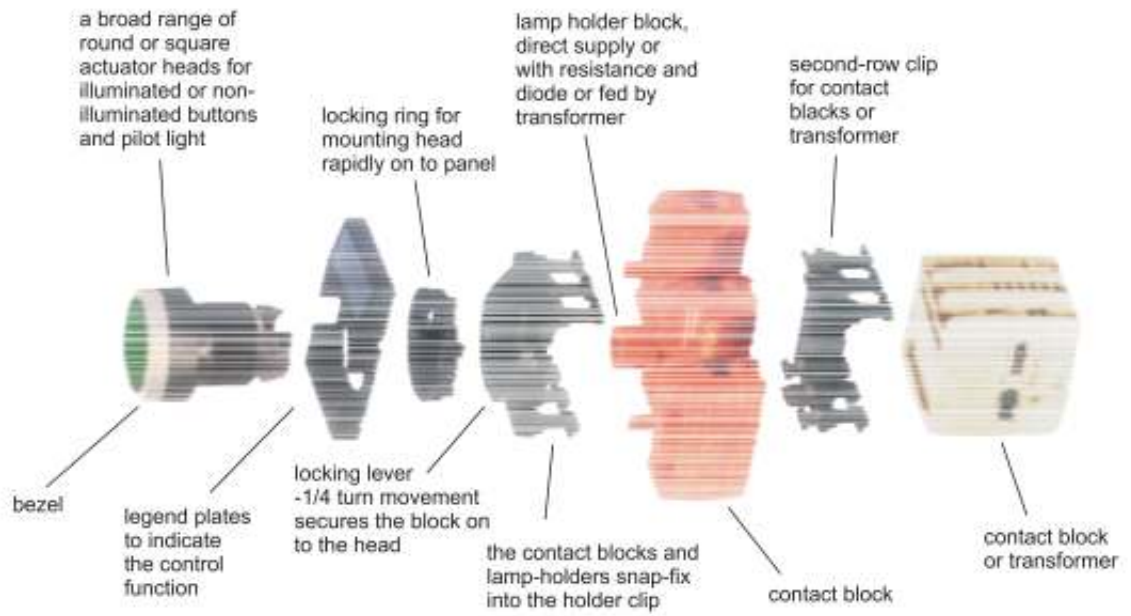




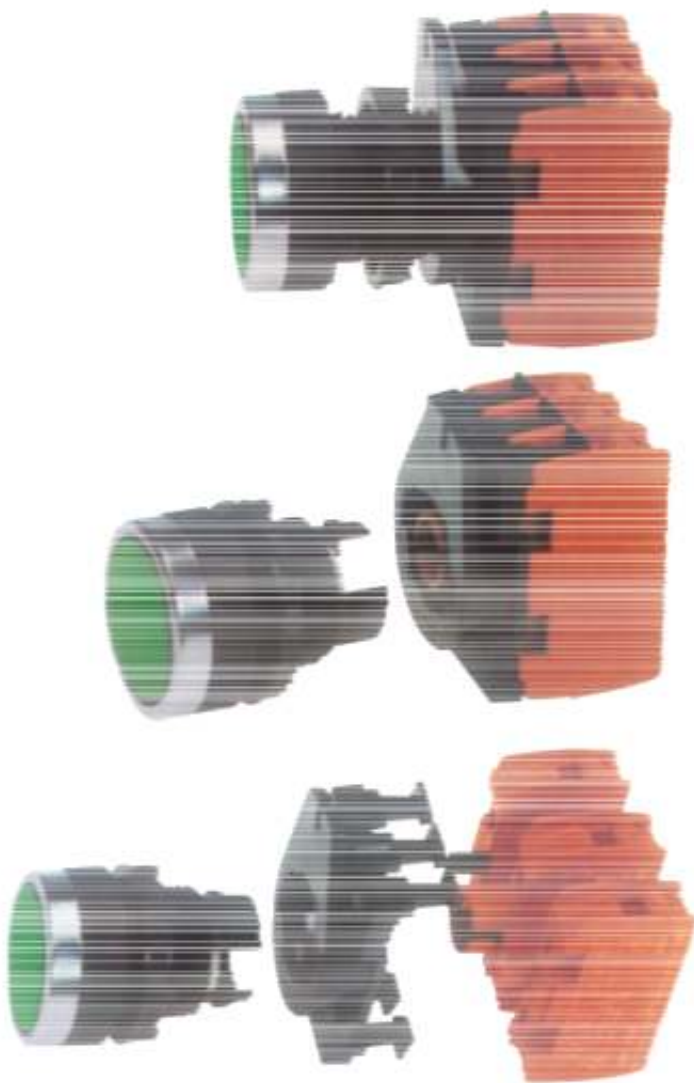
GANZ KK Kft.
ISO 9001
certified



CONTROL AND SIGNALLING UNITS Ø22



Picture 1.



Picture 2.



Picture 3.



Picture 4.

Ganz Kapcsoló- és Készülékgyártó Kft. is the hungarian distributor of the control and signalling units manufactured by **BACO**, France.

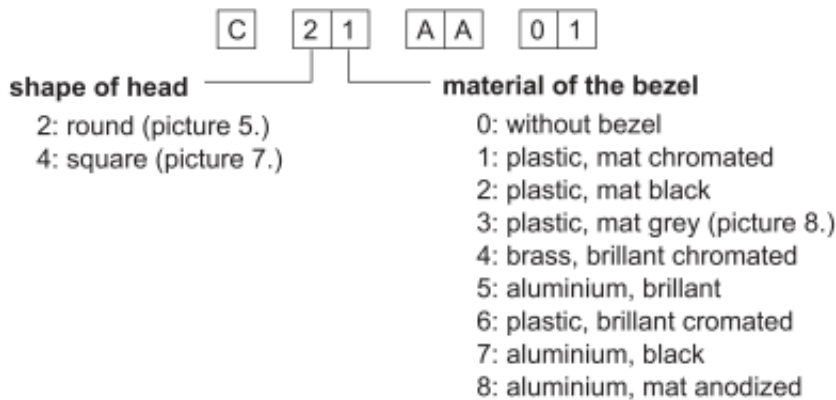
The control and signalling units shown in this catalogue have the advantages of the modular design. Many combinations of the **heads**, **contact blocks** and **lamp-holder blocks** can be assembled, so it is not necessary to keep extensive stocks of different versions to meet various demands, just snap the desired unit together according to the actual needs quickly, without using a tool.

Heads

Non-illuminated		Illuminated	
pushbuttons	<i>push</i> <i>push-push</i>	pushbuttons	<i>push</i> <i>push-push</i>
mushroom-shaped heads	<i>spring-return</i> <i>not returning</i>	mushroom-shaped heads	<i>spring-return</i> <i>not returning</i>
togle switch		selector switches	
selector switches		two positions	<i>spring-return</i> <i>not returning</i>
two positions	<i>spring-return</i> <i>not returning</i>	three positions	<i>spring-return</i> <i>not returning</i>
three positions	<i>spring return</i> <i>not returning</i>	twin touch pushbuttons	
twin and triple touch pushbuttons		pilot lamp	
key-operated selector switches	<i>spring-return</i> <i>not returning</i>	monoblock pilot lamp	

The shape of the **heads** (frame) can be round or square. Changing over from round to **square version** is carried out by mounting the operator on a rectangular-shaped frame-bezel. The appearance is depending on the **material of the bezel**.

In the type specification it is indicated as follows:



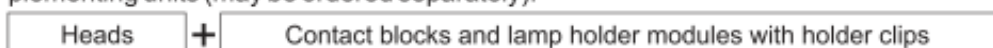
Most frequently sold version (basic type):



The heads can be flush (low) or projecting (high) - see pictures 5. and 6. The low versions IP 65 degree of protection can be changed to IP 67 by using a silicone shroud (picture 38. and 39.).

