



GIOVENZANA
INTERNATIONAL B.V.



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PHOENIX CAM SWITCHES
DIN MOUNTING - D



PHOENIX CAM SWITCHES | TYPE D

DIMENSIONS AND DRILLING PLAN | TYPE D

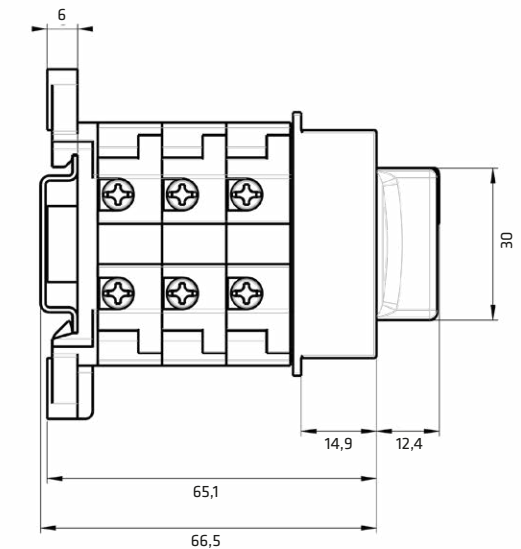
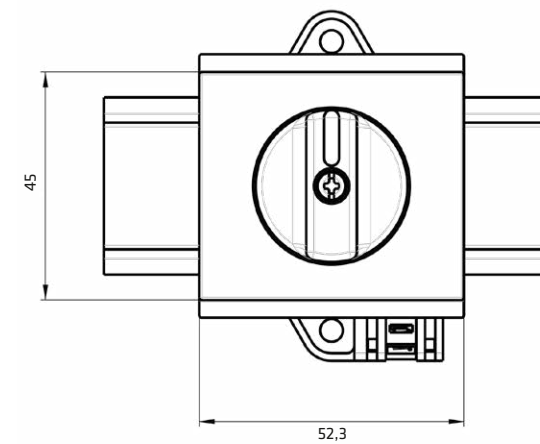
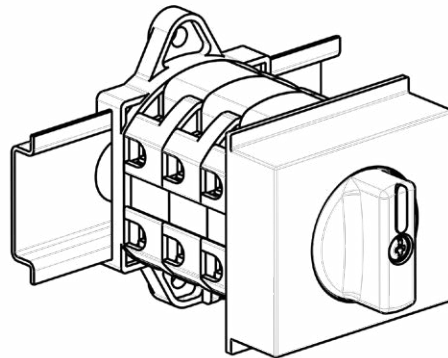


DIN MOUNTING 46 mm

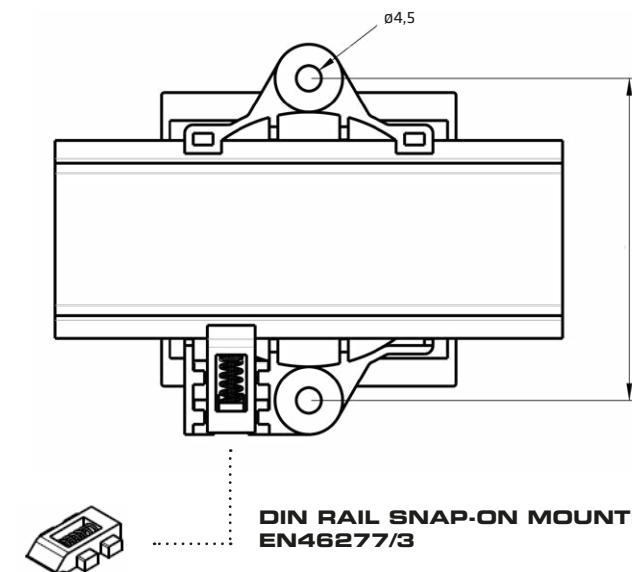
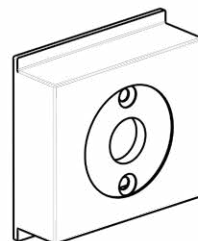
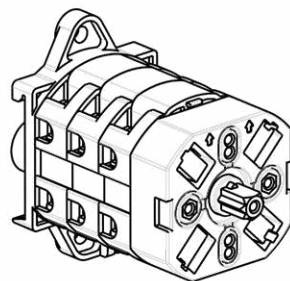
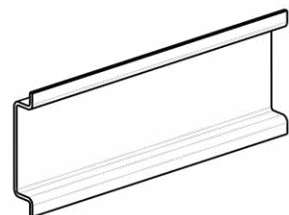
Only switches DIN rail mounting 46 mm standard boxes

