

# MCB 6KA PA-CV47

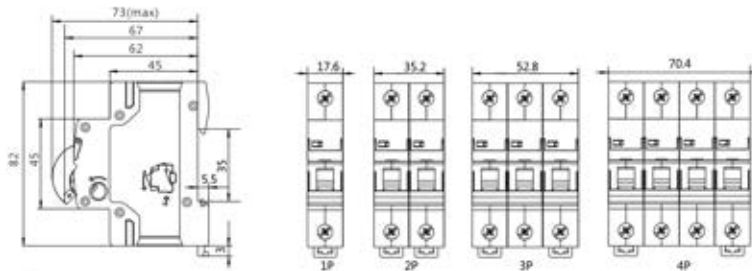
پارس اروند  
الکترونیک





### Connection

Rated current	Nominal Section Area of Copper Wire(mm <sup>2</sup> )
1-6A	1
10A	1.5
16, 20A	2.5
25A	4
32A	6
40, 50A	10
63A	16

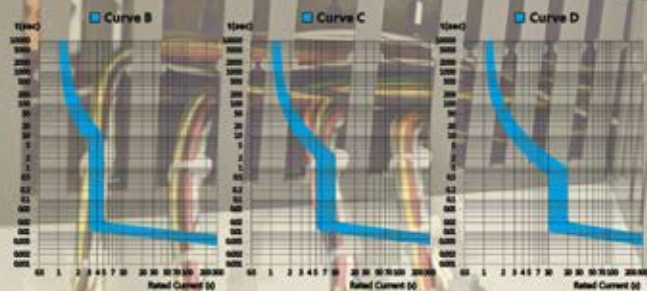


### Technical Data

Electrical features	
Rated current	1-63A
Poles	1P 2P 3P 4P
Rated voltage Ue	1P: 230/400V~ 2/3/4P:400~
Insulation voltage Ui	500V
Rated frequency	50/60Hz
Rated breaking capacity	4500/6000A
Rated impulse withstand voltage(1.2/50) Uimp	6kV
Dielectric test voltage at and ind. freq.for 1min	2kV
Polution degree	2
Thermo-magnetic release characteristic	B C D
Electrical life	4000
Mechanical life	10000
Installation	
Contact position indicator	Yes
Protection Class	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average $\leq 35^{\circ}\text{C}$ )	-5~ +40°C
Storage temperature	-25~ +70°C
Terminal connection type	Cable/U-type busbar/Pin - type busbar
Terminal size top/bottom for cable	25mm <sup>2</sup> 18-3
Tightening torque	3.0N·m 22
Mounting	On DIN rail FN 60715 (35mm) by means of fast clip device
Connection	Top and bottom
Combination with accessories	
Auxillary contact	Yes
Alarm contact	Yes
Shunt release	Yes
Under voltage release	Yes



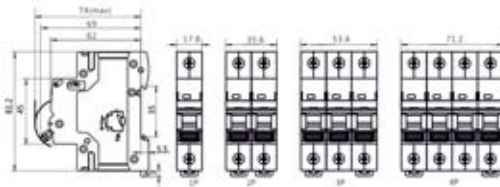
# MCB 10KA PA-CV57





## Connection

Rated current	Nominal Section Area of Copper Wire(mm <sup>2</sup> )
1-6A	1
10A	1.5
16, 20A	2.5
25A	4
32A	6
40, 50A	10
63A	16



## Technical Data

### Electrical features

Rated current	1-63A
Poles	1P 2P 3P 4P
Rated voltage Ue	1P: 230/400V~ 2/3/4P:400~
Insulation voltage Ui	500V
Rated frequency	50/60Hz
Rated breaking capacity	6000A
Rated impulse withstand voltage(1.2/50) Uimp	6kV
Dielectric test voltage at and ind. freq.for 1min	2kV
Polution degree	2
Thermo-magnetic release characteristic	B C D
Electrical life	8000
Mechanical life	10000

### Installation

Contact position indicator	Yes
Protection Class	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average $\leq 35^{\circ}\text{C}$ )	-5 ~ +40°C
Storage temperature	-25 ~ +70°C
Terminal connection type	Cable/U-type busbar/Pin-type busbar
Terminal size top/bottom for cable	25mm <sup>2</sup> 18-3
Tightening torque	3.0N·m 22
Mounting	On DIN rail FN 60715 (35mm) by means of fast clip device
Connection	Top and bottom

### Combination with accessories

Auxillary contact	Yes
Alarm contact	Yes
Shunt release	Yes
Under voltage release	Yes



ساخت ایران



7165051956



# RCCB PA-CVL7

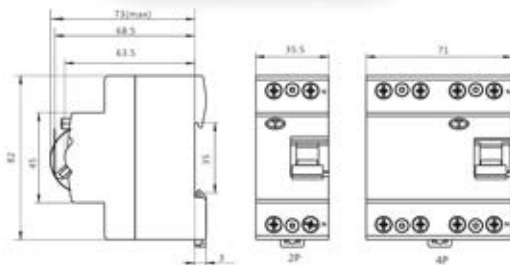
## Detection Waveform Type and Classification

Waveform definition	Waveform	AC Type	A Type	A-SI Type	Tripping current
Sinusoidal exchange		✓	✓	✓	0.5-1 s
Pulsating half wave		X	✓	✓	0.5-1.4 s
Pulsating half wave + leak current (10mA)		X	✓	✓	max(4I <sub>n</sub> +6mA)
Pulsating half wave + leak current (10mA)		X	X	✓	max(4I <sub>n</sub> +10mA)
High frequency (up to 1KHz)		X	X	X	150Hz 0.5-2.4 s
		X	X	X	400Hz 0.5-6 s
		X	X	X	1000Hz 1-14 s
Two phase rectified full wave		X	X	X	0.5-2 s
Three phase rectified full wave		X	X	X	0.5-2 s
Direct current					


## Connection

Rated current	Nominal Section Area of Copper Wire(mm <sup>2</sup> )
1-6A	1
10A	1.5
16, 20A	2.5
25A	4
32A	6
40, 50A	10
63A	16





## Technical Parameter

Electrical features							
Residual current operating type	Rated current (In)	Poles	Rated voltage	Rated Insulation voltage (Ui)	Rated frequency	Rated sensitivity (I $\Delta$ n)	DC current operating sensitivity I $\Delta$ nc
A+EV	25, 40, 63A	2P, 4P	240/415V	500V	50/60Hz	30mA	6mA
Rated short-circuit current Inc	Rated limited short-circuit current I $\Delta$ c	Rated switch-on segment capacity Im	Rated switch-on segment capacity I $\Delta$ m	Fuse selection	Rated impulse withstand voltage (1.2/50)	Dielectric test voltage	Pollution level
6kA	6kA	500A(25A,40A),630A(63A)	500A(25A,40A),630A(63A)	 Matching silver wire	4000V	2500V/1min	2

## mechanical features

Mechanical life	Electrical life	Leakage trip indication
10000	4000	■

## Rated residual current breaking time

Rated current	Rated sensitivity (I $\Delta$ n)	Residual current segment time (S)		
		I $\Delta$ n	2I $\Delta$ n	5I $\Delta$ n
25, 40, 63A	30	0.1	0.08	0.04
	Rated sensitivity (I $\Delta$ n)	Residual current segment time (S)		
25, 40, 63A	6mA	6mA	60mA	200mA
	30	10	0.3	0.1

# RCCB PA-CVL10

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## Detection Waveform Type and Classification

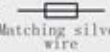
Waveform definition	Waveform	AC Type	A Type	A-FI Type	Tripping current
Sinusoidal exchange		✓	✓	✓	0.5-1.0 In
Pulsating half wave		X	✓	✓	0.5-1.4 In
Pulsating half wave + first quarter sine wave		X	✓	✓	max 1.4 In 60ms
Pulsating half wave + first quarter (100ms)		X	X	✓	max 1.4 In 100ms
High frequency (up to 2KHz)		X	X	X	150 to 2.5-2 X In
		X	X	X	400 to 2.5-6 In
		X	X	X	1000 to 1-14 In
Two phase rectified full wave		X	X	X	0.5-2 In
Three phase rectified full wave		X	X	X	0.5-2 In
Direct current					

## Connection

Rated current	Nominal Section Area of Copper Wire(mm <sup>2</sup> )
1-6A	1
10A	1.5
16, 20A	2.5
25A	4
32A	6
40, 50A	10
63A	16



## Technical Parameter

Electrical features							
Residual current operating type	Rated current (In)	Poles	Rated voltage	Rated Insulation voltage (Ui)	Rated frequency	Rated sensitivity (I $\Delta$ n)	DC current operating sensitivity I $\Delta$ nc
A+EV	25, 40, 63A	2P, 4P	240/415V	500V	50/60Hz	30mA	6mA
Rated short-circuit current Inc	Rated limited short-circuit current I $\Delta$ c	Rated switch-on segment capacity Im	Rated switch-on segment capacity I $\Delta$ m	Fuse selection	Rated impulse withstand voltage (1.2/50)	Dielectric test voltage	Pollution level
10kA	10kA	500A(25A,40A),630A(63A)	500A(25A,40A),630A(63A)	 Matching silver wire	4000V	2500V/1min	2

## mechanical features

Mechanical life	Electrical life	Leakage trip indication
10000	4000	■

## Rated residual current breaking time

Rated current	Rated sensitivity (I $\Delta$ n)	Residual current segment time (S)		
		I $\Delta$ n	2I $\Delta$ n	5I $\Delta$ n
25, 40, 63A	30	0.1	0.08	0.04
		Residual current segment time (S)		
	6mA	60mA	200mA	
		10	0.3	0.1



# RCBO

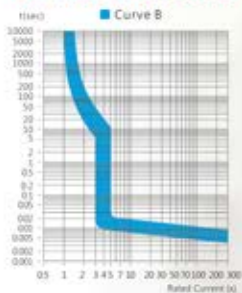


## Temperature compensation

Ambient temperature at 30 degrees as benchmark, the reference correction factor is as follows.