Pushbuttons and pilot lamps can be ordered with different colour legends, containing ISO or DIN symbols.

On the following pages you can find the details concerning the two (main) complementing units (may be ordered separately):



INDEX

Types of heads	1
Non-illuminated control devices	2
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Accessories	20

The code numbers of the most often used types are indicated by bold letters.

Non-illuminated pushbuttons

Head					Contact blocks with holder clips					
Type		Code (1)	Dimensions	Picture No.	Contacts	Position on the holder clip (rear view)	Code	Dimensions	Picture No.	
Spring-return pushbuttons	low	Without engraving	C21AA01 red C21AA02 green C21AA03 black C21AA04 yellow C21AA05 white C21AA06 blue	1	5			230E10 (2)	page 12.	-
		With engraving (3)	C21AA81 red O C21AA82 green I C21AA83 black I	1	7			230E01 (2)	page 12.	-
		Without legend	C21AA00	1	-					
	high	Without engraving	C21AB01 red C21AB02 green C21AB03 black C21AB04 yellow C21AB05 white C21AB06 blue	2	6			233E11 (2)	page 12.	-
		Position "0" can be fixed with key	C21GF00	16	-			233E20 (2)	page 12.	-
		Positions "0" and "1" can be fixed with key	C21GL00	16	-			233E02 (2)	page 12.	-
Push-push function	low	Without engraving	C21CA01 red C21CA02 green C21CA03 black C21CA04 yellow C21CA05 white C21CA06 blue	1	5			233E21 (2)	page 12.	-
		Without engraving	C21CB01 red C21CB02 green C21CB03 black C21CB04 yellow C21CB05 white C21CB06 blue	2	6			233E12 (2)	page 12.	-
	Without engraving	C21CB01 red C21CB02 green C21CB03 black C21CB04 yellow C21CB05 white C21CB06 blue	2	6			233E30 (2)	page 12.	-	
							234E22 (2)	page 12.	-	

(1) Not only the basic types can be ordered. Please refer to details (code explanation) on page 1.

(2) Basic types have screw-type wire fixing method.
If 6,3/2×2,8 mm slip-on terminal ("FASTON") wire-fixing is desired, please add a D letter to the type code (e.g. 230E10D).

(3) Legends are listed on page 10.

(4) Key can be taken out in any position.
Basic type comes with key No 455. On request with key No 1424A.

Non-illuminated pushbuttons with mushroom heads

		Head			
Type		Code (1)	Dimensions	Picture No.	
Spring-return	Ø 29	C21AC01 red C21AC02 green C21AC03 black C21AC04 yellow	3	-	
	Ø 40	C21AD01 red C21AD02 green C21AD03 black C21AD04 yellow	4	9	
	Ø 70	C21AE01 red C21AE03 black	5	-	
Latching. Unlatch by	pull	Ø 29	C28DC01 red C28DC02 green C28DC03 black C28DC04 yellow	7	-
		Ø 40	C28DD01 red C28DD02 green C28DD03 black C28DD04 yellow	8	-
		Ø 48	V10DV01 red	(5)	9
	turn	Ø 29	C21EC01 red C21EC02 green C21EC03 black C21EC04 yellow	10	-
		Ø 40	C21ED01 red C21ED02 green C21ED03 black C21ED04 yellow	11	10
	key	Ø 40	(4) C21GM01 red	14	3
		Ø 70	(4) C21GP01 red	15	-

+

Contact blocks with holder clips				
Contacts	Position on the holder clip (rear view)	Code	Dimensions	Picture No.
		230E10 (2)	page 12.	-
		230E01 (2)	page 12.	-
		233E11 (2)	page 12.	-
		233E20 (2)	page 12.	-
		233E02 (2)	page 12.	-
		233E21 (2)	page 12.	-
		233E12 (2)	page 12.	-
		233E30 (2)	page 12.	-
		234E22 (2)	page 12.	-

+

Toggle switches

		Head		
Type		Code (1)	Dimensions	Picture No.
	not returning	C21PA03 fekete	20	4
	spring-return	C21PB03 fekete	20	4

(1) Not only the basic types can be ordered. Please refer to details (code explanation) on page 1.

(4) Can not be ordered with square bezel.

(5) Without bezel ring, snap action.

(2) Basic types have screw-type wire fixing method.

If 6,3/2×2,8 mm slip-on terminal ("FASTON") wire-fixing is desired, please add a D letter to the type code. (e.g. 230E10D).

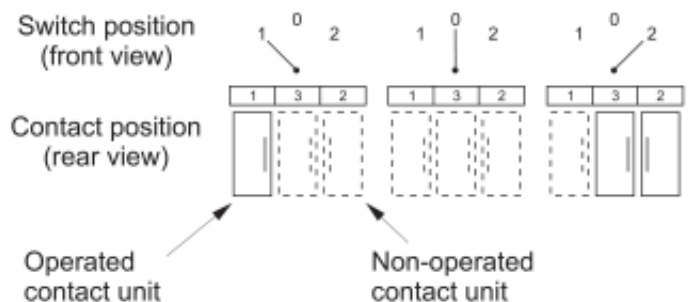
Non-illuminated selector switches

Head					
	Switching positions	Handle	Code (1)	Dimensions	Picture No.
2 positions with black handle (5)	 45°	short	C21KA03	12	12
		long	C21KP03	13	13
	 45°	short	C21KB03	12	12
		long	C21KQ03	13	13
	 45°	short	C21KC03	12	12
		long	C21KR03	13	13
	 45°	short	C21KD03	12	12
		long	C21KS03	13	13
	 90°	short	C21KE03	12	12
		long	C21KT03	13	13
 90°	short	C21KF03	12	12	
	-	-	-	-	-
3 positions with black handle (5)	 2x45°	short	C21MA03	12	12
		long	C21MR03	13	13
	 2x45°	short	C21MB03	12	12
		long	C21MS03	13	13
	 2x45°	short	C21MC03	12	12
		long	C21MT03	13	13
	 2x45°	short	C21MD03	12	12
		long	C21MU03	13	13
	 2x90°	short	C21MK03	12	12
		-	-	-	-








Contact blocks with holder clips					
Contacts	Position on the holder clip (rear view)	Code (2)	Dimensions	Picture No.	
		230E10	page 12.	-	
		230E01	page 12.	-	
		233E0110	page 12.	-	
		233E20	page 12.	-	
		233E02	page 12.	-	
		233E21	page 12.	-	
		233E12	page 12.	-	
		233E30	page 12.	-	
		234E22	page 12.	-	

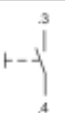



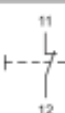

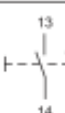

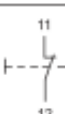

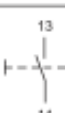

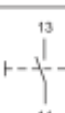

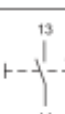

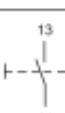

Operation method of contact blocks in 3-position switches:











- (1) Not only the basic types can be ordered. Please refer to details (code explanation) on page 1.
- (2) Basic types have screw-type wire fixing method. If 6,3/2x2,8 mm slip-on terminal ("FASTON") wire-fixing is desired, please add a D letter to the type code. (e.g. 230E10D).
- (5) On request with red, green or grey handle.