| RANGE AC21A | 12A - 16A - 20A |

DIN EN46277/3



**STEADY Length
3 WAFERS**



**ADDITIONAL FIXING
HOLES**

**DIN RAIL SNAP-ON MOUNTING
EN46277/3**

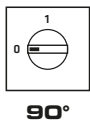
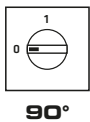
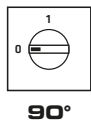
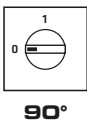
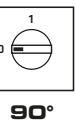
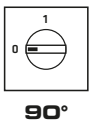


DIN MOUNTING 46 mm

Only switches DIN rail mounting 46 mm standard boxes



12-16-20A



1					
	1-2				X
WAF	CONT.	0		1	

1		3-4			X
	1-2				X
WAF	CONT.	0		1	

2					
	5-6				X
1		3-4			X
	1-2				X
WAF	CONT.	0		1	

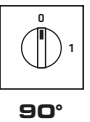
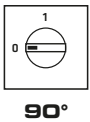
2		7-8			X
	5-6				X
1		3-4			X
	1-2				X
WAF	CONT.	0		1	

3					
	9-10				X
2		7-8			X
	5-6				X
1		3-4			X
	1-2				X
WAF	CONT.	0		1	

3		11-12			X
	9-10				X
2		7-8			X
	5-6				X
1		3-4			X
	1-2				X
WAF	CONT.	0		1	

ACTUATOR

P012 - P016 - P020



027/0001

SERIES	AC21A	1 POLE	2 POLES	3 POLES	4 POLES	5 POLES	6 POLES
P012	12A	P0120001D	P0120002D	P0120003D	P0120004D	P0120005D	P0120006D
P016	16A	P0160001D	P0160002D	P0160003D	P0160004D	P0160005D	P0160006D
P020	20A	P0200001D	P0200002D	P0200003D	P0200004D	P0200005D	P0200006D

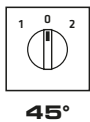


DIN MOUNTING 46 mm

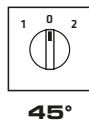
Only switches DIN rail mounting 46 mm standard boxes



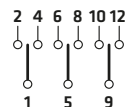
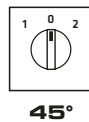
12-16-20A



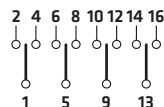
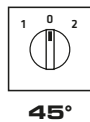
1	3-4			X
	1-2	X		
WAF	CONT.	1	0	2



2	7-8			X
	5-6	X		
1	3-4			X
	1-2	X		
WAF	CONT.	1	0	2



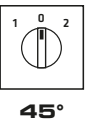
3	11-12			X
	9-10	X		
2	7-8			X
	5-6	X		
1	3-4			X
	1-2	X		
WAF	CONT.	1	0	2



4	15-16			X
	13-14	X		
3	11-12			X
	9-10	X		
2	7-8			X
	5-6	X		
1	3-4			X
	1-2	X		
WAF	CONT.	1	0	2

ACTUATOR

P012 - P016 - P020



027/0008

SERIES	AC21A	1 POLE	2 POLES	3 POLES	4 POLES
P012	12A	P0120008D	P0120009D	P0120010D	P0120011D
P016	16A	P0160008D	P0160009D	P0160010D	P0160011D
P020	20A	P0200008D	P0200009D	P0200010D	P0200011D