Ambient Temperature	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
Current Correction Coefficient	1.25	1.2	1.15	1.10	1.05	1.00	0.95	0.90	

## Characteristics Curve



## Connection unit (mm<sup>2</sup>)

Rated current	Nominal Section Area of Copper Wire
1-6A	1
10A	1.5
16, 20A	2.5
25A	4
32A	6
40, 50A	10
63A	16

## Technical Data



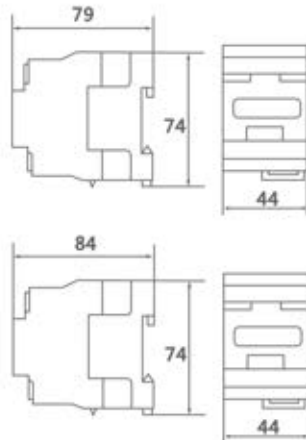
### Electrical features

Residual current protection type	Electronic
Residual current working type	A C, A
Rated current	6-63A
Poles	1P+N, 2P,3P,3P+N, 4P
Rated voltage Ue	1P+N/2P:230V;3P,3P+N, 4P:400V
Insulation voltage Ui	500V
Rated frequency	50/60Hz
Rated sensitivity I <sub>Δn</sub>	0.01A 0.03A 0.1A 0.3A
Short-circuit current I <sub>nc</sub> =I <sub>cc</sub>	4500A 10000A
Break time under I <sub>Δn</sub>	≤0.1s
Rated impulse withstand voltage(1.2/50) U <sub>imp</sub>	6000V
Dielectric test voltage at and ind. freq.for 1min	2.5kV
Polution degree	2
Thermo-magnetic release characteristic	B, C
Electrical life	4000
Mechanical life	10000
<b>Installation</b>	
Contact position indicator	Yes
Protection Class	IP20
Reference temperature for setting of thermal element	30°C
Ambient temperature (with daily average ≤35°C)	-5~+40°C
Storage temperature	-25~+70°C
Terminal connection type	Cable/U-type busbar/Pin -type busbar
Terminal size top/bottom for cable	25mm <sup>2</sup> 18-3
Tightening torque	3.0N•m 22
Mounting	On DIN rail FN 60715 (35mm) by means of fast clip device
Connection	Top and bottom

# CONTACTOR

C1 SERIES

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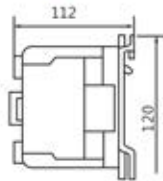


## Technical Data

Type		C1-09	C1-12	C1-18	
<b>Main circuit characteristic</b>					
Poles		3P			
Rated insulation voltage(Ui)	V	690			
Rated operating voltage(Ue)	V	380/400, 660/690			
Rated thermal current(Ith) , AC-1		20	20	32	
	AC-3,380/400V	A	9	12	18
Rated operation current(Ie)	AC-3,660/690V	A	6.6	8.9	12
	AC-4,380/400V	A	3.5	5	7.7
	AC-4,660/690V	A	1.5	2	3.8
Rated operational power(Pe)	AC-3,380/400V	kW	4	5.5	7.5
	AC-3,660/690V	kW	5.5	7.5	10
	AC-4,380/400V	kW	1.5	2.2	3.3
	AC-4,660/690V	kW	1.1	1.5	3
Mechanical life			1200		
Electrical life	AC-3	10000	times		
	AC-4		22		
Frequency of operation	AC-3		times/hour		
	AC-4		1200		
<b>Connecting capability of main circuit terminal</b>					
Flexible wire	1 wire	mm <sup>2</sup>	1.4		
No terminal	2 wire	mm <sup>2</sup>	1.4		
Flexible wire	1 wire	mm <sup>2</sup>	1.4		
With terminals	2 wire	mm <sup>2</sup>	1.25		
Hard wire	1 wire	mm <sup>2</sup>	1.4		
No terminal	2 wire	mm <sup>2</sup>	1.4		
Fastening torque		N·m	1.2		
<b>Coil</b>					
Rated control voltage(Uc)	50Hz	V	24, 36, 48, 110, 127, 220/230, 240, 380/400, 415, 440		
	50/60Hz	V	24, 36, 48, 110, 127, 220/230, 240, 380/400, 415, 440		
Allowed control circuit voltage(Uc)	Operation	V	Installation inclination angle ±22.5°: 85%~110%Us ; Installation inclination angle±5°: 70%~120%		
	Release	V	Installation inclination angle ±22.5°: 20%~75%Us ; Installation inclination angle±5°: 20%~65%		
Power consumption of coil	Actuation	VA	60		
	Keep	VA	6-9.5		
	Consumption	W	1-3		
<b>Auxiliary contacts</b>					
Auxiliary contacts specification	A	11			
Rated thermal current (Ith)	A	10			
Rated operating voltage (Ue)	AC	V	380		
	DC	V	220		
Rated control capacit	AC-15	VA	360		
	DC-13	W	33		
Certification		CCC, CE, TUV, CB			

# C1 SERIES CONTACTOR

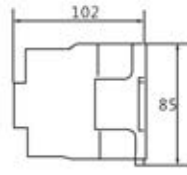




GCL1-32



75(3P)85(4P)



GCL1-40,50,60



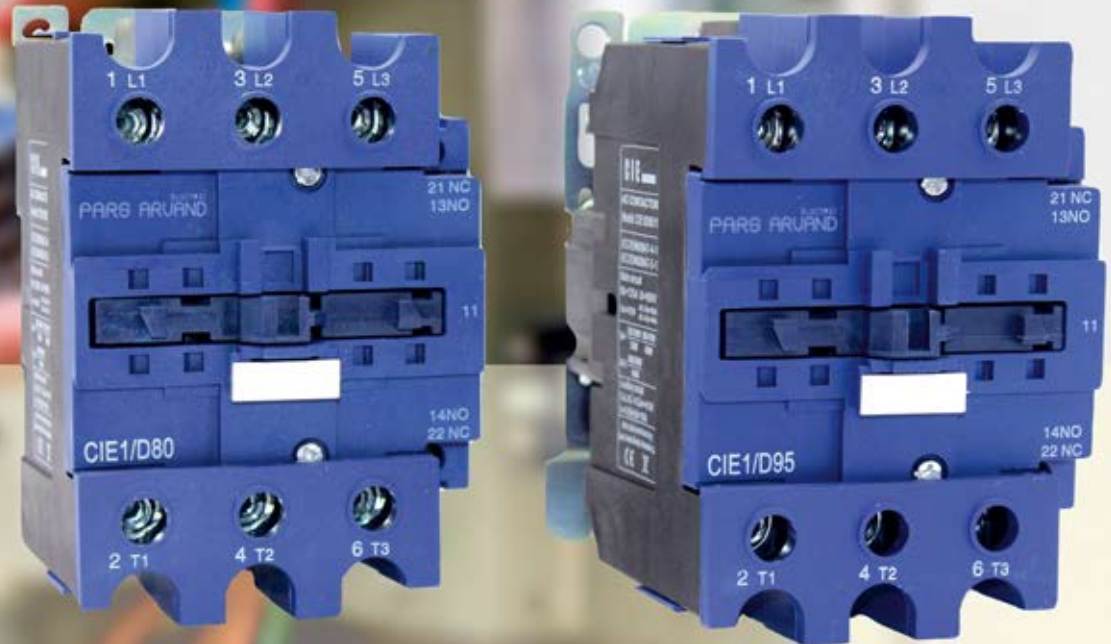
## Technical Data

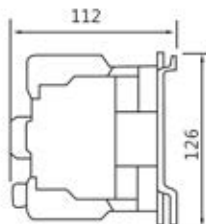
Type		C1-25	C1-32	C1-40	C1-50	C1-65
<b>Main circuit characteristic</b>						
Poles						3P
Rated insulation voltage(Ui)	V					690
Rated operating voltage(Ue)	V					380/400, 660/690
Rated thermal current(Ith) , AC-1		40	50	60	80	80
	AC-3,380/400V	A	25	32	40	50
	AC-3,660/690V	A	18	22	34	39
Rated operation current(Ie)	AC-4,380/400V	A	8.5	12	18.5	24
	AC-4,660/690V	A	4.4	7.5	9	12
	AC-3,380/400V	kW	11	15	18.5	22
Rated operational power(Pe)	AC-3,660/690V	kW	15	18.5	30	33
	AC-4,380/400V	kW	4	5.4	7.5	11
	AC-4,660/690V	kW	3.7	5.5	7.5	10
Mechanical life			1200		1000	900
Electrical life	AC-3	10000 times			90	
	AC-4		22		17	
Frequency of operation	AC-3	times/hour	1200		600	
	AC-4		300		300	
<b>Connecting capability of main circuit terminal</b>						
Flexible wire	1 wire	mm <sup>2</sup>	1..4		1.5..6	2.5..25
No terminal	2 wire	mm <sup>2</sup>	1..4		1.5..6	2.5..16
Flexible wire	1 wire	mm <sup>2</sup>	1..4		1..6	2.5..25
With terminals	2 wire	mm <sup>2</sup>	1..2.5		1..4	2.5..10
Hard wire	1 wire	mm <sup>2</sup>	1..4		1.5..6	1.5..10
No terminal	2 wire	mm <sup>2</sup>	1..4		1.5..	2.5..10
Fastening torque		N.m	1.2		1.8	5
<b>Coil</b>						
Rated control voltage(Uc)	50Hz	V	24, 36, 48, 110, 127, 220/230, 240, 380/400, 415, 440			
	50/60Hz	V	24, 36, 48, 110, 127, 220/230, 240, 380/400, 415, 440			
Allowed control circuit voltage(Ucs)	Operation	V	Installation inclination angle $\pm 22.5^\circ$ : 85%~110%Us ; Installation inclination angle $\pm 5^\circ$ : 70%~120%			
	Release	V	Installation inclination angle $\pm 22.5^\circ$ : 20%~75%Us ; Installation inclination angle $\pm 5^\circ$ : 20%~65%			
Power consumption of coil	Actuation	VA	60		70	
	Keep	VA	6-9.5		6-9.5	
	Consumption	W	1-3		1-3	
<b>Auxiliary contacts</b>						
Auxiliary contacts specification	A				11	
Rated thermal current (Ith)	A				10	
Rated operating voltage (Ue)	AC	V			380	
	DC	V			220	
Rated control capacit	AC-15	VA			360	
	DC-13	W			33	
Certification			CCC, CE, TUV, CB			

