

SPECIAL FEATURES

- ❑ Designed for closing or opening of Power circuits in tropical climate.
- ❑ Sturdy design with proven performance.
- ❑ Available in different versions as follows:
 - (a) With one normally open main contact (Series KPV 600-T) for operation in DC Power circuit up to 250V DC.
 - (b) With two normally open main contacts (Series KTPV 600-T) for operation in AC Power circuits up to 440V, 50 to 60 Hz.
 - (c) With one normally closed main contact (Series KPV-620-T) for operation in Dynamic of DC motors.
- ❑ All parts are easily accessible to ensure quick maintenance & minimum down time.
- ❑ Can be supplied with mechanical inter-loc reversing duty.
- ❑ Interlocking (Auxiliary) Contact upto 2N can be provided.
- ❑ Provided with efficient arc quenching mechanism.
- ❑ Contactors can also be supplied with built in suppressors.
- ❑ The contactors are available for front as well as rear connection.

SELECTION

The opening current value relative to the rated current of the contactor commutating the power load may be computed by the following formula:

$$I_o = \frac{I_{rat.}}{\sqrt{DF + \frac{N}{600} \sqrt{DF}}}$$

Where :
 I_{rat.} – Contactor rated current ;
 I_o – Opening current value;
 DF . – Relative in-contact duration;
 N – Number of actuation per hour.

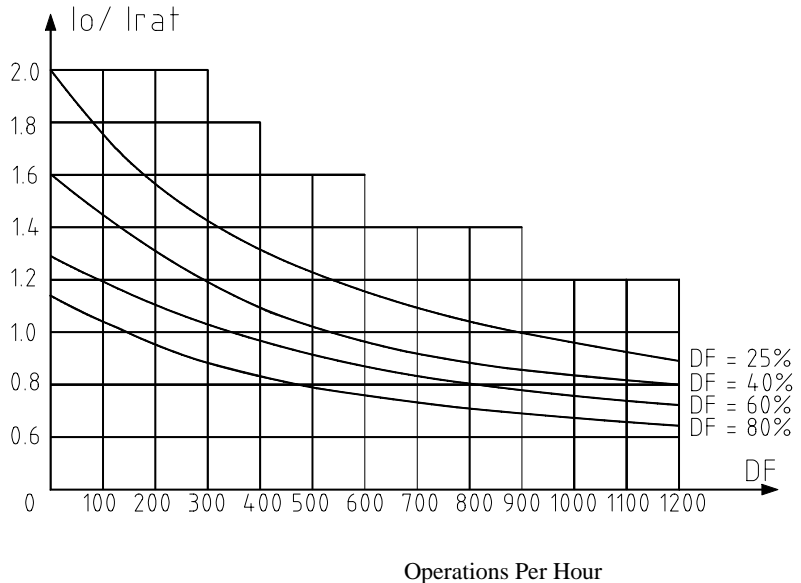


Fig: 1. Graph showing the permissible nominal-current-multiple of rupture I_o / I_{rat} . as a function of the number of operations per hour for various values of DF

TECHNICAL DATA & SELECTION

- (a) Insulation Voltage : 600 V
- (b) Class of insulation of coil : B
- (c) Coil operation Voltage range : +5% & -10% of rated Voltage



INTERLOCKING CONTACTS

The normally open contactors can be fitted with two interlocking contact blocks, one on either side of the contactors, with two contact elements each (See fig 5 and 8). Alternatively one inter-locking contact with 3 contact elements can be provided on the right hand side of the contactors. The normally closed contactors are equipped with one inter-locking contact block with 3 contact elements.