AMMETER AND VOLTMETER SWITCHES | TYPE D

ACTUATORS AMMETER AND VOLTMETER SWITCHES | TYPE D

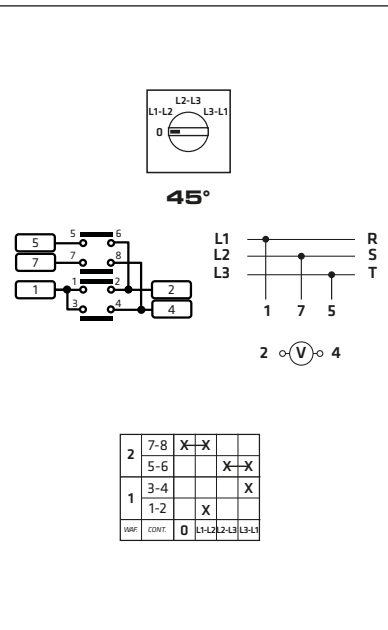
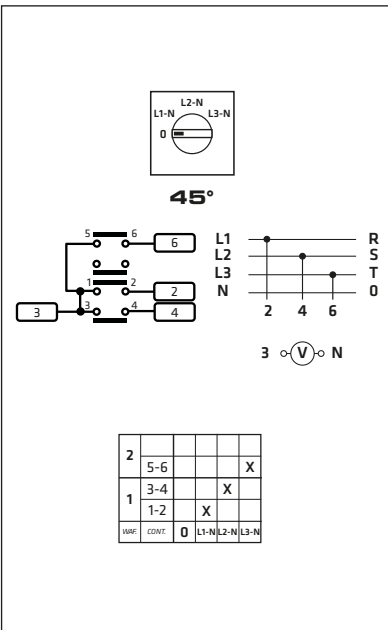
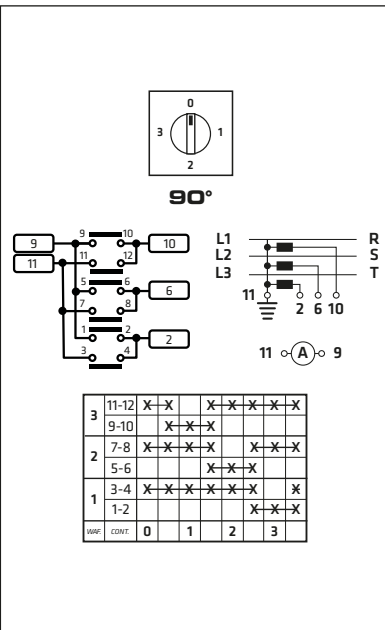


DIN MOUNTING 46 mm

Only switches DIN rail mounting 46 mm standard boxes



12-16-20A

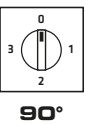


SERIES	AC21A	AMMETER SELECTOR SWITCH 1 POLE FOR 3 CURRENT TRANSFORMERS	VOLTMETER SELECTOR SWITCH PHASE-NEUTRAL	VOLTMETER SELECTOR SWITCH PHASE-PHASE
P012	12A	P0120019D	P0120020D	P0120021D
P016	16A	P0160019D	P0160020D	P0160021D
P020	20A	P0200019D	P0200020D	P0200021D