Non-illuminated twin and triple touch pushbuttons

Head					
Type	Texture and colours	Code	Dimensions	Picture No.	
Twin touch	 1 IP 40 2 (3)	1: I green 2: O red	V62QA02	22	-
	 1 IP 40 2 (3)	1: I green 2: O red	V62QB02	23	-
Triple touch	 1 IP 40 3 (3) 2	1: ↑ 3: STOP 2: ↓	V62BO51	25	14
	 1 IP 40 3 (3) 2	1: → 3: STOP 2: ←	V62BO52	25	-
	 1 IP 40 3 (3) 2	1: ↗ 3: STOP 2: ↘	V62BO53	25	-

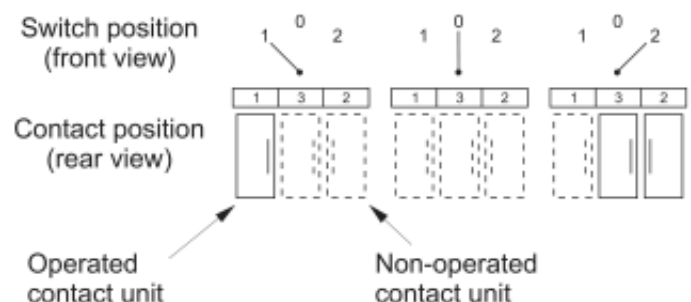
Contact blocks with holder clips				
Contacts	Position on the holder clip (rear view)	Code	Dimensions	Picture No.
		230E10 (2)	page 12.	-
		230E01 (2)	page 12.	-
		233E0110 (2)	page 12.	-
		233E20 (2)	page 12.	-
		233E02 (2)	page 12.	-
		233E21 (2)	page 12.	-
		233E12 (2)	page 12.	-
		233E30 (2)	page 12.	-
		234E22	page 12.	-

Key-operated selector switches

Head					
	Switching positions	Key (4) can be taken out	Code (1)	Dimensions	Picture No.
2 positions		in 0 position	C21LC00	17	11
		in 0 position	C21LD00	17	11
		in 0 position	C21LF00	17	11
		in 0 and 1 positions	C21LG00	17	11
		in 0 and 1 positions	C21LH00	17	11
3 positions		in 0 position	C21NC00	17	11
		in 0 position	C21ND00	17	11
		in 1, 0 and 2 positions	C21NK00	17	11

- (1) Not only the basic types can be ordered. Please refer to details (code explanation) on page 1.
- (2) Basic types have screw-type wire fixing method. If 6,3/2×2,8 mm slip-on terminal ("FASTON") wire-fixing is desired, please add a D letter to the type code. (e.g. 230E10D).
- (3) On request with WA0224 type silicone shroud providing IP 67 degree of protection.
- (4) Basic type comes with key No 455. On request with key No 1424A.

Operation method of contact blocks in 3-position switches:



Illuminated pushbuttons

Head				
Type		Code (1)	Dimensions	Picture No.
Spring-return pushbuttons	low	C21AH10 red C21AH20 green C21AH30 clear C21AH40 yellow C21AH50 opal	1	5
	With leged plates in different colours (3)	C21AJ10 red C21AJ20 green C21AJ30 clear C21AJ40 yellow	1	17 (C41...)
high	Without engraving	C21AK10 red C21AK20 green C21AK30 clear C21AK40 yellow C21AK50 opal	2	18
	low	C21CH10 red C21CH20 green C21CH30 clear C21CH40 yellow C21CH50 opal	1	5
Push-push function	low	C21CK10 red C21CK20 green C21CK30 clear C21CK40 yellow C21CK50 opal	2	18
	high	Without engraving	2	18

Contact and lamp-holder blocks with holder clips (5)				
Contact and lamp-holder blocks	Position on the holder clip (rear view)	Code (2)	Dimensions	Picture No.
		233EA10	page 13.	-
		233EA11	page 13.	-
		233EA20	page 13.	30
		233ECKG11	page 13.	-
		233ECKG10	page 13.	-
		233ECKG01	page 13.	-

Illuminated pushbuttons with mushroom heads



Head				
Type		Code (1)	Dimensions	Picture No.
Spring-return	∅ 29	C 21AL10 red C 21AL20 green C 21AL40 yellow C 21AL50 opal	3	19
Push-push unlatch by pulling	∅ 29	C28DL10 red	7	-
	∅ 40 ⁽⁴⁾	C28DM10 red	8	20
Push-turn unlatch by turning	∅ 29	C21EL10 red	10	-
	∅ 40 ⁽⁴⁾	C21EM10 red	11	-

For all lamp-holder blocks use BA 9s bulbs
 a 233EA ... type for filament bulb max. 130 V, 2,6 W
 for neon max. 230 V
 a 233ECKG ... type for filament bulb max. 130 V 2,6 W
 220 ... 250 VAC rated voltage with resistor
 and diode

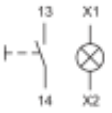

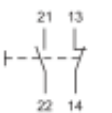

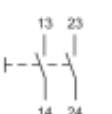

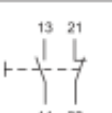

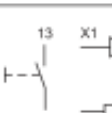

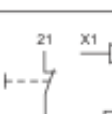

(5) Light emitters (page 20): filament bulb
 neon
 LED

- (1) Not only the basic types can be ordered. Please refer to details (code explanation) on page 1.
- (2) Basic types have screw-type wire fixing method. If 6,3/2×2,8 mm slip-on terminal ("FASTON") wire-fixing is desired, please add a D letter to the type code. (e.g. 230E10D).
- (3) Legends are listed on page 10.
- (4) Can not be ordered with square bezel.

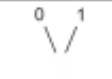

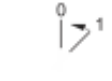
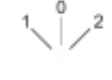
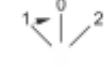
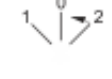
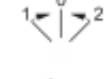
Illuminated twin touch pushbuttons

Head				
Type	Texture and colours	Code (1)	Dimensions	Picture No.
 1 2	IP 40 (3)	1: I green 2: O red	V62QH02	22 15
 1 2	IP 40 (3)	1: I green 2: O red	V62QK02	23 -

+

Contact and lamp-holder blocks with holder clips (5)				
Contact and lamp-holder units	Position on the holder clip (rear view)	Code (2)	Dimensions	Picture No.
		233EA10	page 13.	-
		233EA11	page 13.	-
		233EA20	page 13.	30
		233ECKG11	page 13.	-
		233ECKG10	page 13.	-
		233ECKG01	page 13.	-

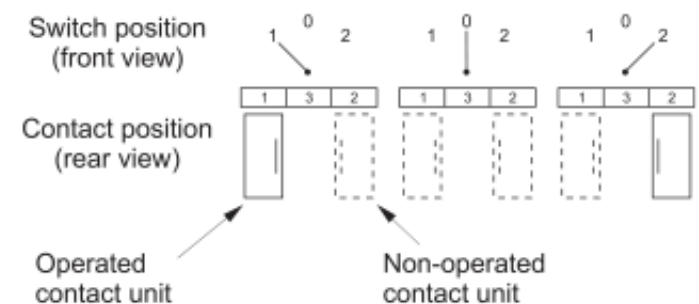
Illuminated selector switches

Head					
	Switching positions	Handle shape	Code (1)	Dimensions	Picture No.
2 positions		short	C21KG51 red C21KG52 green C21KG53 black	12	12
		long	C21KV53 black	13	13
		short	C21KJ51 red C21KJ52 green C21KJ53 black	12	12
		long	C21KX53 black	13	13
		short	C21KK51 red C21KK52 green C21KK53 black	12	12
		long	C21KY53 black	13	13
3 positions		short	C21ME51 red C21ME52 green C21ME53 black	12	12
		long	C21ML53 black	13	13
		short	C21MF51 red C21MF52 green C21MF53 black	12	12
		long	C21MM53 black	13	13
		short	C21MG51 red C21MG52 green C21MG53 black	12	12
		long	C21MN53 black	13	13
		short	C21MH51 red C21MH52 green C21MH53 black	12	12
		long	C21MP53 black	13	13

+

For all lamp-holder blocks use BA 9s bulbs
 a 233EA ... type for filament bulb max. 130 V 2,6 W
 for neon max. 230 V
 a 233ECKG ... type for filament bulb max. 130 V 2,6 W
 220 ... 250 VAC rated voltage with resistor
 and diode

Operation method of contact blocks
 in 3-position switches:



(5) Light emitters: filament bulb
 neon
 LED

- (1) Not only the basic types can be ordered. Please refer to details (code explanation) on page 1.
- (2) Basic type have screw-type wire fixing method. If 6,3/2×2,8 mm slip-on terminal ("FASTON") wire-fixing is desired, please add a D letter to the type code. (e.g. 230E10D).
- (3) On request with WA0224 type silicone shroud providing IP 67 degree of protection.