# CONTACTOR

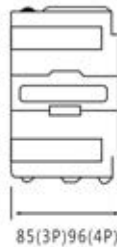
C1 SERIES

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C1-80,95



85(3P)96(4P)



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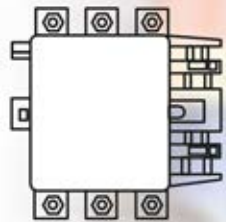
## Specifications

Type	C1-80		C1-95	
<b>Main circuit characteristic</b>				
Poles			3P	
Rated insulation voltage(Ui)	V	690		
Rated operating voltage(Ue)	V	380/400, 660/690		
Rated thermal current(Ith) , AC-1			125	125
Rated operation current(Ie)	AC-3,380/400V	A	80	95
	AC-3,660/690V	A	49	49
	AC-4,380/400V	A	37	44
	AC-4,660/690V	A	17.3	21.3
Rated operational power(Pe)	AC-3,380/400V	kW	37	45
	AC-3,660/690V	kW	45	45
	AC-4,380/400V	kW	18.5	22
	AC-4,660/690V	kW	15	18.5
<b>Mechanical life</b>				
			10000	
Electrical life	AC-3	times	65	
	AC-4		11	
Frequency of operation	AC-3	times/hour	600	
	AC-4		300	
<b>Connecting capability of main circuit terminal</b>				
Flexible wire	1 wire	mm <sup>2</sup>	4...50	
No terminal	2 wire	mm <sup>2</sup>	4...25	
Flexible wire	1 wire	mm <sup>2</sup>	4...50	
With terminals	2 wire	mm <sup>2</sup>	4...16	
Hard wire	1 wire	mm <sup>2</sup>	4...50	
No terminal	2 wire	mm <sup>2</sup>	4...25	
Fastening torque		N.m	9	
<b>Coil</b>				
Rated control voltage(Us)	50Hz	V	24, 36, 48, 110, 127, 220/230, 240, 380/400, 415, 440	
	50/60Hz	V	24, 36, 48, 110, 127, 220/230, 240, 380/400, 415, 440	
Allowed control circuit voltage(Us)	Operation	V	Installation inclination angle $\pm 22.5^\circ$ : 85%~110%Us ; Installation inclination angle $\pm 5^\circ$ : 70%~120%	
	Release	V	Installation inclination angle $\pm 22.5^\circ$ : 20%~75%Us ; Installation inclination angle $\pm 5^\circ$ : 20%~65%	
Power consumption of coil	Actuation	VA	200	
	Keep	VA	15-20	
	Consumption	W	6-10	
<b>Auxiliary contacts</b>				
Auxiliary contacts specification	A		11	
Rated thermal current (Ith)	A		10	
Rated operating voltage (Ue)	AC	V	380	
	DC	V	220	
Rated control capacity	AC-15	VA	360	
	DC-13	W	33	
Certification				CCC, CE, TUV, CB

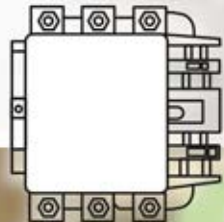


# AC Contactor for 115-1000A

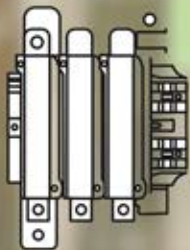
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PA-CC1-115~330



PA-CC1-400~500



PA-CC1-630~800





ساخت ایران

**Application**

Remote making & breaking circuits  
Protect circuit from over-load when assembling with thermal over-load  
Frequent start-up and control of AC contactor  
AC50/60Hz, 690V, up to 1000A

**Electric value****Utilization category**

AC-3, AC-4

**Altitude**

≤2000m

**Ambient temperature**

-5°C~+40°C

**Mounting category**

III

**Mounting conditions**

inclination between the mounting plane and the vertical plane should not exceed +5°

**Standard**

IEC/EN 60947-4-1

**Technical Specification**

Standard IEC/EN60947-4-1

Model No. PA-CC1 PA-15Ccl PA-150Ccl PA-185Ccl PA-225Ccl PA-265Ccl PA-330Ccl PA-400Ccl PA-500Ccl PA-630Ccl PA-780Ccl PA-800Ccl PA-1000Ccl

Rated Conventional Heating Current Ith (A) 200 200 275 275 315 380 460 580 850 1200 850 1200

Rated Voltage Ui(V)Ui(V) 690

Rated Operation Current

Ue=380/415VAC-3 Ie(A) 115 150 185 225 265 330 400 500 630 780 800 1000

AC-4 Ie(A) 52 60 79 86 105 117 138 147 188 240 195 320

Power Controlled 3ph cage Motor AC-3 380/415V KW557590110132160200250335400400500

660/690V

KW 80 100 110 129 160 220 280 335 450 475 475 560

Electrical life (x103 operations) AC-3 600 600 300 300 300 300 300 300 300 200 200 200

AC-4 100 100 100 100 100 100 100 100 100 50 50 50

Mechanical life (x106 operations) 6 6 3 3 3 3 3 3 3 2 3 2

**Matched Fuse**

Size RT16-1RT16-2RT16-2RT16-2RT16-2RT16-3RT16-3RT16-4RT16-4RT16-4RT16-4RT16-4

Main circuit

A 200 225 315 315 355 450 500 630 800 1250 800 1250  
3P or 4P**Terminal Connection**

Cabling cross section(Cu)

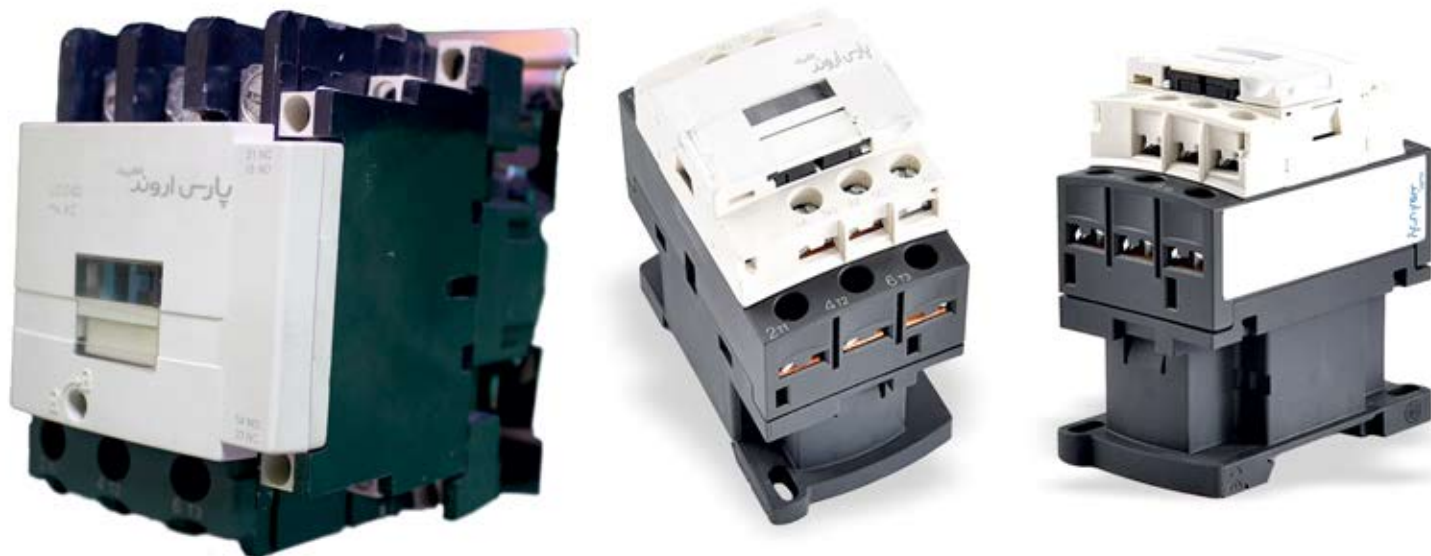
Model

Model	Number of pieceCable	Cross section(mm2)	Cu busbar Cross section(mm2)	screw size	Tightening torque(N.m)
PA-CC1-115	1	70-90	-	3	M6
PA-CC1-150	1	70-90	-	6	M8
PA-CC1-185	1	95-150	-	6	M8
PA-CC1-225	1	95-150	-	10	M10
PA-CC1-265	1	120-185	-	10	M10
PA-CC1-330	1	185-240	-	10	M10
PA-CC1-400	1(2)	240(150)	30*5	10	M10
PA-CC1-500	2	150-185	40*5	10	M10
PA-CC1-630	2	185-240	50*5	14	M12
PA-CC1-800	2	185-240	50*5	14	M12