The contactors with mechanical interlocking can be provided with 2 interlocking contact block with 2 contact elements each, mounted on either side of the left hand side contactor. The right hand side contactor can be provided only with one interlocking contact block with either 2 contact elements or three contact elements, mounted on the right side of the contactor, as shown in fig.9

The design of the interlocking contact permits to re-arrange the contact elements as shown in fig.10

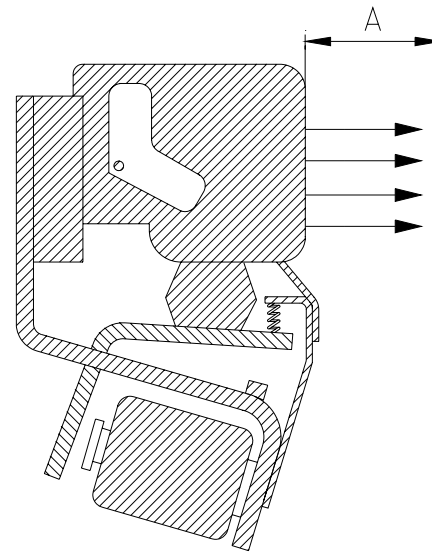


Fig.2. A – Arcing clearance

MOUNTING

The contactors can be supplied in either of the following conditions

- a) With independent mounting channel
- b) With insulated board as per Fig No. 11
- c) Without mounting channel or insulated board .

TABLE NO. – 1

SIZE	TYPE	RATED CURRENT (A)	COIL POWER CONSUMPTION, (W)	INHERENT OPERATING TIME, SEC.		WEIGHT (Approx.) Kgs.	ARCING CLEARANCE
				CLOSING	OPENING		
CONTACTOR WITH ONE NORMALLY-OPEN MAIN CONTACT							
II	KPV 602-T	80	30	0.13	0.07	5	70
III	KPV 603-T	120	40	0.16	0.12	7	80
	KPV 603-A	150	40	0.16	0.12	7	
IV	KPV 604-T	200	55	0.28	0.12	13	140
	KPV 604-A	300	55	0.28	0.12	13	
V	KPV 605-T	500	70	0.37	0.23	28	210
CONTACTOR WITH ONE NORMALLY-CLOSED MAIN CONTACT							
III	KPV 623-T	120	40	0.09	0.12	8	
IV	KPV 624-T	200	55	0.1	0.16	14	



KAKKU DC CONTACTORS
Series : KPV 600-T OR KTPV 600-T

Sheet : 3 Of 7

SIZE	TYPE	RATED CURRENT (A)	COIL POWER CONSUMPTION, (W)	INHERENT OPERATING TIME, SEC.		WEIGHT (Approx.) Kgs.	ARCING CLEARANCE
				CLOSING	OPENING		
CONTACTORS WITH TWO NORMALLY-OPEN MAIN CONTACTS							
I	KTPV 622-T	80	40	0.14	0.09	8	80
II	KTPV 623-T	120	55	0.22	0.1	13	80
III	KTPV 624-T	200	70	0.25	0.1	26	140

INTERLOCKING CONTACTS OF THE CONTACTORS

KIND OF CURRENT	RATED VOLTAGE, (V)	CURRENT, (A)			
		RATED	TO CLOSE	TO RUPTURE	
				INDUCTIVE	OHMIC
A.C.	127 – 380	10	100	10	10
D.C.	110	10	15	2.5	5
	220		8	1	2