Pilot lamps

Modular pilot lamps

Head			
Type	Code	Dimensions	Picture No.
Fluted lens without legend	C20SA10 red C20SA20 green (1) C20SA30 clear C20SA40 yellow C20SA50 opal (1) C20SA60 blue (1)	21	21
Smooth lens with legend (3)	C20SB10 red C20SB20 green (1) C20SB30 clear C20SB40 yellow C20SB50 opal (1) C20SB60 blue (1)	21	22 (C40...)

+

Lamp-holder blocks (5)					
Lamp-holder block	Position on the holder clip	Code		Dimensions	Picture No.
		Screw	*Faston*		
		230EA	233EB	page 13.	-
		230ECKG	233EDKG	page 13.	-
		233EAT	233EBU	page 13.	-

- (1) Only with light bulb
- (3) Legends are listed on page 10.
- (4) Coloured shroud can be ordered additionally (see page 20)
- (5) Light emitters (page 20): filament bulb
neon
LED

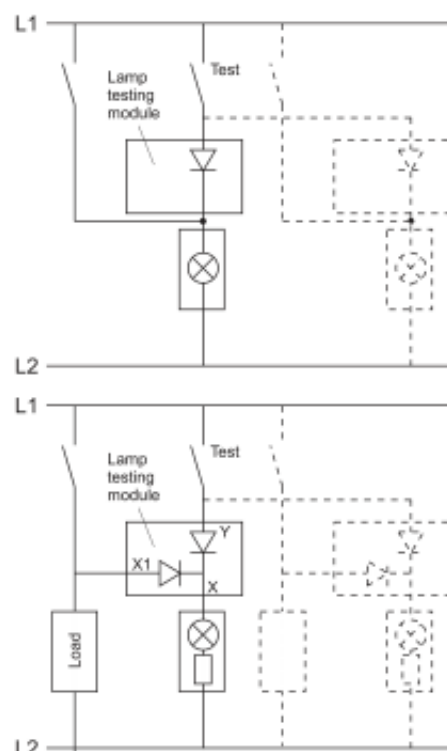
For all lamp-holder modules use BA 9s bulbs
230 EA type for filament bulb max. 130 V 2,6 W
for neon max. 230 V
230 ECKG type for filament bulb max. 130 V 2,6 W
220 ... 250 VAC rated voltage with resistor and diode
233 EAT type has an additional diode that serves the checking of the lamp

Monoblock pilot lamps

(Head and lamp holder cannot be separated)

Type	Code	Dimensions	Picture No.
 Direct with BA 9s holder max. 230 V 2 W filament bulb max. 400 V neon (without filament bulb)	Fluted lens without legend (4)	18	-
	Smooth lens with legend (3)	18	-
 With resistor and diode with BA 9s holder 230 V rated voltage 130 V 2 W filament bulb (with filament bulb)	Fluted lens without legend (4)	18	-
	Smooth lens with legend (3)	18	-

Connection diagrams of lamp-testing modules



Holder clips

Type	Marking	Code
Single module		230E
Triple module		233E
Additional 2 nd row clip		236E
Single, for sideways extension		235E
3 positions, for one lamp-holder block and one or two 23 E 11 contact blocks		234E

Contact blocks

Type	Code		Picture No.
	Screw	FASTON	
Closing (NO)	23E10	23E10D	-
Breaking (NC)	23E01	23E01D	-
Delayed breaking	23E01C	23E01E	-
1 close + 1 break with 234 E holder clip	23E11	-	33

Special contact blocks

Type	Code	
	Screw	FASTON
Lamp-testing module	23ET	23EU
Lamp-testing module	23ETT	23EUU
Empty module space: for the 2 nd row clip	23 EX	

Lamp-holder blocks with BA 9s bulb holder

Type	Code		Picture No.
	Screw	FASTON	
Filament bulb max. 2 W Neon max. 230 V	23EA	23EB	34
 220 ... 250 V 130 V 2 W	23ECKG	23EDKG	-

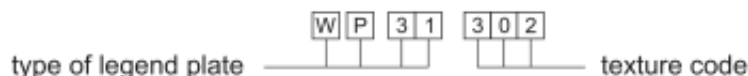
Transformers

Type	Secondary voltage	Code		
For pilot light, BA 9s bulb Primary voltage 230 V resistant to short circuits secondary	6 V / 0,6 VA	23EVHA	Holder clip 230E or 233E	
	12 V / 1,2 VA	23EVHB		
	24 V / 1,5 VA	23EVHC		
For pilot light and illuminated pushbuttons resistant to short circuits secondary	6 V / 0,6 VA	23EHA	picture 32	
	12 V / 1,2 VA	23EHB		
	24 V / 1,5 VA	23EHC		
	12 V / 1,2 VA	23ELB		
	400 V	24 V / 1,5 VA	23ELC	

Legend plates

Legend plates

Codes



Example: WP 31 302 - small size AUXIGRAPH legend plate, with STOP text on red plate (picture 36)

Type		Code		
		without texture	with texture	
Clip-in plate for non-illuminated flush pushbuttons see page 2	red	WA31	WA31 □□□	
	green	WA32	WA32 □□□	
	black	WA33	WA33 □□□	
	yellow	WA34	WA34 □□□	
	white	WA35	WA35 □□□	
	blue	WA36	WA36 □□□	
See-through plate for illuminated pushbuttons		opal	WE15 □□□	
See-through plate for modular pilot lamps		opal	WE18 □□□	
See-through plate for monoblock pilot lamps		opal	WE24 □□□	
Plate for rectangular frame-bezel	complete picture N° 35 diagram N° 29	red	WP41 □□□	
		black	WP43 □□□	
		alu	WP49 □□□	
		clear	WP47 -	
	additional black frame		WP4	-
	additional textured legend plate	red	IA1 □□□	
		black	IA3 □□□	
		alu	IA9 □□□	
	see-through cover (1)		IA7	IA7 □□□
	additional blank legend plate (1)		IA2A	-
Metal base-plate for emergency-stop function with mushroom heads colour: yellow see picture 28	with NOT AUS texture	Ø 80	-	WE00200
		Ø 60	-	WE16200
	with EMERGENCY STOP texture	Ø 80	-	WE00300
		Ø 60	-	WE16300
	without texture	Ø 80	WE00	-
		Ø 60	WE16	-

Type		Code			
		without texture	with texture		
AUXIGRAPH legend plate	Small	complete picture N° 36 diagram N° 26	red	WP31 □□□	
			black	WP33 □□□	
			alu	WP39 □□□	
			clear	WP37 -	
		additional black frame		WP3	-
		additional textured legend plate	red	IA1 □□□	
	black		IA3 □□□		
	alu		IA9 □□□		
	see-through cover (1)		IA7	-	
	additional blank legend plate (1)		IA2A	-	
	Large	complete picture No 36 diagram No 27	red	WG31 □□□	
			black	WG33 □□□	
			alu	WG39 □□□	
			clear	WG37 -	
additional black frame		WG3	-		
additional textured legend plate		red	IB1 □□□		
		black	IB3 □□□		
		alu	IB9 □□□		
see-through cover (1)		IB7	-		
additional blank legend plate (1)		IB2B	-		

(1) 20 pcs of aluminium-coloured cards to be textured by the user.
Clear covers can be used to protect cards.