# PA-C2 SERIE'S CONTACTOR

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**PA-C2**

D09 D12 D18 D25 D32 D38 D40 D50 D65 D80 D95

Rated operational current  
in AC-3 440V up to

9A 12A 18A 25A 32A 38A 40A 50A 65A 80A 95A

Control circuit voltage

AC 24V,110V,220V,380V,415V

Standard power  
ratings of 3-phase  
motors 50-60 Hz in  
category AC-3  
( $\theta \leq 60^\circ\text{C}$ )

220V/230V	2.2	3	4	5.5	7.5	9	11	15	18.5	22	25
380V/400V	4	5.5	7.5	11	15	18.5	18.5	22	30	37	45
415V	4	5.5	9	11	15	18.5	22	25	37	45	45
440V	4	5.5	9	11	15	18.5	22	30	37	45	45
500V	5.5	7.5	10	15	18.5	18.5	22	30	37	55	55
660V/690V	5.5	7.5	10	15	18.5	18.5	30	33	37	45	45
1000V	-	-	-	-	-	-	-	-	-	45	45

# Capacitor Switching Contactor



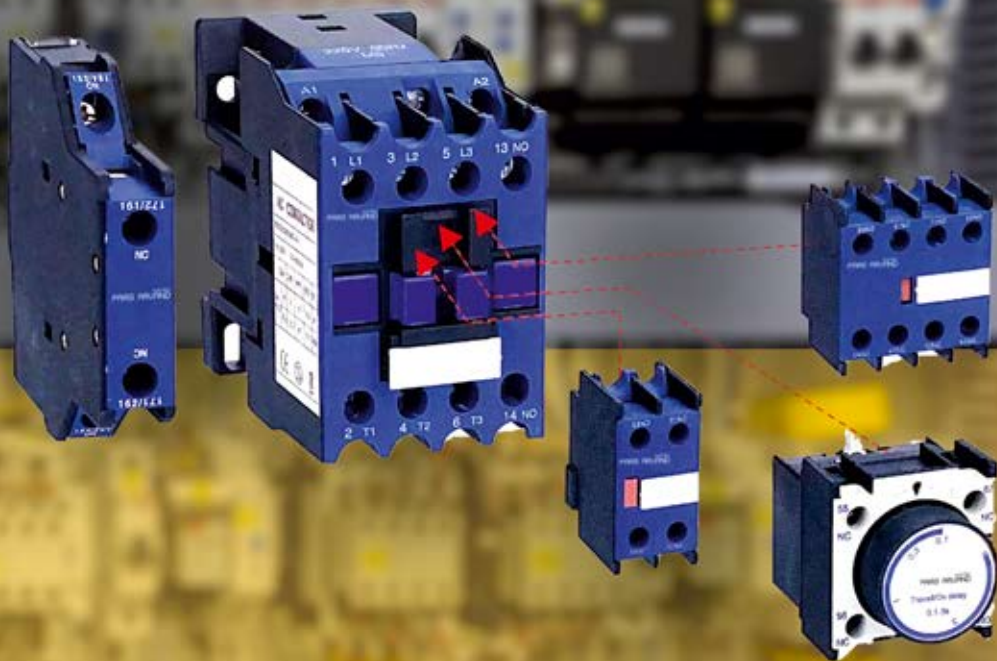


## Technical Specification

<b>Standard</b>	IEC/EN60947-4-1					
<b>Model No.</b>	PA-J19-25 /PA-J19-32/PA-J1943/PA-J19-63/PA-J19-80 /PA-J19-95					
<b>Rated Conventional Heating Current Ith(A)</b>	25	32	43	63	80	95
<b>Rated Work Current 415V/1e (A)</b>	18	25	32	60	80	95
<b>Capacitor 220V/240V(Kvar)</b>	6	9	10	15	18	22
<b>Controlled 400V/440V(Kvar)</b>	12	18	20	30	36	40
<b>Rated Insulation Voltage Ui(V)</b>	690	690	690	690	690	690
<b>Rated Operation Voltage Electrical life(x103) Ue(V)</b>	400	400	400	400	400	400
<b>Times</b>	120	120	120	100	100	100
<b>Mechanical life(x103) Times</b>	3000	3000	3000	3000	3000	3000
<b>Restrained Surge Capacity x Ie</b>	15					
<b>Auxiliary Contact Ith=10A</b>	AC-15 360VA;DC-13 33W					
<b>Control Capacity</b>						
<b>COIL PARAMETERS</b>						
<b>Coil Power(VA) Start-up</b>	76	110	110	230	230	230
<b>Holding</b>	10	11	11	32	32	32
<b>Rated Control Power Us(V)</b>	24,36,48,110,220,380					
<b>Pull time Ms</b>	12-22	15-24	15-24	20-26	20-35	20-35
<b>Release time Ms</b>	4-12	5-19	5-19	8-12	6-20	6-20
<b>Operation Range</b>	Pick-up (85%-110%)Us Drop-out (20%-75%)Us					

<b>Electric value</b>	AC50/60Hz, up to 690V;
<b>Ambient temperature</b>	-5°C~+40°C; the average during 24 hours should not exceed +35°C
<b>Altitude</b>	≤2000m;
<b>Atmosphere conditions</b>	At mounting site,relative humidity not exceed 50% at the max temperature of +40°C, higher relative humidity is allowable under lower temperature. For example,RH could be 90% at +20°C,special measures should be taken to occurrence of dews;
<b>Pollution degree</b>	3
<b>Installation conditions</b>	The inclination between installation plane and vertical plane is within ±5°
<b>Impact and shake</b>	The products should locate in the places where there are no obvious impact and shake

# CONTACTOR ACCESORIES





Auxiliary Contact  
2-pole Side mount

PA-EKF8-20	2NO
PA-EKF8-11	1NO+1NC
PA-EKF8-02	2NC

1NO+1NC  
Pneumatic timer  
ON-delay

1NO+1NC  
Pneumatic timer  
OFF-delay



EKC1-09-95  
EKC1-115-800

PA-EKF5-T0	0.1-3s
PA-EKF5-T2	0.1-30s
PA-EKF5-T4	10-180s
PA-EKF5-D0	0.1-3s
PA-EKF5-D2	0.1-30s
PA-EKF5-D4	10-180s



Auxiliary Contact  
4-pole Front mount

PA-EKF4-40M	4NO
PA-EKF4-31M	3NO+1NC
PA-EKF4-22M	2NO+2NC
PA-EKF4-13M	1NO+3NC
PA-EKF4-04M	4NC



Auxiliary Contact  
2-pole Front mount

PA-EKF4-20M	2NO
PA-EKF4-11M	1NO+1NC
PA-EKF4-02M	2NC



Auxiliary Contact  
4-pole Front mount

PA-EKF4-40	4NO
PA-EKF4-31	3NO+1NC
PA-EKF4-22	2NO+2NC
PA-EKF4-13	1NO+3NC
PA-EKF4-04	4NC



Auxiliary Contact  
2-pole Front mount

PA-EKF4-20	2NO
PA-EKF4-11	1NO+1NC
PA-EKF4-02	2NC



Contactor Coil

PA-EKX1-2	AC Volts	EKC1-09-18
PA-EKX1-4	AC Volts	EKC1-25-32
PA-EKX1-6	AC Volts	EKC1-40-95



Contactor Coil  
Water Proof

PA-EKX1-6N	AC Volts	EKC1-40-95
PA-EKX1-FF	AC Volts	EKC1-115-150
PA-EKX1-FG	AC Volts	EKC1-185-225
PA-EKX1-FH	AC Volts	EKC1-265
PA-EKX1-FJ	AC Volts	EKC1-400
PA-EKX1-FK	AC Volts	EKC1-500
PA-EKX1-FL	AC Volts	EKC1-630
PA-EKX1-FX	AC Volts	EKC1-780



# THERMAL OVER RELAY

Type  
Designation

PA R 2-□□ □□

Code of current rating  
Basic specification, expressed with the rated  
operational current (380V/400V, AC3)

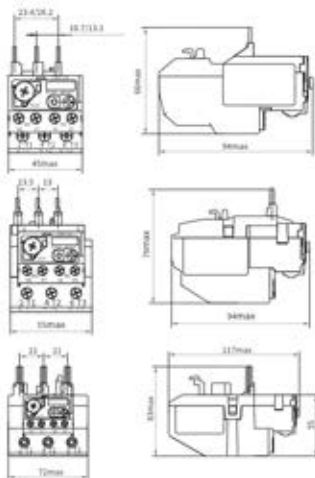
Frame Size

Design sequence Number

Thermal Overload Relay

Company code





### Technical Data

Standard	IEC/EN60947-4-1 IEC/EN60947-5-1		
	PA-R2	PA-R3	
Model No.			
Rated Conventional Heating Current	Ith(A)	20	20
Rated Voltage Ui(V)	Ui(V)	690	690
Rated Operation Current	AC-3 Ie(A)	9	12
Ue=380/415V	AC-4 Ie(A)	3.5	5
Power Controlled	220/240V KW	2.2	3
3ph cage Motor	380/415V KW	4	5.5
AC-3	660/690V KW	5.5	7.5
Electrical life(x10 <sup>3</sup> operations)	AC-3	1000	1000
	AC-4	200	200
Mechanical life(x10 <sup>3</sup> operations)		10	10
Matched Fuse	Size	RT16-00	RT16-00
	A	20	20
Main circuit		3P or 4P	
Auxiliary circuit			
Cat.:AC-15,Ue=415V			
Ie=0.95A Ith=10A			1NO or 1NC