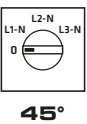


ACTUATOR

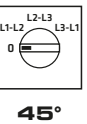
P012 - P016 - P020



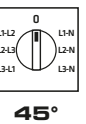
027/0019



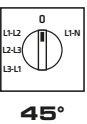
027/0020



027/0021



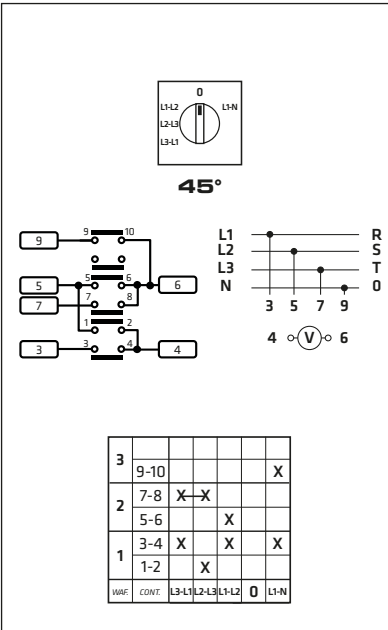
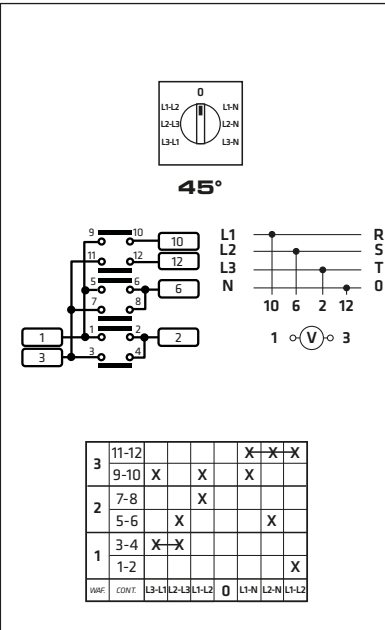
027/0023



027/0024



12-16-20A



SERIES	AC21A	VOLTMETER SELECTOR SWITCH PHASE-PHASE AND PHASE-NEUTRAL	VOLTMETER SELECTOR SWITCH PHASE-PHASE AND 1 PHASE-NEUTRAL
P012	12A	P0120023D	P0120024D
P016	16A	P0160023D	P0160024D
P020	20A	P0200023D	P0200024D

RANGE OVERVIEW AND GENERAL CHARACTERISTICS

COMPLY WITH RULES

IEC 947-3, EN 60947-3, UL508



SERIES			P012-P016-P020 PX12-PX16-PX20			C025-C032-C040 CX25-CX32-CX40		
Protection class	control	EN 60529 (UL50) NEMA 4X	IP65 (Type 1 - 4 -4X)			IP65 (Type 1 - 4 -4X)		
	control with knob only		IP40			IP40		
	terminals		IP20 (P0) - IP10 (PX)			IP20 (P0) - IP10 (PX)		
Material group		EN 60947-1	II			II		
Pollution grade		EN 60947-1	3			3		
Flammability		UL94	VO (Live Electrical parts)			VO (Live Electrical parts)		
Ambient temperature		°C	Operating: -40 +85			Operating: -40 +85		
		°C	Storage: -40 +70			Storage: -40 +70		
Climate Withstand		IEC 68 part 2-3	Hot damp			Hot damp		
		IEC 68 part 2-30	Unsettled hot damp			Unsettled hot damp		
Terminal screw identification			EN50013			EN50013		
Connections	Terminal block caliber	EN60947-1	A3			A5		
	Terminal screw		M3,5			M4		
	Screwing torque	EN60947-1	0,8 Nm (7,2 lb. in.)			1,2 Nm (10,6 lb. in.)		
		UL508	7,5 lb. in. (0,85 Nm)			12 lb. in. (1,4 Nm)		
Connectable section	Flexible conductors min/max	mm ²	1x0,75/4 - 2x0,75/2,5			2x2,5/10		
		AWG	10 - 18			14 - 6		
	Solid conductors min/max	mm ²	1x0,75/4 - 2x0,75/2,5			2x2,5/10		
		AWG	10 - 18			14 - 6		
Contacts			Double breaking			Double breaking		
Opening angles			30° - 45° - 60° - 90°			30° - 45° - 60° - 90°		
Mechanical lifetime at 120 operations for hour		mil./cl	1	1	1	1	1	1
Electrical lifetime at 120 operations for hour		mil./cl	1	0,75	0,75	1	0,75	0,75
CERTIFICATIONS			P012 PX12	P016 PX16	P020 PX20	C025 CX25	C032 CX32	C040 CX40
CE	CE mark - Europe		■	■	■	■	■	■
cUL	cUL Listed - USA and Canada		●	●	●	●	●	●
IMQ	IMQ Istituto Marchio Qualità - Italy		●	●	●	●	●	●
CCC	CCC Cina		●	●	●	●	●	●
EAC	EAC Russia		●	●	●	●	●	●