Standard texts

for pushbuttons and pilot lights

on AUXIGRAPH legend plates, for rectangular shaped frame-bezels

Texture	Code	Texture	Code	Texture	Code
START	301	SLOW	309	VORWÄRTS	205
STOP	302	FAST	310	RÜCKWÄRTS	206
ON	303	LEFT	311	LANGSAM	209
OFF	304	RIGHT	312	SCHNELL	210
FORWARD	305	RESET	315	LINKS	211
REVERSE	306	POWER-ON	330	RECHTS	212





































for selector switches

on AUXIGRAPH legend plates

Texture	Code	Texture	Code
HAND - AUTO	383	O - I	081
HAND - OFF - AUTO	391	I - II	082
OFF - ON	382	I - O - II	091
STOP - START	381	I - II - III	092
		O - I - START	093
		O - I - II	094

Standard symbols

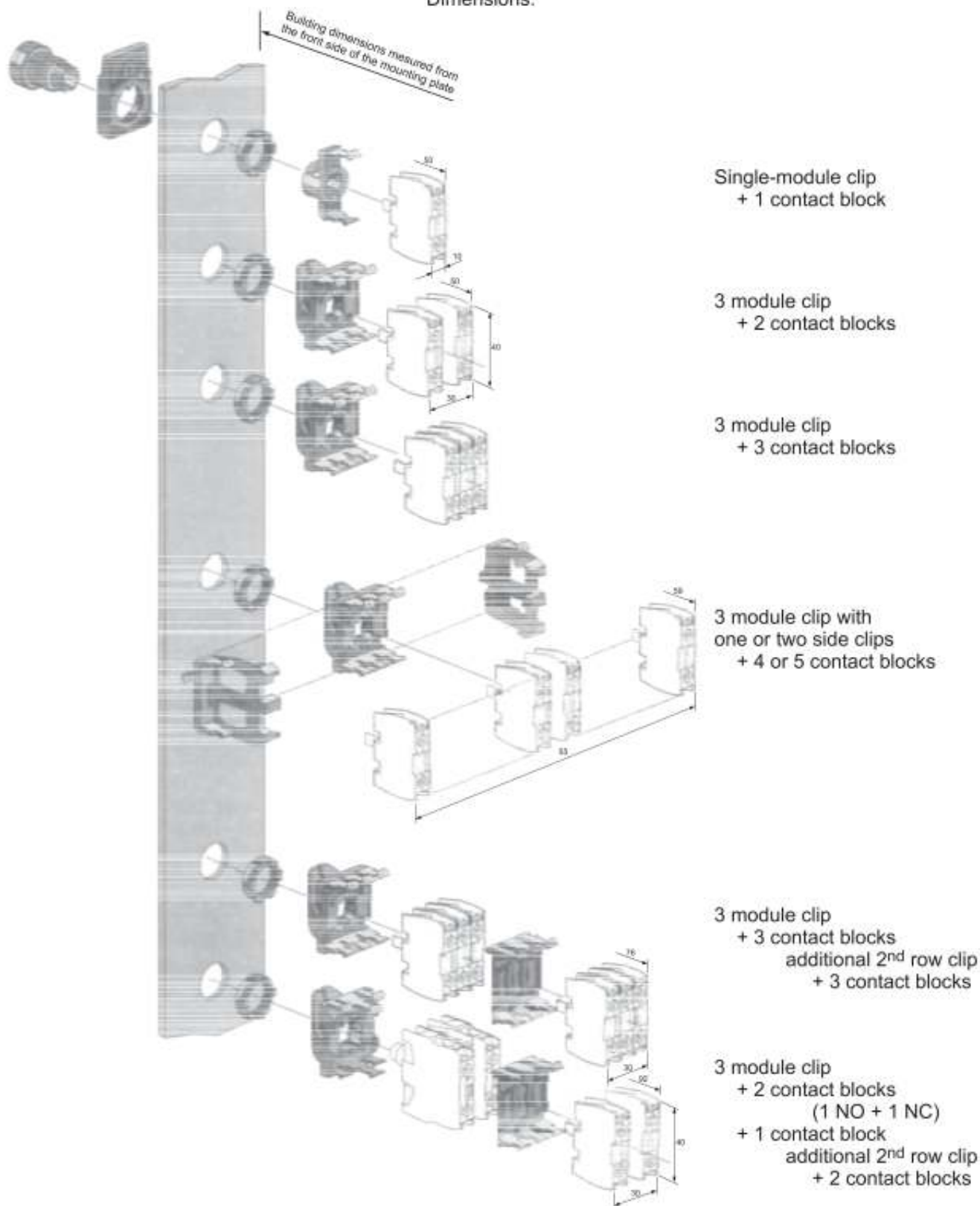
for pushbuttons and pilot lights

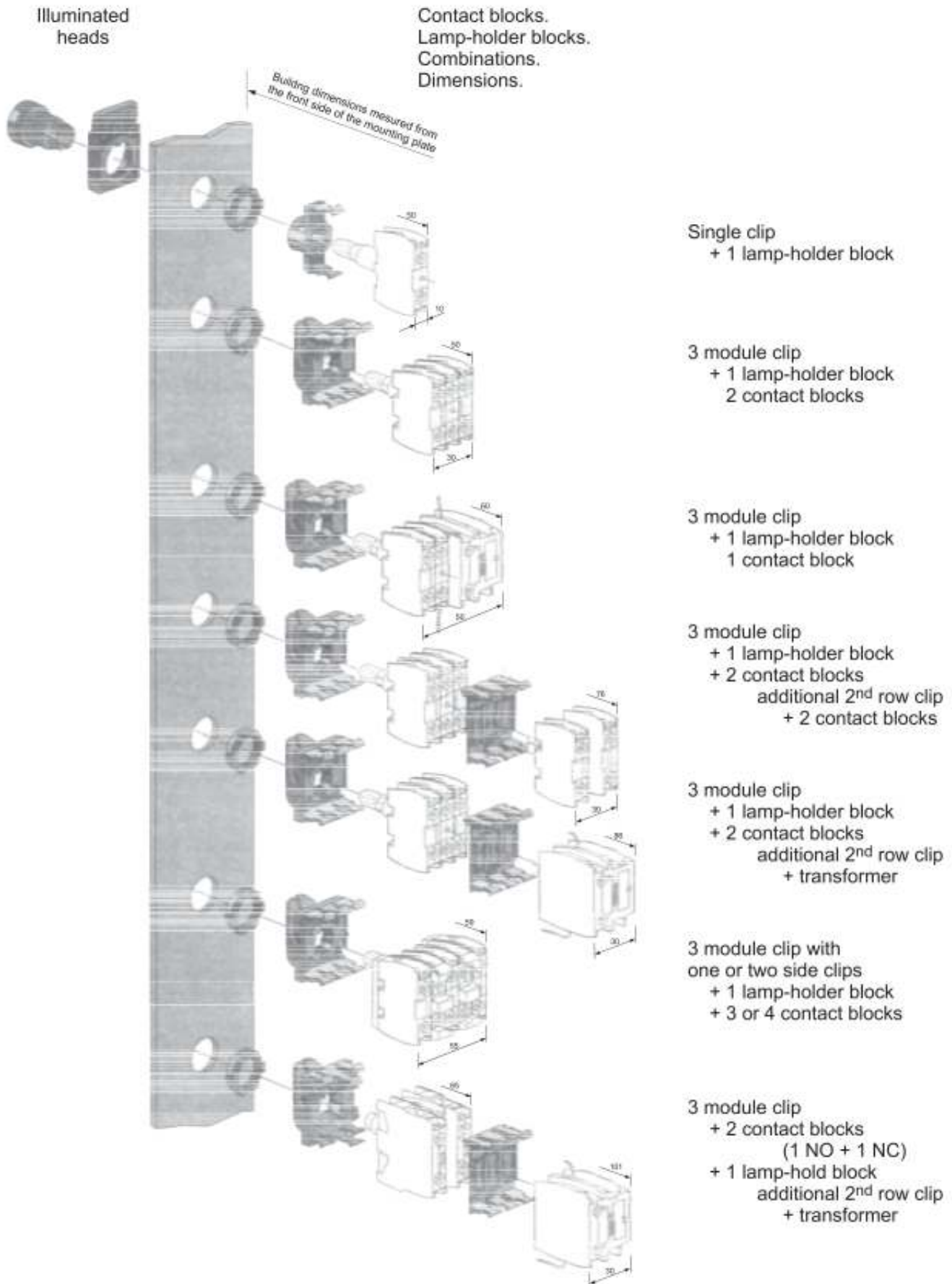
Description	Symbol	Code	Description	Symbol	Code	Description	Symbol	Code
Continuous straight-line movement ISO 1		A01	Brake ISO 65		A65	Lubrication jet ISO 101		C01
Alternating straight-line movement ISO 5		A05	Release brake ISO 66		A66	Machine lighting ISO 102		C02
Continuous rotating movement clockwise ISO 7A		A07	Automatic cycle (or semi-automatic) ISO 67		A67	Greasing ISO 107		C07
Continuous rotating mov. anti-clockwise ISO 7B		B07	Manual control ISO 68		A68	Blow ISO 108		C08
Forward ISO 16		A16	"ON" close circuit ISO 69		A69	Suction ISO 109		C09
Increase in value ISO 28		A28	"Stop" open circuit ISO 70		A70	(Sound) alarm DIN 165		D01
Decrease in value ISO 29		A29	ON/OFF close + open circuit ISO 71		A71	Additional standard symbol		B01
Adjustable ISO 62		A62	Close circuit manual impulse ISO 72		A72	Additional standard symbol		E01
Clamp, block apply pressure ISO 63A		A63	Clutch ISO 74		A74	Additional standard symbol		F01
Clamp, block apply pressure ISO 63B		B63	De-clutch ISO 75		A75	Additional standard symbol		B62
Undamp, release ISO 64A		A64	Warning "live" (energized) ISO 92		A92	Additional standard symbol		E62
Undamp, release ISO 64B		B64	Main switch ISO 94		A94	Additional standard symbol		F62