### Technical Data

Electric value	AC50/60Hz, 690V, 0.1A-93A
Tripping class	10A
Mounting version	Plug-in: Available for EKR2-13,23,33

Feature	
	3-phase bimetal
	Continuously readjustable current settings
	Temperature compensation
	Tripping indicator
	Test button
	Stop button
	Manual and automatic reset button
	Electrically separated 1N/O plus 1N/C contact

# MPCB

## MOTOR PROTECTION CIRCUIT BREAK





## Technical Data

<b>Description</b>	Electric value	AC690V, 32A, 80A
	Standard	IEC/EN 60947-2, IEC60947-4-1
<b>Operating Condition</b>	Temperature:	-5°C~+40°C, average temperature in 24 hours not exceed +35°C
	Altitude	not exceed 2000m
Air conditions	At mounting site, relative humidity not exceed 50% at the max temperature of +40°C, higher relative humidity is allowable under lower temperature, for example, RH could be 90% at +20°C	
Release grade	Grade III	
Release grade	10A( PA-1S-32) 10A( PA-1S-80)	
Rated operational system	Continuous operational system	
Mounting conditions	The inclination between the mounting plane and the vertical plane shall not exceed 5°	
	The product shall be installed and operated at a place without obvious shake, impact and vibration	

Protection Property	Series No.	Multiple of setting current	Initial status	Time	Expected results	Over-load Protection Properties
						Ambient temperature
	1	1.05	Cold status	$t \geq 2h$	Non-tripping	+20°C ± 2°C
	2	1.20	Heat status (right after test.1)	$t < 2min$	Tripping	+20°C ± 2°C
	3	1.50	Heat status (right after test.1)	Tripping class 10A $t < 2min$ 10 $t < 4min$	Tripping	+20°C ± 2°C
	4	7.20	Cold status	Tripping class 10A $2s < t \leq 10s$ 10 $4s < t \leq 10s$	Tripping	+20°C ± 2°C

Protection Property	Series No.	Multiple of setting current		Initial status	Time	Expected results	Phase failure protection properties
		Any 2 phase	The other phase				Ambient temperature
	1	1.0	0.9	Cold status	$t \geq 2h$	Non-tripping	+20°C ± 2°C
	2	1.15	0	Heat status (right after test.1)	$t < 2h$	Tripping	+20°C ± 2°C

Model	Range of setting current A	Current (A)	Maximum rated Power (kW)			Model of equipped AC contactor	TOR matched
			600V	380V	220V		
PA-1S-09/1301	0.1-0.16						
PA-1S-09/1302	0.16-0.25						
PA-1S-09/1303	0.25-0.4						
PA-1S-09/1304	0.4-0.63						
PA-1S-09/1305	0.63-1						
PA-1S-09/1306	1-1.6	9	5.5	4	2.2	C1-09	R2-13
PA-1S-09/1307	1.6-2.5						
PA-1S-09/1308	2.5-4						
PA-1S-09/1310	4-6						
PA-1S-09/1312	5.5-8						
PA-1S-09/1314	7-10						
PA-1S-18/1314	7-10						
PA-1S-18/1316	9-13	18	10	7.5	4	C1-18	R2-13
PA-1S-18/1321	12-18						
PA-1S-25/1321	12-18						
PA-1S-25/1322	17-25	25	15	11	5.5	C1-25	R2-13
PA-1S-32/2353	23-32	32	18.5	15	7.5	C1-32	R2-23
PA-1S-40/3355	30-40	40	30	18.5	11	C1-40	R2-33
PA-1S-50/3357	37-50	50	33	22	15	C1-50	R2-33
PA-1S-65/3359	48-65	65	37	30	18.5	C1-65	R2-33

# MPCB

MOTOR PROTECTION  
CIRCUIT BREAK

الکترونیک  
پارس ارونند





### Technical Data

<b>Description</b>	Electric value	AC690V, 32A, 80A
	Standard	IEC/EN 60947-2, IEC60947-4-1
<b>Operating Condition</b>	Temperature:	-5°C~+40°C, average temperature in 24 hours not exceed +35°C
	Altitude	not exceed 2000m
	Air conditions	At mounting site, relative humidity not exceed 50% at the max temperature of +40°C, higher relative humidity is allowable under lower temperature, for example, RH could be 90% at +20°C
	Release grade	Grade III
	Eelease grade	10A(EKMS2-32) 10A(EKMS2-80)
	Rated operational system	Continuous operational system
	Mounting conditions	The inclination between the mounting plane and the vertical plane shall not exceed 5° The product shall be installed and operated at a place without obvious shake, Impact and vibration

### Over-load Protection Properties

Protection Property	Series No.	Multiple of setting current	Initial status	Time	Expected results	Ambient temperature
2	1.20	Heat status (right after test.1)	$t < 2min$	Tripping	+20°C±2°C	
3	1.50	Heat status (right after test.1)	Tripping class 10A $t < 2min$ 10 $t < 4min$	Tripping	+20°C±2°C	
4	7.20	Cold status	Tripping class 10A $2s < t \leq 10s$ 10 $4s < t \leq 10s$	Tripping	+20°C±2°C	

### Phase failure protection properties

Protection Property	Series No.	Multiple of setting current		Initial status	Time	Expected results	Ambient temperature
		Any 2 phase	The other phase				
1	1.0	0.9	Cold status	$t \geq 2h$	Non-tripping	+20°C±2°C	
2	1.15	0	Heat status (right after test.1)	$t < 2h$	Tripping	+20°C±2°C	

Model	Range of setting current A	Current (A)	Maximum rated Power (kW)			Model of equipped AC contactor	TOR matched
			600V	380V	220V		
PA-1S-80/3361	55-70	80	45	37	22	EKC1-80	EKR2-33
PA-1S-80/3363	63-80		45	45	25	EKC1-95	EKR2-33
PA-1S-95/3365	80-93	95	45	45	25	EKC1-95	EKR2-33



# MCCB

## EAZY PACT





## Key performance parameter

Case current (A)	125	160	200	315
<b>Model</b>	<b>PA-EZD63/100N</b>	<b>PA-EZD125N</b>	<b>PA-EZD160N</b>	<b>PA-EZD200N</b>
No. of poles	3,4	3,4	3,4	3,4
				
Power supply system	3P 4P	303W,102W,103W 304W	303W,102W,103W 304W	303W,102W,103W 304W
Rated current (A)	16,20,25,32,40,50,63 80,100,125	100,120,140,160	16,20,32,40,50, 63,80,100,125,145,160	125,140,160,180, 200,220,250,315
Rated voltage (V)	AC400V	AC400V	AC400V	AC400V
Rated insulation voltage (V)	800V	800V	1000V	800V
Leakage indication system	Button	Button	Button	Button
Short circuit breaking capacity(I <sub>cs</sub> ) AC400V(50Hz)	35/22	35/20	35/22	65/42
Operation cycle (times)	ON OFF	4000 3000	3000 7000	3000 7000
Speed type	Rated leakage operation current(I <sub>leak</sub> ) Max. operation time (s)	100,300,500 0.1	100,300,500 0.1	100,300,500 0.1
Delay type	Rated leakage operation current(I <sub>leak</sub> ) Max. operation time(s)	100,300,500 ---	100,300,500 ---	100,300,500 ---
type	Max. operation time(s) @21-in Interval (inactive time)(s) @21-in(s)	0.45,1.0,2.0(adjustable) 0.1,0.5,1.0	0.45,1.0,2.0(adjustable) 0.1,0.5,1.0	0.45,1.0,2.0(adjustable) 0.1,0.5,1.0
Dimension (mm) #B-C-1A	3P 4P	75-120-68-90 100-120-68-90	80-150-68-90 120-155-68-90	90-155-63-120 140-160-68-92
Weight (kg)	3P 4P	0.65 0.9	0.85 1.2	1.2 2.5
Electrical operation device(MDI)	•	•	•	•
External drive operating handle	•	•	•	•
Automatic release device	Thermo- electromagnetic	Thermo- electromagnetic	Thermo- electromagnetic	Thermo- electromagnetic
Case current (A)	315	630	800	
<b>Model</b>	<b>PA-EZD225/250N</b>	<b>PA-EZD400N</b>	<b>PA-EZD630N</b>	
No. of poles	3,4	3,4	3,4	
				