C063-C080		G125	G200
IP65		IP65	IP65
IP40		-	-
IP00		IP00	IP00
II		IIIA	IIIA
3		3	3
VO (Live Electrical parts)		VO (Live Electrical parts)	VO (Live Electrical parts)
Operating: -40 +70		Operating: -15 +55	Operating: -15 +55
Storage: -40 +70		Storage: -25 +70	Storage: -25 +70
Hot damp		-	-
Unsettled hot damp		-	-
EN50013		-	-
A7		-	-
2xM4		Hex. screw M8 for bars and cable lugs	Hex. screw M10 for bars and cable lugs
1,2 Nm (10,6 lb. in.)		-	-
10,62 lb. in. (1,2 Nm)		-	-
2,5/35		-	-
14 - 3		-	-
2,5/35		-	-
14 - 3		-	-
Double breaking		Double breaking	Double breaking
45° - 60° - 90°		60° - 90°	60° - 90°
1	1	0,1	0,1
0,5	0,25	0,01	0,01
C063	C080	G125	G200
■	■	■	■
●	●	●	●
●	●		



PHOENIX CAM SWITCHES

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ELECTRICAL CHARACTERISTICS

EN 60947-3 CHARACTERISTICS			P012 - PX12	P016 - PX16	P020 - PX20
Rated operating voltage Ue	V		690	690	690
Rated insulation voltage Ui	V		690	690	690
Rated impulse withstand voltage Uimp (sectionable)	kV		4	4	4
Rated thermal current Ith	A		16	20	25
Rated thermal current in enclosed Ithe	A		12	16	20
Frequency	Hz		50/60	50/60	50/60
RATED OPERATING CURRENT Ie: alternate current			P012 - PX12	P016 - PX16	P020 - PX20
AC-21A Switching resistive loads with light overloads	690V	A	12	16	20
AC-22A Switching mixed resistive and inductive loads at light overloads	690V	A	12	16	20
AC-23A Periodic switching of motors	single phase - 1 pole	110V A/kW	12/1,1	14/1,5	18/2
		230V A/kW	12/2,2	14/3	18/4
	3 phases - 3 poles	230V A/kW	10/3	14/4	16/5
		400V A/kW	10/5,5	14/7,5	16/9
		500V A/kW	10/7,5	14/10	16/11
		690V A/kW	10/7,5	14/10	16/12,5
AC3 Starting of cage motors (interruption hile running)	single phase - 2 poles	110V A/kW	10/0,75	12/1,1	16/1,5
		230V A/kW	10/2	12/2,2	16/3,5
	3 phases - 3 poles	230V A/kW	8/2,2	10/3	12/4
		400V A/kW	8/4	10/5	12/6
		500V A/kW	8/5,5	10/7,5	12/8
		690V A/kW	6/5,5	8/7,5	10/9
Nominal interruption power AC-23A (cosfi 0,45)		230V A	80	104	128
		400V A	80	104	128
		500V A	80	112	128
		690V A	80	112	128
Power dissipation for each pole	W		0,3*	0,35*	0,4*
RATED OPERATING CURRENT Ie: direct current			P012 - PX12	P016 - PX16	P020 - PX20
DC-21A Switching resistive loads with light overloads	50V (1 phase)	A	10	12	16
DC-22A Switching mixed resistive and inductive loads at light overloads	30V (1 phase)	A	8	10	12
SHORT CIRCUIT CHARACTERISTICS			P012 - PX12	P016 - PX16	P020 - PX20
Rated short-time short circuit withstand current Icw (1 s)	A		300	300	300
Rated short circuit making capacity Icm	A		1200	1200	1200
Conditional rated short circuit withstand current	kA		5	5	5
Fuse rating gG	690V	A	20	20	20
UL 508 CHARACTERISTICS			P012 - PX12	P016 - PX16	P020 - PX20
General Use	600V AC	A	12	16	20
Standard motor load	single phase - 2 poles	120V AC HP (FLA)	0,5 (9,8)	1 (16)	1,5 (20)
		240V AC HP (FLA)	1 (8)	1,5 (10)	2 (12)
	3 phases - 3 poles	200V AC HP (FLA)	1,5 (6,9)	3 (11,04)	5 (17,5)
		240V AC HP (FLA)	3 (9,6)	5 (15,2)	5 (15,2)
		480V AC HP (FLA)	5 (7,6)	7,5 (11)	10 (14)
		600V AC HP (FLA)	5 (6,1)	7,5 (9)	10 (11)