Examples of assemblies

Non-illuminated heads

Contact blocks.
Combinations.
Dimensions.





Ordering examples

Ordering examples for the most frequently used control and signalling units

Control and signalling units can be assembled of two larger or more smaller sub-assemblies. The inventory of more smaller sub-assemblies (having the same value as if larger sub-assemblies were on stock) offer the possibility of more assembly variations.

Abbreviations used in the chart below: EI - heads
Ér - contact blocks
Fé - lamp-holder blocks

	Description	Codes for larger sub-assemblies		Codes for smaller sub-assemblies
Non-illuminated	ON-pushbutton spring-return, flush, 1 NO contact without engraving, green	EI	C21AA02	C21AA00 + WA32
		Ér: Fé	230E10	230E + 23E10
	OFF-pushbutton spring-return, flush, 1 NC contact without engraving, red	EI	C21AA01	C21AA00 + WA31
		Ér: Fé	230E01	230E + 23E01
	Pushbutton spring-return, flush 1 NO + 1 NC contact, without engraving, black	EI	C21AA03	C21AA00 + WA33
		Ér: Fé	233E11	233E + 23E01 + 23E10
	Mushroom-head pushbutton Ø 40, 1 NC unlatch by turning	EI	C21ED01	C21ED01
		Ér: Fé	230E01	230E + 23E01
Illuminated	Pushbutton spring-return, flush, 1 NO + 1 NC, 230 V, without engraving, yellow	EI	C21AH40	C21AH40
		Ér: Fé	233ECKG11	233E + 23E10 + 23E01 + 23ECKG
	ON-pushbuttons spring-return, flush, 1 NO contact, direct, without engraving, green	EI	C21AH20	C21AH20
		Ér: Fé	233EA10	233E + 23E10 + 23EA
	Pushbutton spring-return, flush, 1 NO + 1 NC direct, without engraving, red	EI	C21AH10	C21AH10
		Ér: Fé	233EA11	233E + 23E10 + 23E01 + 23EA
Pilot light with resistor and diode 230 V, monoblock without engraving, green, with filament bulb	EI	S20JA20C	S20JA00 + 818321 + bulb (130 V; 2 W)	
	Ér: Fé	-	-	
Pilot light with resistor and diode 230 V, monoblock, without engraving, red with filament bulb	EI	S20JA10C	S20JA00 + 818321 + bulb (130 V; 2 W)	
	Ér: Fé	-	-	
Pilot light direct, monoblock, without engraving, green, without filament bulb	EI	S20SA20	S20SA00 + 818322	
	Ér: Fé	-	-	
Pilot light direct, monoblock, without engraving, red, without filament bulb	EI	S20SA10	S20SA00 + 818321	
	Ér: Fé	-	-	
Selector switch, O-1 1 NO contact, short black handle (lever)	EI	C21KC 03	C21KC03	
	Ér: Fé	230E10	230E + 23E10	
Key-operated selector switch 1-O-2 1 NO + 1 NC contact, spring-return	EI	C21ND00	C21ND00	
	Ér: Fé	233E0110	233E + 23E10 + 23E 01	
Twin-touch pushbutton; I green, O red 1 NO + 1 NC contact	EI	V62QA02	V62QA02	
	Ér: Fé	233E0110	233E + 23E10 + 23E01	

Rated values

Insulation voltage	690 V
Impulse withstand voltage	6 kV
Conventional thermal current	16 A
Operational current at alternating voltage	

Ue [V]	AC-21	AC-15
	(resistiv load)	(electromagnetic load)
	le [A]	le [A]
230	14	6
400	12	4,5
440	11	3,5
500	10	2,5
690	6	1

Operational current at direct voltage

Ue [V]	DC-13
	(electromagnetic load)
	le [A]
24	1,5
48	1
60	0,7
110	0,3
220	0,2

Short-time withstand current at 10 A fuse (G)

1 min:	70 A
1 sec:	180 A

Mechanical endurance (pushbutton)

3×10⁶ c

Electrical endurance at 230 V, AC-21

operational current [A]

14	0,2×10 ⁶ c
10	0,5×10 ⁶ c
6	1×10 ⁶ c
2	3×10 ⁶ c

Ambient temperature

usage	-30 ... +60 °C
storage	-50 ... +80 °C

Degree of protection

standard devices	IP 65
for twin and triple touch	IP 40
for buttons with shroud	IP 67

Climatic resistance MSz IEC 68

tropical

Cross-section of connecting wires max.

2×2,5 mm²

Relevant standard

MSZ EN 60947

Bulb to BA9s socket

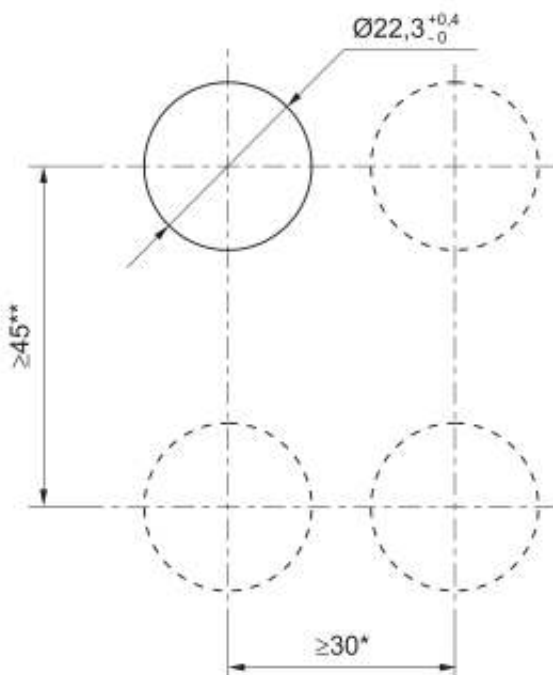
max. 2,6 W

Approvals for distribution

MEEI, U.L., CSA,
VERITAS, SEV,
NEMKO, DEMKO,
SEMKO, F.I., G.I

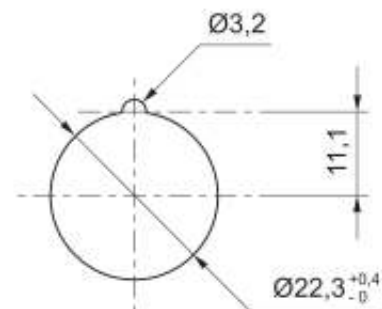
Drill plan

(devices with screw terminals)



Thickness of mounting panel: 1 ... 6 mm

Cut off when using anti-rotation ring (optional)



- *: - for switches with shroud = 33 mm
- for switches with lever handle > 45 mm
- for mushroom heads: greater than the diameter of the head

- **:- for twin-touch and triple touch ≥ 54 mm
- for mushroom heads: greater than the diameter of the head

Enclosed devices (control stations)

The enclosures are double insulated, having IP 65 degree of protection, made of grey self-extinguishing plastic. Heads are round with grey bezels.