Power supply system	3P 4P	303W,102W,103W 304W	303W,102W,103W 304W	303W,102W,103W 304W
Rated current (A)	125,160,180, 200,225,250,315	400,500,630	630,700,800	
Rated voltage (V)	AC400V	AC400V	AC400V	
Rated insulation voltage (V)	800V	1000V	1000V	
Leakage indication system	Button	Button	Button	
Short circuit breaking capacity(I <sub>cs</sub> ) AC400V (50Hz)	50/35	60/50	60/50	
Operation cycle (times)SP	3000 OFF	2000 4000	1500 4000	
Speed type	Rated leakage operation current(I <sub>leak</sub> ) Max. operation time (s)	100,300,500 0.1	100,300,500 0.1	100,300,500 0.1
Delay type	Rated leakage operation current(I <sub>leak</sub> ) Max. operation time (s)	100,300,500 ---	100,300,500 ---	100,300,500 ---
	Max. operation time(s) @21-in Interval (inactive time)(s) @21-in(s)	0.45,1.0,2.0(adjustable) 0.1,0.5,1.0	0.45,1.0,2.0(adjustable) 0.1,0.5,1.0	0.45,1.0,2.0(adjustable) 0.1,0.5,1.0
Dimension (mm) #B-C-1A	3P 4P	105-165-93-115	140-257-105-155	210-257-104-155
Weight (kg)	3P 4P	2.0 2.5	6.6 8.4	12.5 17.5
Electrical operation device(MDI)	•	•	•	
External drive operating handle	•	•	•	
Automatic release device	Thermo- electromagnetic	Thermo- electromagnetic	Thermo- electromagnetic	



ساخت ایران





# MCCB COMPACT





## TECHNICAL INFO & PERFORMANCE

Frame(A)	125		160		315
Model	NSX63N	NSX100N	NSX125N	NSX160N	NSX200N
Number of poles	3,4	3,4	3,4	3,4	3,4
Rated current (A)	16,20,32,40,50, 63,80,100,125	16,20,32,40,50, 63,80,100,125	16,20,32,40,50,63, 80,100,125,140,160	16,20,32,40,50,63, 80,100,125,140,160	125,140,160,180, 200,225,250,315
Rated voltage Ue (V)	AC400V	AC400V	AC400V	AC400V	AC400V
Rated insulation voltage Ui (V)	800V	800V	800V	800V	800V
Short-circuit interrupting capacity (KA)Icu/Ics	AC400V 25/18	50/35	25/18	70/50	35/22
Operation life (cycle)	ON 6000 OFF 8000	6000 9000	3000 7000	3000 7000	3000 7000
Dimensions (mm) a-b-c-d		3P 75-130-68-90 4P 100-130-68-90	75-130-68-90 100-130-68-90	90-155-68-90 120-155-68-90	90-155-83-105 140-165-68-92
Weight(kg)	3P 0.55 4P 0.65	0.65 0.8	1.1 1.4	1.1 1.4	1.5 1.9
Electrical operation device (MD)	*	*	*	*	*
External rotary handle	*	*	*	*	*
Automatic tripping device	Thermo - electromagnetic	Thermo - electromagnetic	Thermo - electromagnetic	Thermo - electromagnetic	Thermo - electromagnetic
Frame(A)	315		630		800
Model	NSX225N	NSX250N	NSX400N	NSX630N	NSX800N
Number of poles	3,4	3,4	3,4	3,4	3,4
Rated current (A)	100,125,140,160, 180,200,225,250,315	250,315,350,400 500, 630	250,315,350,400, 500,630	630,700,800	630,700,800
Rated voltage Ue (V)	AC400V	AC400V	AC400V	AC400V	AC400V
Rated insulation voltage Ui (V)	800V	800V	800V	1000V	1000V
Short-circuit interrupting capacity (KA)Icu/Ics	AC400V 70/50	35/22	16/70	50/35	100/70
Operation life (cycle)	ON 3000 OFF 7000	3000 4000	2000 4000	1500 4000	1500 4000
Dimensions (mm) a-b-c-d		3P 105-165-91-115 4P 140-165-91-115	140-257-105-155 185-257-105-155	140-257-105-155 210-275-105-158	210-275-105-155 280-275-105-155
Weight(kg)	3P 1.8 4P 2.3	5.7 7.5	5.7 7.5	9.5 12.5	9.5 Model:2.5
Electrical operation device (MD)	*	*	*	*	*
External rotary handle	*	*	*	*	*
Automatic tripping device	Thermo - electromagnetic	Thermo - electromagnetic	Thermo - electromagnetic	Thermo - electromagnetic	Thermo - electromagnetic

# PA-CNS Moulded Case Circuit Breaker





### Functions and characteristics

	Item No.	CNS 800-1600
	Number of poles	3P, 4P
Control	Manual	with toggle with direct or extended rotary handle
Connections	Fixed	front connections
	Plug-in	front connections/rear connections

### Electrical characteristics as per IEC60947 and EN60947-2

Rated current(A) In	In	800, 1000, 1250, 1600
Rated insulation voltage(V)	Ui	800
Rated impulse withstand voltage(kV)	Uimp	8
Rated operational voltage(V)	Ue	AC 50/60Hz, 690
Breaking capacity levels		N H
Utilization category		
AC220/240V	85	85
380/415V	50	70
440V	50	65
500/525V	40	50
660/690V	30	42
Operation performance	Mechanical	10000
	Electrical 440V	5000
Protection		Chart C-1
Overload protection	long-time delaylr	(In x.....)
Short-circuit protection	short-time delay	I <sub>sd</sub> (I <sub>r</sub> x.....)
	Instantaneous	I <sub>i</sub> (I <sub>n</sub> x.....)

#### Indication and control auxiliaries

- Auxiliary switch ■
- MX Shunt coil ■
- MN under-voltage coil ■



# Trip Unit For PA-NSX





### PA-TMD thermal-magnetic trip units

TM-D, for protection of cables on distribution systems supplied by transformers

#### Protection Thermal protection (Ir)

Thermal overload protection based on a bimetal strip providing an inverse time curve I<sup>2</sup>t, corresponding to a temperature rise limit. Above this limit, the deformation of the strip trips the circuit breaker operating mechanism.

This protection operates according to:

Ir that can be adjusted in amps from 0.7 to 1 times the rating of the trip unit (16 A to 250 A), corresponding to settings from 11 to 250 A for the range of trip units a non-adjustable time delay, defined to ensure protection of the cables.

Magnetic protection (Im)

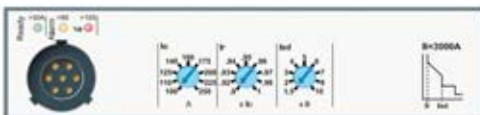
Short-circuit protection with a fixed or adjustable pick-up Im that initiates instantaneous tripping if exceeded.

TM-D: fixed pick-up, Im, for 16 to 160 A ratings and adjustable from 5 to 10 x In for 200 and 250 A ratings  
fixed pick-up for 16 to 63 A ratings.

Protection against insulation faults

Two solutions are possible by adding:

a Vigi add-on acting directly on the trip unit of the circuit breaker  
a Vigiex relay connected to an MN or MX voltage release.  
MicroLogic 2 trip unit



Circuit breakers equipped with MicroLogic 2 trip units can be used to protect distribution systems supplied by transformers. For generators and long cables, MicroLogic 2 G trip units offer better suited low pick-up solutions

#### Protection

Settings are made using the adjustment dials with fine adjustment possibilities

Overloads: Long time protection (Ir)

Inverse time protection against overloads with an adjustable current pick-up Ir set using a dial and a non-adjustable time delay Ir.

Short-circuits: Short-time protection with fixed time delay (Isd)

Protection with an adjustable pick-up Isd. Tripping takes place after a very short delay used to allow selectivity with the downstream device.

Short-circuits: Non-adjustable instantaneous protection

Instantaneous short-circuit protection with a fixed pick-up.

#### Indications

##### Front indications

Green "Ready" LED: flashes slowly when the circuit breaker is ready to trip in the event of a fault.

Orange overload pre-alarm LED: steady on when  $I > 90 \% I_r$ .

Red overload LED: steady on when  $I > 105 \% I_r$ .

Ready, Alarm

##### Remote indications

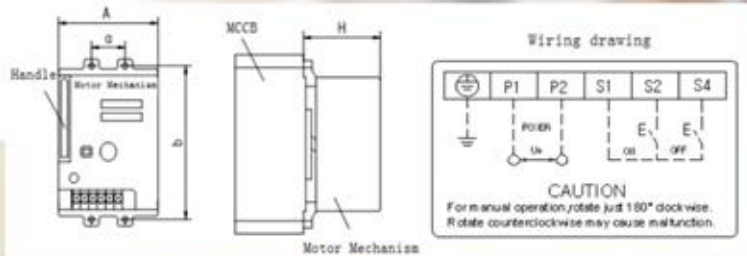
An overload trip signal can be remotely by installing an SDx relay module inside the circuit breaker. This module receives the signal from the MicroLogic electronic trip unit via an optical link and makes it available on the terminal block. The signal is cleared when the circuit breaker is reclosed.

##### MicroLogic 1.3 M for magnetic protection only

MicroLogic 1.3 M trip units provide magnetic protection only, using electronic technology. They are dedicated to 400/630 A 3-poles (3P 3D) circuit breakers or 4-pole circuit breakers with detection on 3 poles (4P, 3D) and are used in certain applications to replace switch-disconnectors at the head of switchboards. They are especially used in 3-poles versions for motor protection

# Economical Motor Mechanism

PA-CNSX





### Mounting Notes:

check the motor mechanism is matched the MCCB or not.  
 after motor mechanism mounted, firstly handle test to  
 check the ON/OFF and reset (ON) action in function.  
 when handle operation, first switch the motor mechanism  
 to be handle step, inset the handle and turn handle in clocking  
 180°, after handle operation, switch the motor mechanism back  
 to auto step.

before power inducting, check the voltage is correct  
 and wiring is correct.

when power inducting, first should check MCCB.