C025 - CX25	C032 - CX32	C040 - CX40	C063	C080	G125	G200
690	690	690	690	690	690	690
690	690	690	690	690	690	690
6	6	6	8	8	6	6
32	40	50	85	100	150	225
25	32	40	85	100	150	225
50/60	50/60	50/60	50/60	50/60	50/60	50/60
C025 - CX25	C032 - CX32	C040 - CX40	C063	C080	G125	G200
25	32	40	63	80	125	200
25	32	40	63	80	125	200
25/1,5	30/2,2	35/3	45/4	63/5,5	-	-
25/4	30/5,5	35/6,5	45/7,5	63/11	-	-
25/7,5	30/9	35/11	50/15	58/18,5	140/45	169/55
22/11	24/15	32/18,5	40/22	54/30	78/45 (415V)	95/55 (415V)
22/11	27/18,5	32/22	40/30	54/37	65/45	79/55
20/15	22/18,5	25/22	32/30	40/37	47/45	57/55
22/1,1	25/1,5	30/2,5	36/3,7	45/4	-	-
22/3,7	25/4	30/5,5	36/6,5	45/7,5	-	-
18/5,5	23/7,5	27/9	37/11	47/15	115/37	140/45
18/7,5	23/11	27/15	35/18,5	44/22	64/37 (415V)	78/45 (415V)
18/11	23/15	27/18,5	35/22	44/30	53/37	64/45
14/11	18/15	20/18,5	25/22	32/30	39/37	47/45
200	240	280	400	464	-	-
176	216	256	320	432	-	-
176	216	256	320	432	-	-
160	176	200	256	320	-	-
-	-	-	-	-	-	-
C025 - CX25	C032 - CX32	C040 - CX40	C063	C080	G125	G200
20 ▼	25 ▼	32 ▼	-	-	-	-
16 ▼	20 ▼	25 ▼	-	-	-	-
C025 - CX25	C032 - CX32	C040 - CX40	C063	C080	G125	G200
500	500	500	1200	1200	-	-
2840	2840	2840	2000	2000	-	-
10	10	10	10	10	20	20
40 ■	40 ■	40 ■	100	100	125 ▲	200 ▲
C025 - CX25	C032 - CX32	C040 - CX40	C063	C080	G125	G200
25	32	40	63	85	125	175
1,5 (20)	2 (24)	3 (34)	5 (56)	5 (56)	-	-
3 (17)	5 (28)	5 (28)	7,5 (40)	10 (50)	-	-
7,5 (25,3)	7,5 (25,3)	10 (32,2)	-	-	10 (56)	15 (84)
7,5 (22)	7,5 (22)	10 (28)	15 (42)	20 (54)	20 (54)	25 (68)
15 (21)	20 (27)	20 (27)	30 (40)	40 (52)	40 (52)	50 (65)
15 (17)	20 (22)	20 (22)	40 (41)	50 (52)	50 (52)	50 (52)

EXECUTION ON DEMAND

ORDER FORM FOR SPECIAL SCHEME ON REQUEST

SPECIAL SHAFTS

- ➔ Length and shape on request.



FAST ON CONNECTIONS

- ➔ Flat fast on terminals.
- ➔ Single or double terminals.
- ➔ P012 ... P020 - C025 ... C040 Series.