Each enclosure has three knock-out cable entries for Pm 13 cable glands (one under, one above and one on the right).

Enclosed devices	Function	Colour	Engraving	Connection scheme	Code	Dimensions	Picture No
1 pushbutton, flush	on	green			BX10110	30	23
1 pushbutton, flush	off	red			BX10610	30	-
1 mushroom head pushbutton, Ø 40	off	red			BX10210	30	-
2 pushbuttons, flush	on off	green red	 	 	BX20120	30	-
2 pushbuttons, flush 1 pilot light 230 VAC filament bulb: 130 V, 2 W lamp-holder: BA9s	pilot light on off	colourless green red	 	 	BX30121	30	-
3 pushbuttons, flush	forward off reverse	green red green	 	 	BX30330	30	-
3 pushbuttons, flush	up off down	green red green	 	 	BX30430	30	24
1 mushroom head pushbutton unlatch by turning	emergency stop	emergency red, yellow enclosure lid	ARRÊT D'URGENCE		BX10310	30	25
			NOT AUS		BX10410		
			EMERGENCY STOP		BX10510		
1 mushroom head pushbutton unlatch by key	emergency stop	emergency red, yellow enclosure lid	ARRÊT D'URGENCE		BX11010	30	-
			NOT AUS		BX11110		
			EMERGENCY STOP		BX11210		
1 selector switch two positions, short handle	on - off	black handle			BX12510	30	-
1 key-operated selector switch	on - off	black handle			BX12610	30	-

Empty enclosures

The IP 65 empty enclosures have three knock-out cable entries for Pm 13 cable glands. The following special base-mounting contact blocks and lamp holder blocks can be built into these enclosures:

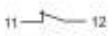
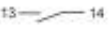



Number of built-in devices	Code
1	BX0100
2	BX0200
3	BX0300
5	BX0500
See diagram No 30	

Devices for plastic enclosures

Pushbuttons

Heads
All types are suitable, except: - for square heads - push-push - push-pull mushroom-head


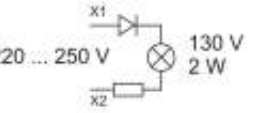
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Contact blocks	Code	Picture No
	ZA5	27
	ZB5	-
	ZA5-ZB5	-
	ZA5-ZA5	-
	ZB5-ZB5	-


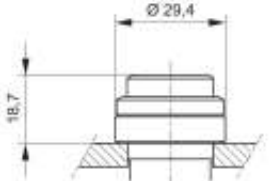


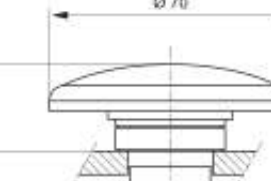


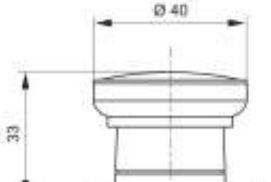
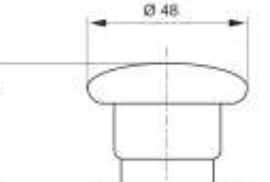
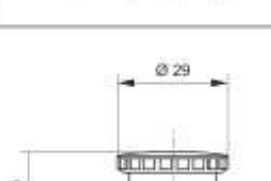
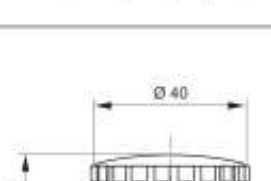
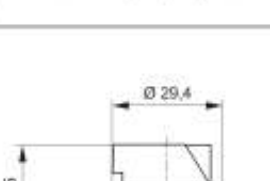
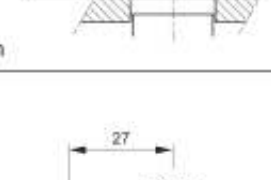
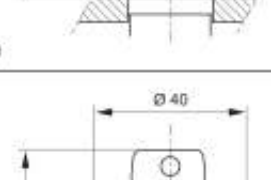
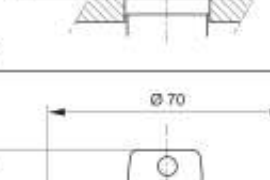
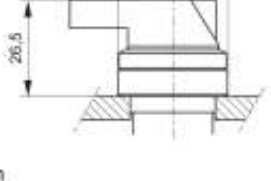
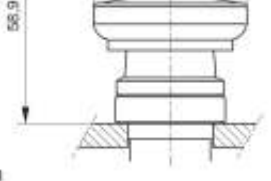
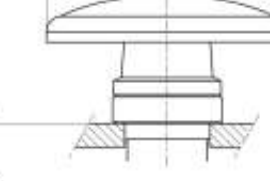
Pilot lights