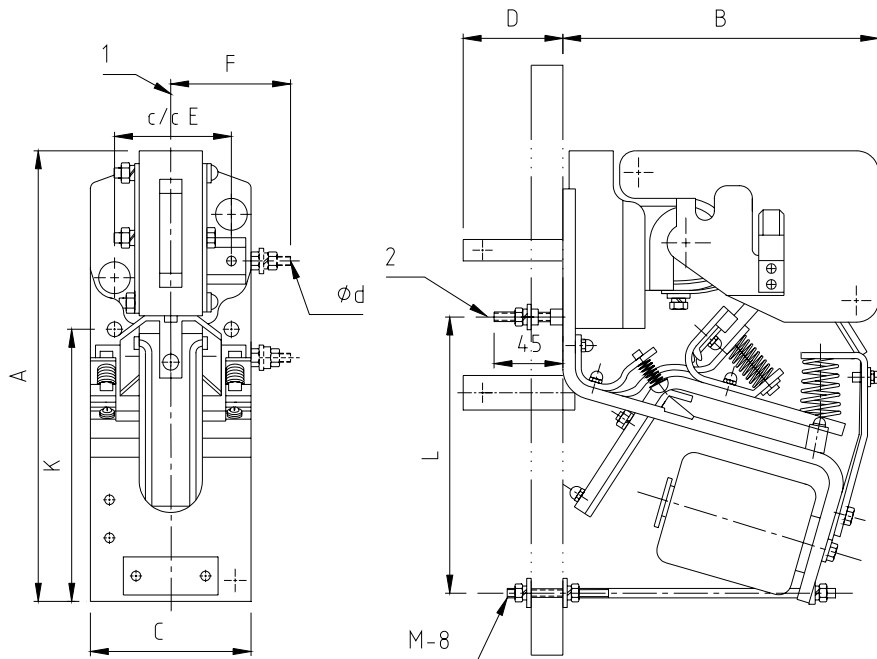


Fig.3. D.C. contactor with one N.O. main contact and arc-quenching chamber
1 – vertical mounting axis; 2 – horizontal mounting axis

CONTACTOR TYPE	A	B	C	D	E	F	L	K	Ø d
KPV-602-T	240	165	85	65	62	75	137	150	M-8
KPV-603-T or A	285	185	90	75	74	75	168	180	M-8
KPV-604-T or A	360	230	90	75	72	80	210	225	M-10



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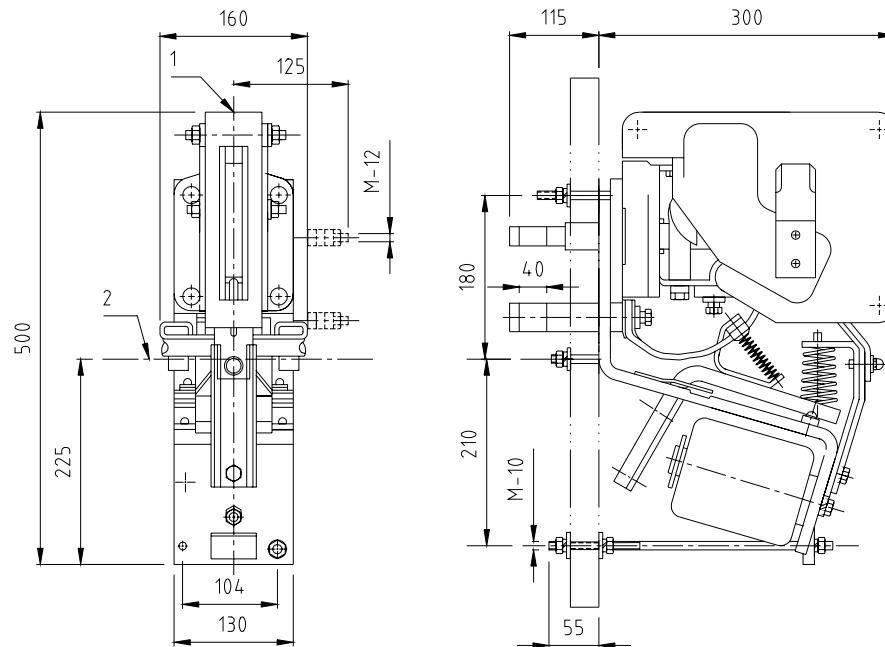


Fig. 4. KPV 605-T. Size V D.C. contactor with one N.O. main contact and arc-quenching chamber 500A rated current :
 1 – Vertical mounting axis;
 2 – Horizontal mounting axis.