AXIAL INTERLOCK

- ➔ "Push and turn" interlock in several positions.
- ➔ C025 ... C040 Series.



UNDIRECTIONAL ROTATION

- ➔ Unidirectional turn.
- ➔ C025 ... C040 Series.



PE SERIES - LOWERED CAM SWITCHES

- ➔ Only for 12 ... 20A Series.
- ➔ Only for few electrical schemes.
- ➔ Length 20mm less than an equivalent PO-PX Series.



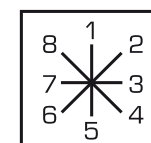
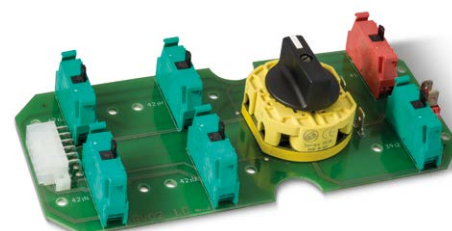
COAXIAL COUPLING

- ➔ Power Unit + Aux Unit.

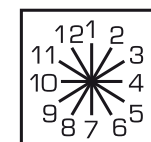


CAM SWITCH

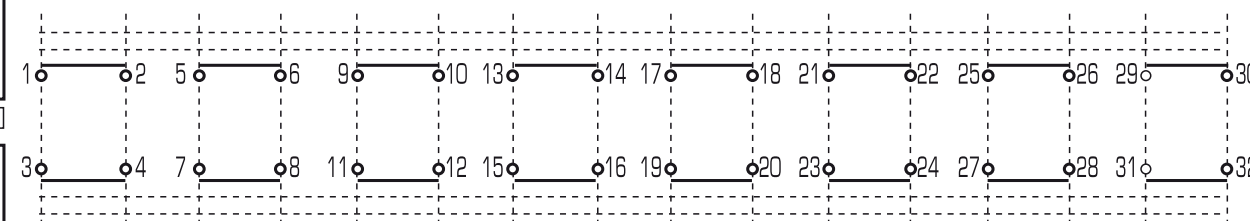
- ➔ Suitable for PCB connection.
- ➔ **PATENTED** product.



☐ 45 - 90 ☐

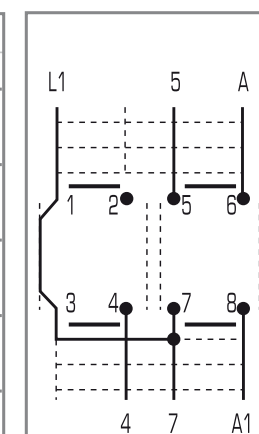


☐ 30 - 60 ☐



POS.	DESCRIPTION	POS.	DESCRIPTION
1		7	
2		8	
3		9	
4		10	
5		11	
6		12	

10	39-40				
9	37-38				
8	35-36				
7	33-34				
6	31-32				
5	29-30				
4	27-28				
3	25-26				
2	23-24				
1	21-22				
	19-20				
	17-18				
	15-16				
	13-14				
	11-12				
	9-10				
	7-8				
	5-6				
	3-4				
	1-2				



2	7-8			X
1	5-6		X	X
	3-4	X	X	
	1-2		X	
WAFFER	CONT.	0	1	M
		POSITION		

- ☐ Open Contact
- ☒ Closed contact
- ☒ Break before make
- ☒ Contact closed: no interruption during changeover
- ☒ Spring return
- ☒ Make before break
- ☒ Open contact early make

Rated current Ie Operational rated voltage Ue			
Category	Amp/kw	Volt	
☐ AC-21A	A		V
☐ AC-22A	A		V
☐ AC-23A	1Ph kW		V
	3Ph kW		V
☐ AC-3	1Ph kW		V
	3Ph kW		V

Series _____

Mounting:

- ☐ Rear Panel mounting
- ☐ Base
- ☐ Din

Operating:

Notes:

Company: _____

Contact person: _____

Phone _____
Fax _____
E-mail _____
Quantity _____
Due date _____
Order Nr. _____