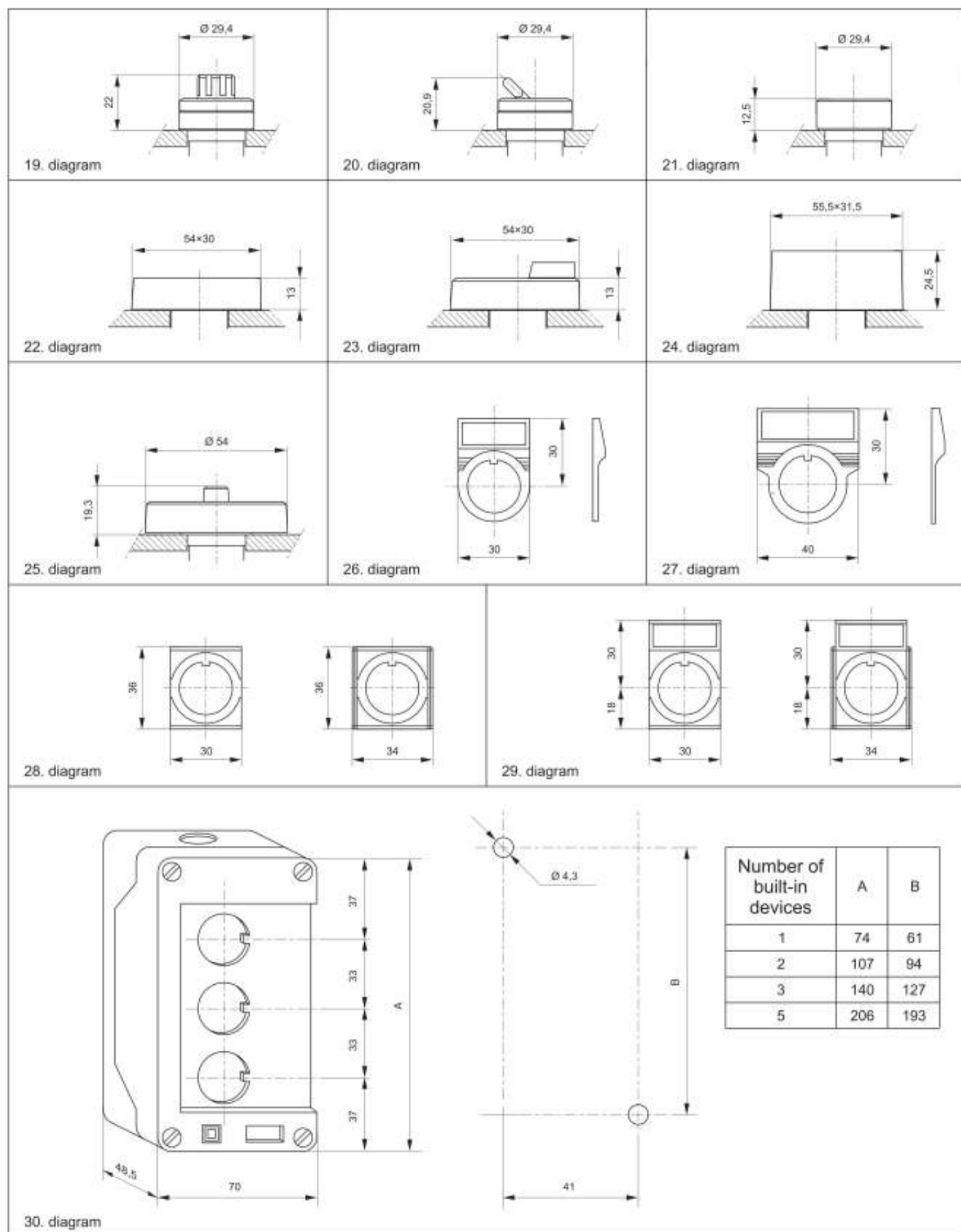
Heads		Code	
Translucent, without texture	without bezel	red	J10SE10
		green	J10SE20
		yellow	J10SE40
		white	J10SE50
	with chromated bezel	red	J15SA10
		green	J15SA20
		yellow	J15SA40
		white	J15SA50
With blank legend plates (3)	without bezel	red	J10SF10
		green	J10SF20
		yellow	J10SF40
		white	J10SF50
	with chromated bezel	red	J15SB10
		green	J15SB20
		yellow	J15SB40
		white	J15SB50

+

Lamp-holder blocks (without bulbs) for BA 9s bulbs	Code	Picture No
 filament bulb max. 2 W neon max 400 V	Z3XD5	26
 220 ... 250 V 130 V 2 W	Z5XE5	-

Dimensions

 <p>1. diagram</p>	 <p>2. diagram</p>	 <p>3. diagram</p>
 <p>4. diagram</p>	 <p>5. diagram</p>	 <p>6. diagram</p>
 <p>7. diagram</p>	 <p>8. diagram</p>	 <p>9. diagram</p>
 <p>10. diagram</p>	 <p>11. diagram</p>	 <p>12. diagram</p>
 <p>13. diagram</p>	 <p>14. diagram</p>	 <p>15. diagram</p>
 <p>16. diagram</p>	 <p>17. diagram</p>	 <p>18. diagram</p>



Accessories

Type		Code	Dimensions	Picture No
Silicone shroud with protection IP 67	For flush pushbuttons	red	WA 0203	6 38
		green	WA 0204	
		black	WA 0205	
		yellow	WA 0206	
		blue	WA 0227	
		transparent	WA 0228	
	For types V 62 ... (page 5 and 7)		WA 0224	24
Square bezel without lateral termination		WA 0230	28	37
lateral termination 2 pcs		WA 0231		
Lens for monoblock pilot light type S20SA... and S20JA... (page 8)	red	818 321	-	-
	green	818 322	-	-
	colourless	818 323	-	-
	yellow	818 324	-	-
	white	818 325	-	-
	blue	818 326	-	-
Low bezels	mat chromed plastic	WB 0021	-	-
	black plastic	WB 0022	-	-
	grey plastic	WB 0023	-	-
	brilliant chromed brass	WB 0024	-	-
	brilliant chromed plastic	WB 0026	-	-
	mat anodized alu	WB 0028	-	-
DIN rail adaptor (only for pilot light heads and pushbuttons)		WA 0232	-	-
Extended bezel		WA 0225	-	-
Blanking plug		WA 0215	-	-
Anti-rotation positioning ring		WA 0209	-	-
Reduction ring Ø 30/22	grey	WA 0219	-	-
	yellow	WA 0220	-	-
Spare key	No 455	994 0000	-	-
	No 1424 A	994 0001	-	-
Padlockable shroud for heads		WA 0226	-	40
Knob for potentiometers with angle Ø 6 ... 6,35 mm		C 21 RP 03	19	16
Fixing tool Ø 22/30		WA 0210	-	-
Bulb extractor for BA9s and B15d bulbs		WA 0201	-	-

Type	Code	Dimensions	Picture No
Filaments with BA9s bulb	6 V 0,6 W	WDL 006	- -
	12 V 1,2 W	WDL 012	- -
	24 V 1,5 W	WDL 024	- -
	48 V 1,5 W	WDL 048	- -
	60 V 2 W	WDL 060	- -
	130 V 2 W	WDL 127	- -
	Neons with BA 9s bulb	red	130 V
230 V			WDN 220 - -
400 V			WDN 380 - -
green		130 V	WDF 127 - -
		230 V	WDF 220 - -
		400 V	WDF 380 - -
Multi-LEDs 8 pcs LEDs in BA 9s bulb for 24 V AC/DC (+ pole on terminal X1)	red	WDB 024	- -
	green	WDB 024	- -
	yellow	WDB 024	- -





Picture 5.



Picture 6.



Picture 7.



Picture 8.



Picture 9.



Picture 10.



Picture 11.



Picture 12.



Picture 13.



Picture 14.



Picture 15.



Picture 16.



Picture 17.



Picture 18.



Picture 19.



Picture 20.



Picture 21.



Picture 22.



Picture 23.



Picture 24.



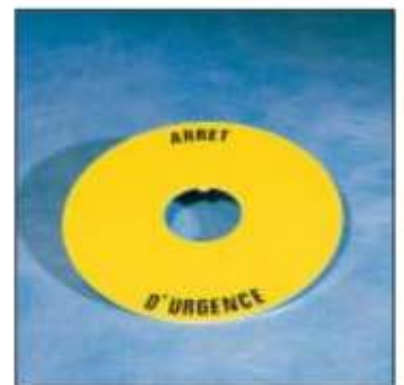
Picture 25.



Picture 26.



Picture 27.



Picture 28.



Picture 29.



Picture 30.



Picture 31.



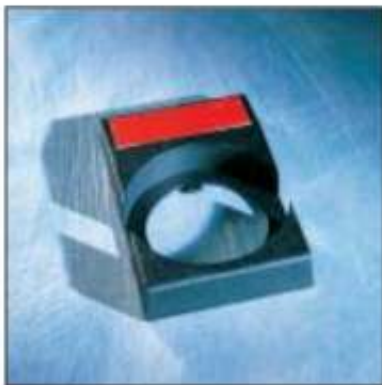
Picture 32.



Picture 33.



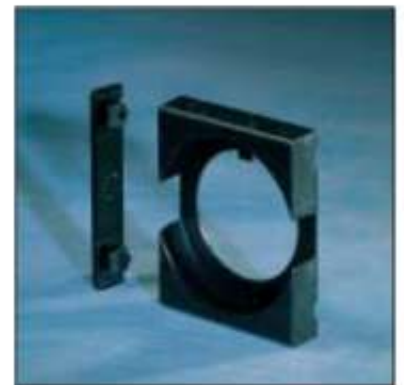
Picture 34.



Picture 35.



Picture 36.



Picture 37.



Picture 38.



Picture 39.



Picture 40.

Ganz Kapcsoló- és Készülékgyártó Kft.

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