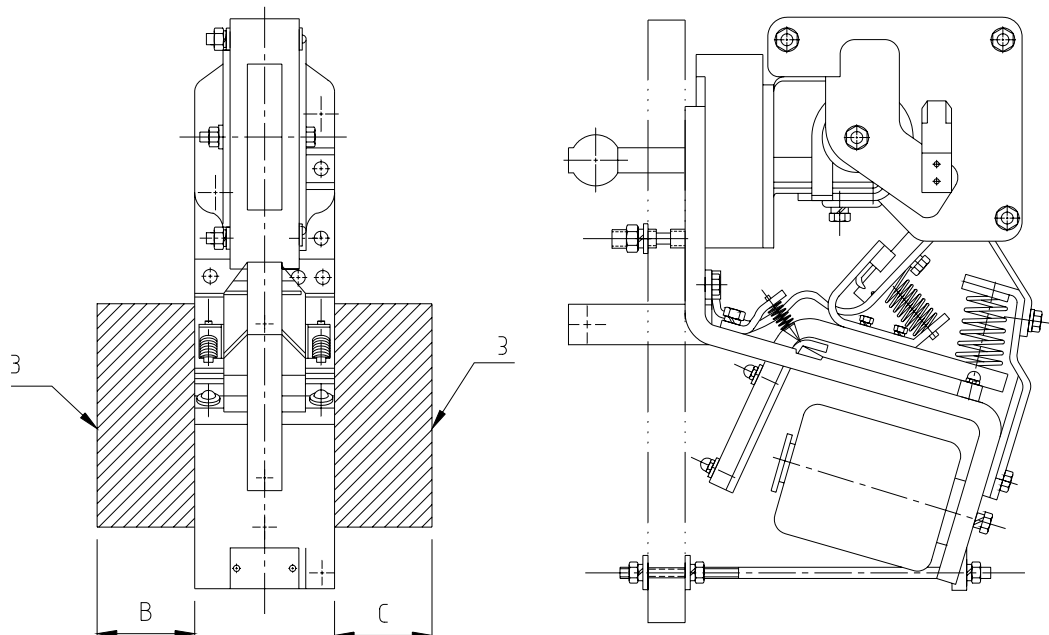


Fig. 5. Overall dimension of contactors KPV 600-T with interlocking contacts.

Note : The dimension B or C = 52 mm incase interlocking contacts are fixed with the contactors on either side.



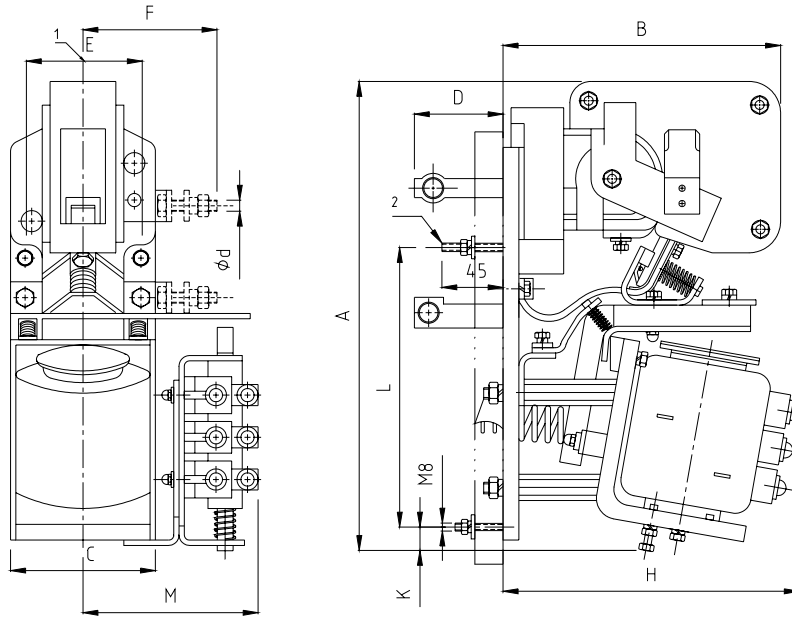


Fig. 6 D.C. contactors with one N.C. main contact and arc-quenching chamber:
1- vertical mounting axis; 2.- horizontal mounting axis.

CONTACTOR TYPE	A	B	C	D	E	F	L	K	M	H	Ød
KPV 623-T	295	175	90	75	72	75	165	25	105	175	M-8
KPV 624-T	375	230	97	75	72	85	210	25	105	205	M-10