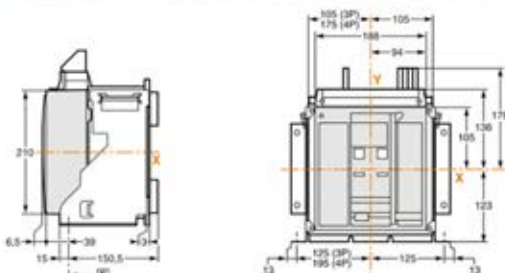
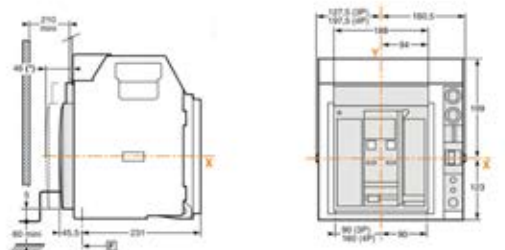
If under voltage Auxiliary switch is mounted, the under voltage  
 releaser power should be inducted. And check the voltage is  
 $\geq 85\%$  rating voltage.

when power inducted, the motor mechanism operation cycle  
 frequency should not more than 180/hour (DC3 63-250), should  
 not more than 60/hour (DC3- 400-800)

Item	Dimension				Rated Voltage (V)	Action Current (A)	Mechanical endurance (o-cycle)	Motor Power (W)
	a	b	A	H				
PA-250 CNSX	35	126	90	102	110-240V AC 100-220V DC 24V DC	$\leq 0.5$	10000	14
PA-630 CNSX	130	220	130	145	230V AC/220V DC 110V AC/110V DC 24V DC	$\leq 0.5$	10000	14



# PA-CNT06 To PA-CNT16 Air Circuit Breaker





Number of poles	3/4
Rated insulation voltage(V)	Ui1000
Impulse withstand voltage(kV)	Uimp12
Rated operational voltage(V AC 50/60Hz)	Ue690

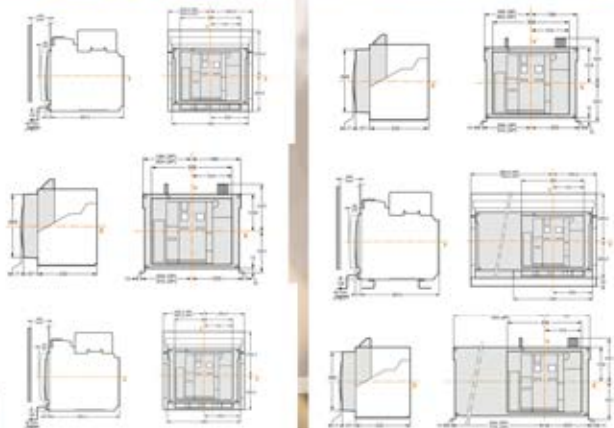
PA-CNT06,PA-CNT08,PA-CNT10,PA-CNT12,PA-CNT16,PA-CNT06,PA-CNT08,PA-CNT10

Rated current(A)	630, 800, 1000, 1250, 1600	630, 800, 1000	
	H1	H2	L1
Type of application	Standard applications with low short-circuit currents	Applications with medium-level short-circuit currents	Limiting circuit breaker for protection of cable-type feeders or upgraded transformer ratings
Icu/Ics at 440V	42 kA	50 kA	100 kA
Icu/Ics at 1000 V	-	-	-
Icu/Ics at 500 V DC L/R < 15 ms	-	-	-
Position of neutral	Left	Left	Left
Fixed	F	F	F
Drawout	D	D	D
Switch-disconnector version	Yes	No	No
Front connection	Yes	Yes	Yes
Rear connection	Yes	Yes	Yes
Type of MicroLogic control unit	A,E,P,H	A,E,P,H	A,E,P,H

PA-CNW08 to PA-CNW63

الکتريک  
پارس ارونډ

# Air Circuit Breaker





## Item No.

PA-CNW08 to PA-CNW63

## Common characteristics

Number of poles

3/4

Rated insulation voltage(V)

Ui 1000 1250 for H10,HA10

Impulse withstand voltage(kV)

Uimp 12 12

Rated operational voltage(V AC 50/60Hz)

Ue 690 1150 for H10,HA10

Suitability for isolation

IEC60947-2

Degree of pollution

IEC60664-1 4 (1000V) / 3 (1250V)

## PA-CNW selection criteria

PA-CNW08, PA-CNW10, PA-CNW12, PA-CNW16, PA-CNW20

PA-CNW25, PA-CNW32, PA-CNW40, PA-CNW40b, PA-CNW50, PA-CNW63

Rated current(A)

800-1600, 800, 1000, 1250

1600, 2000, 2500, 3200, 4000, 4000, 5000, 6300

Type of application

N1	H1	H2	H3	L1
Standard applications with low short-circuit currents	Circuit breaker for industrial sites with high short-circuit currents	High-performance circuit with very heavy industry with high short-circuit currents	Incoming device breaker for high performance for critical applications	Limiting circuit breaker for protection of cable-type feeders or upgraded transformer ratings
42 kA	65 kA	100 kA	120 kA	120 kA
-	-	-	-	-
-	-	-	-	-
Left	Left or right	Left or right	Left	Left
Fixed	F	F	-	-
Drawout DDDDD				
Switch-disconnector version	Yes	Yes	Yes	Yes
Front connection	Yes up to 3200A	Yes up to 3200A	Yes up to 3200A	Yes up to 3200A
Rear connection	Yes	Yes	Yes	Yes
Type of MicroLogic control unit	A,E,P,H	A,E,P,H	A,E,P,H	A,E,P,H

Icu/lcs at

440 V

Icu/lcs at 1000 V

Icu/lcs at 500 V DC L/R &lt; 15 ms

Position of neutral

Fixed

Drawout DDDDD

Switch-disconnector version

Front connection

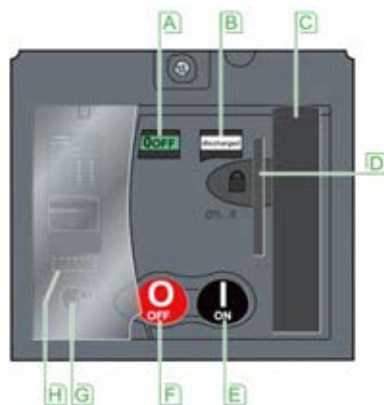
Rear connection

Type of MicroLogic control unit

پارس ارونڊ الکتریک  
For PA-CNSX / PA-CNSV

# Motor Mechanism



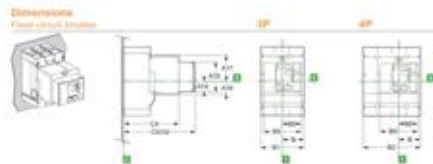


- A: Position indicator (positive contact indication)  
 B: spring status indicator (charged, discharged)  
 C: manual spring-charging lever  
 D: Keylock device (optional)  
 E: I (ON) pushbutton  
 F: O (OFF) pushbutton  
 G: manual/auto mode selection switch. The position of this switch can be indicated remotely  
 H: operation counter (PA-CNSX400-630)

When equipped with a motor-mechanism module, CNSX circuit breakers feature very high mechanical endurance as well as easy and sure operation:

all circuit-breaker indications and information remain visible and accessible, including trip-unit settings and indications  
 suitability for isolation is maintained and padlocking remains possible  
 double insulation of the front face.

A specific motor mechanism is required for operation via the communication function. This communicating motor mechanism must be connected to the BSCM module to receive the opening and closing orders. Operation is identical to that of a standard motor mechanism.



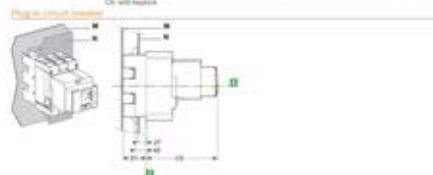
#### Operation

The type of operation is selected using the manual/auto mode selection switch. A transparent, lead-seal cover controls access to the switch.

#### Automatic

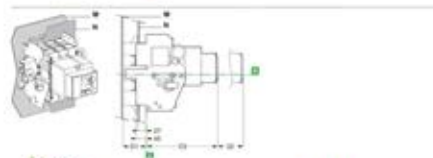
When the switch is in the "auto" position, the ON/OFF (I/O) buttons and the charging lever on the mechanism are locked.

Circuit-breaker ON and OFF controlled by two impulse-type or maintained signals.  
 Automatic spring charging following voluntary tripping (by MN or MX), with standard wiring.  
 Mandatory manual reset following tripping due to an electrical fault.  
 Manual



When the switch is in the "manual" position, the ON/OFF (I/O) buttons may be used.  
 A microswitch linked to the manual position can remote the information.

