:

Handle

A3

A3

A3

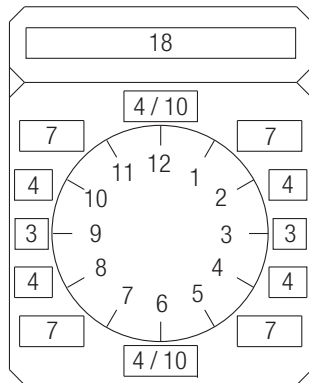
Front plate

Standard A3

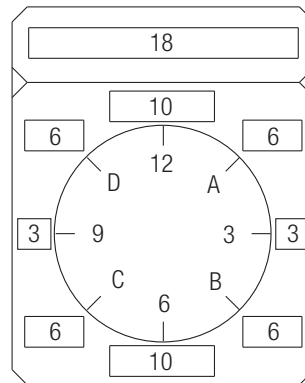
REMARK: - Standard combination of colours and forms. Please mark the desired request (or).

Max. number of characters

30° / 60°



45° / 90°





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