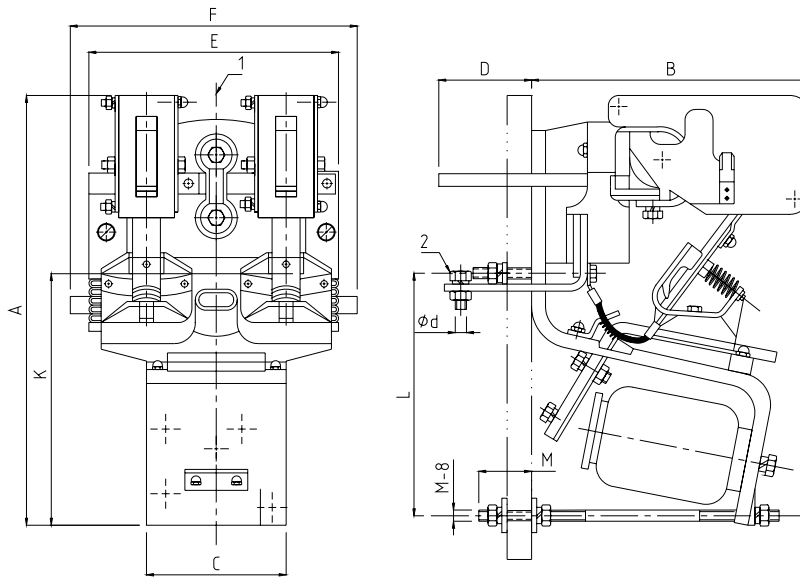


Fig. 7 A.C. contactor with 2 N.O. main contacts for with arc-quenching chamber.
1 – vertical mounting axis; 2. Horizontal mounting axis

CONTACTOR TYPE	A	B	C	D	E	F	L	K	M	Ø d
KTPV-622-T	275	185	90	55	145	170	168	180	45	M-8
KTPV-623-T	320	205	90	75	165	180	170	185	45	M-8
KTPV-624-T	420	255	130	90	230	240	254	270	55	M-10



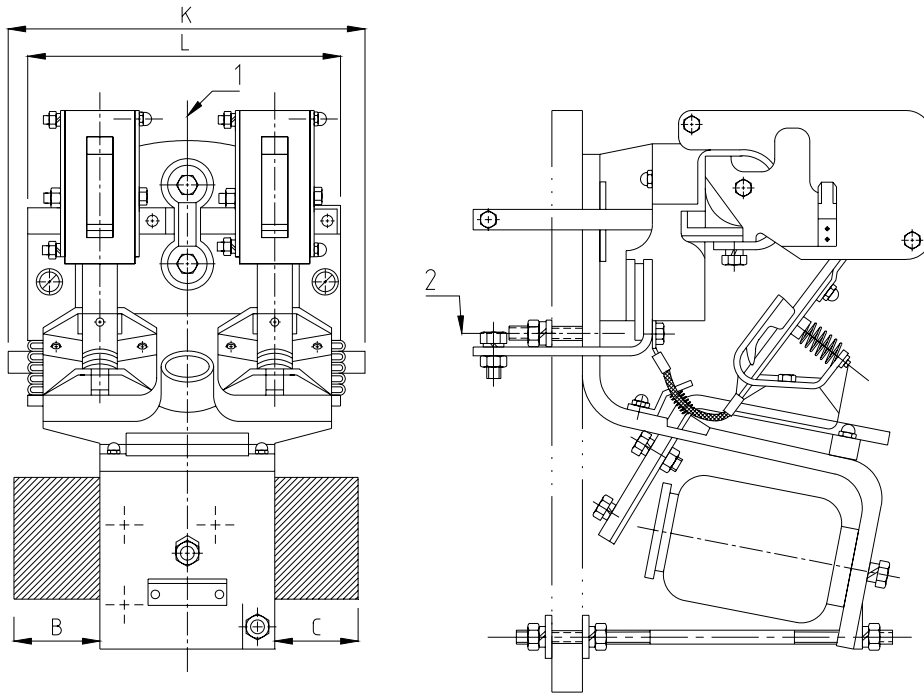


Fig. 8. Overall dimensions of contactors KTPV 600-T with interlocking contacts, mm.
1 – vertical mounting axis; 2 – horizontal mounting axis

Note : The dimension B or C = 52 mm incase interlocking contacts are fixed with the contactors on either side.