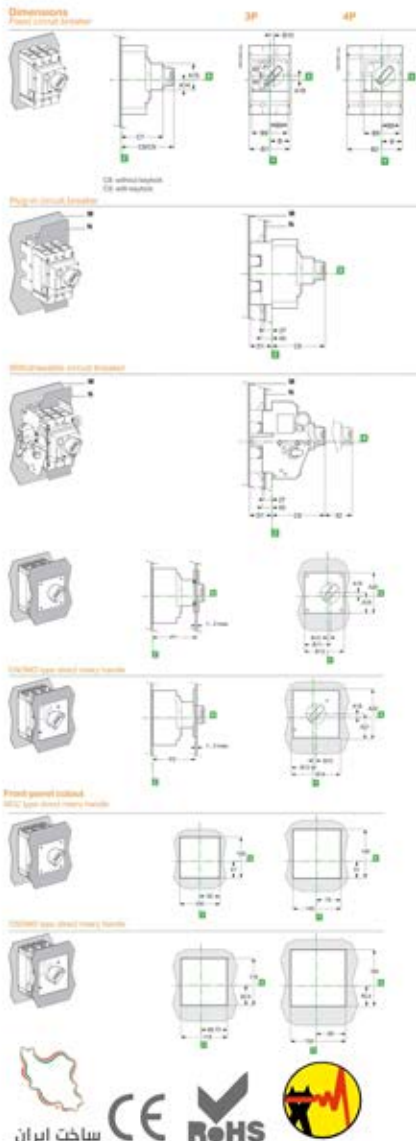
Circuit-breaker ON and OFF controlled by 2 pushbuttons I/O.  
 Recharging of stored-energy system by pumping the lever 8 times.  
 Padlocking in OFF position.  
 Installation and connections



All installation (fixed, plug-in/withdrawable) and connection possibilities are maintained.  
 Motor-mechanism module connections are made behind its front cover to integrated terminals, for cables up to 2.5 mm<sup>2</sup>.

# Direct or Extended Rotary Handle





### Direct rotary handles

#### Installation

The direct mounted rotary handle has to be mounted by 3 screws on the front accessory cover.

#### Operation

##### The direct rotary handle maintains:

suitability for isolation  
 indication of the three positions OFF (O), ON (I) and tripped (Trip)  
 access to the "push-to-trip" button  
 visibility and access to the trip unit.  
 Device padlocking

The circuit breaker may be locked in the OFF position by using one to three padlocks (not supplied) or in ON position after customer modification of the rotary handle before installation, padlock shackle  $\varnothing 4-8$  mm. Locking in the ON position does not prevent the circuit breaker from tripping if a fault occurs. In this case, the handle remains in the ON position after the circuit breaker trips. Unlocking is required for the handle to go to the tripped then the OFF position.

#### Variations: door locking

Door locking built-in functionality can be activated by the customer to prevent opening the door when the circuit breaker is ON or in trip position. For exceptional situations, door locking can be temporarily disabled with a tool by qualified personnel to open the door when the circuit breaker is closed.

### Extended rotary handles

#### Installation

##### The door-mounted (extended) rotary handle is made up of:

a unit that has to be screwed on the front accessory cover of the circuit breaker  
 an assembly (handle mechanism and front plate) on the door that is always secured in the same position, whether the circuit breaker is installed vertically or horizontally  
 an adjustable extension shaft.

The handle mechanism is fixed with a nut ( $\varnothing 22$  mm) to make assembly easier. The Laser Square tool (GVAPL01) can be used to accurately align the hole on the door with the circuit breaker.

#### Operation when door is closed

The door mounted handle makes it possible to operate a circuit breaker installed in an enclosure from the front. The door mounted operating handle maintains:

##### suitability for isolation

indication of the three positions OFF (O), ON (I) and tripped (Trip)  
 visibility and access to trip unit when the door is open  
 degree of protection of the handle on the door: IP54 or IP65 as per 60520.  
 Mechanical door locking when device closed

A standard feature of the extended rotary handle is a locking function, built into the shaft, that disables door opening when the circuit breaker is in the ON or tripped positions. Door locking can be temporarily disabled with a tool by qualified personnel to open the door without opening the circuit breaker. This operation is not possible if the handle is locked by a padlock.

#### Device and door padlocking

##### Padlocking locks the circuit breaker handle and disables door opening:

standard situation, in the OFF position, using 1 to 3 padlocks, shackle  $\varnothing 4-8$  mm, padlocks are not supplied  
 for the black handle, with a voluntary modification of the door handle (to be done by the customer during installation), in the ON and OFF positions. Locking in the ON position does not prevent the circuit breaker from tripping if a fault occurs. In this case, the handle remains in the ON position after the circuit breaker trips. Unlocking is required for the handle to go to the tripped then the OFF position.

##### Operation when door is opened

An open door shaft operator can be used to operate the circuit breaker when door is opened. This accessory complies with UL 508A.

The indication of the three positions OFF (O), ON (I) and tripped (Trip) is visible on the circuit breaker.

The circuit breaker itself may be locked in OFF position when the door is opened by 1 padlock / lockout hasp, shackle  $\varnothing 4-8$  mm.

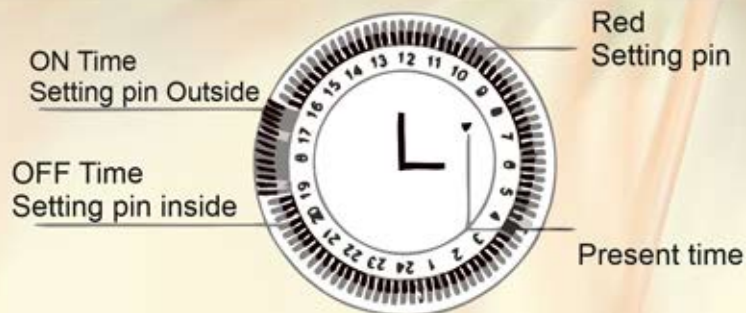
#### Shaft length

##### The shaft length is the distance between the back of the circuit breaker and the door:

minimum shaft length is 200 mm  
 maximum shaft length is 600 mm  
 shaft length must be adjusted.



# MECHANICAL INDUSTRIAL TIMER MOVEMENT





## Main

Size: 6.2\*6\*3.58cm

Color: white

Material: plastic

Working voltage: 250V 50Hz

Working current: 16 (4A)

Rated power: 3680W

Power dissipation: < 1W

Setting range: 30min ~24h

Error: < 5min (a day)

Control output: 16A 250V

## Features:

< Time setting: With up to 24h, you can program your devices to auto on/off.

< Automate your life: Automate your home or office lighting to enhance home security. Turn on and off lamps, small appliances, Christmas trees, holiday light decorations and other electrical devices with this handy timer.

< Money and energy saving: Turn on and off TV, fan, oven, heaters and other electrical devices with our automatic timer to help reduce energy and save money.

< Application: Suitable for  $\leq$  16A electrical devices

< Easy to use: This timer features an easy to use, built-in pin dial that allows you to set your timer.

< Material: Constructed from good quality plastic, impact resistant, long lasting and durable.

## Notes:

1. Please allowed 1-3mm differences due to manual measurement, thank you for your understanding!

2. Due to the difference between different monitors, please understand that the picture may not reflect the actual color of the item.

Package list:

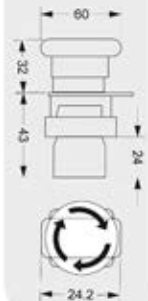
1 x mechanical timer

# Pushbutton Switch





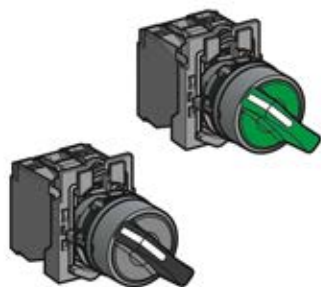
Emergency Stop  
Push Button Switch



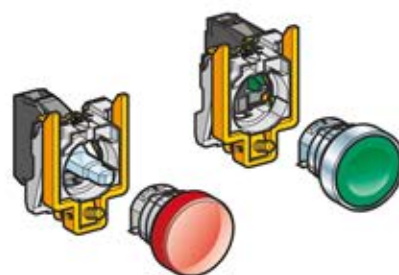
Flush Button  
spring return



Standard  
handle knob



Two position  
handle knob  
with LED light



Flush Button  
with LED light



Flush Button  
with LED light



Double head button

N/O+N/C

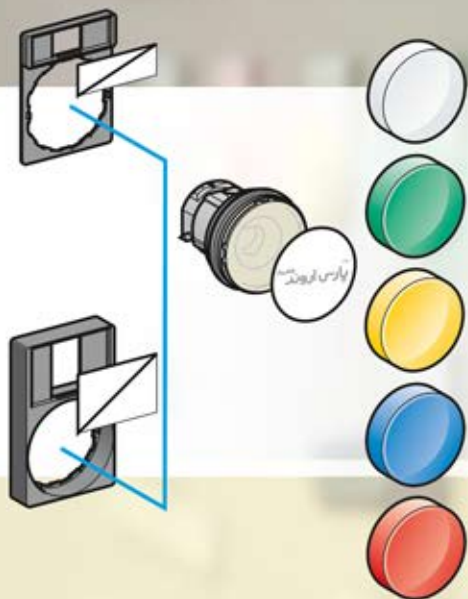


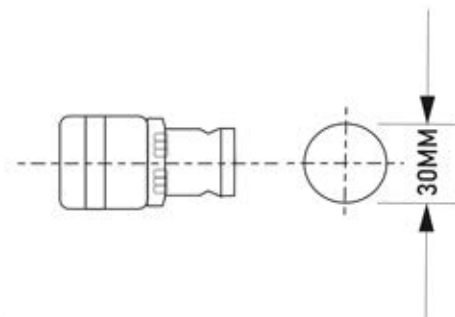
Double head button  
with lamp

N/O+N/C



# LED Indicator





## Main

PA -22s

PA-22s

PA-22s

PA-22s

PA-22s

The LED electronics economy energy indicator Install Structure drawing  $\phi 22$