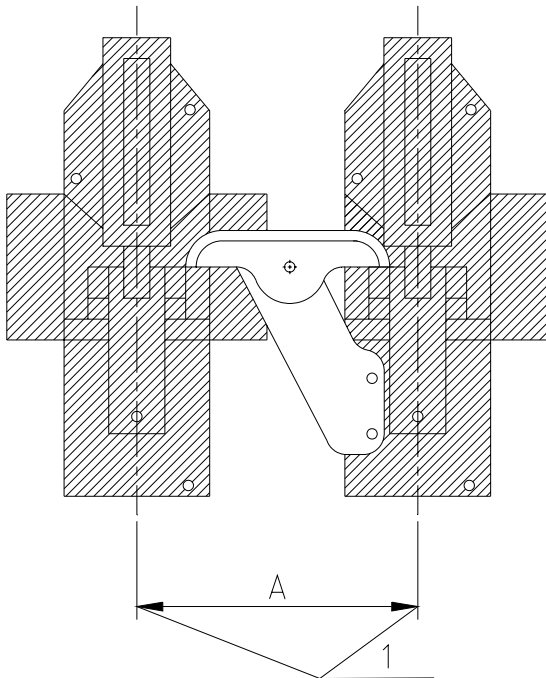


Fig . 9 Mutual position of contactors with
Mechanical interlocking system :
1 – vertical mounting axis;
2 – horizontal mounting axis

Contactor Type	Dimension, A	Contactor Type	Dimension, A
KPV 602-T	180	KTPV 622-T	180
KPV 603-T or A		KTPV 623-T	200
KPV 604-T or A	250	KTPV 624-T	290
KPV 605-T			



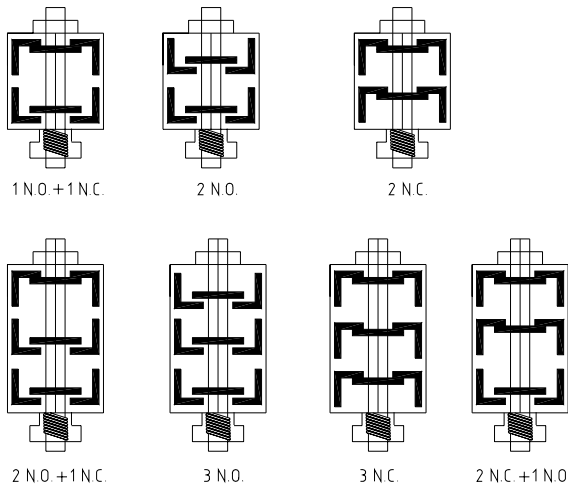


Fig. 10. Interlocking contact alternative
Assembling diagram.

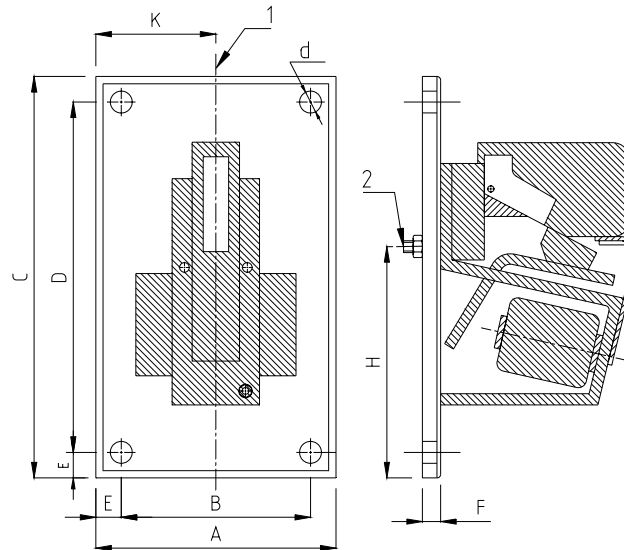


Fig 11. Overall dimensions of the panels for mounting of the contactors:
1. vertical mounting axis; 2. horizontal mounting axis

Dimensions, mm

Contactor type	A	B	C	D	E	F	H	K	d
KPV 602-T	200	150	350	300	25	20	210	100	9
KPV 603-T or A	200	150	350	300	25	20	210	100	9
KPV 604-T or A	200	150	450	400	25	25	270	100	11
KPV 605-T	270	220	550	500	25	30	250	135	11
KTPV 622-T	200	150	350	300	25	20	210	100	9
KTPV 623-T	200	150	450	400	25	25	270	100	11
KTPV 624-T	250	200	500	450	25	30	310	125	11

