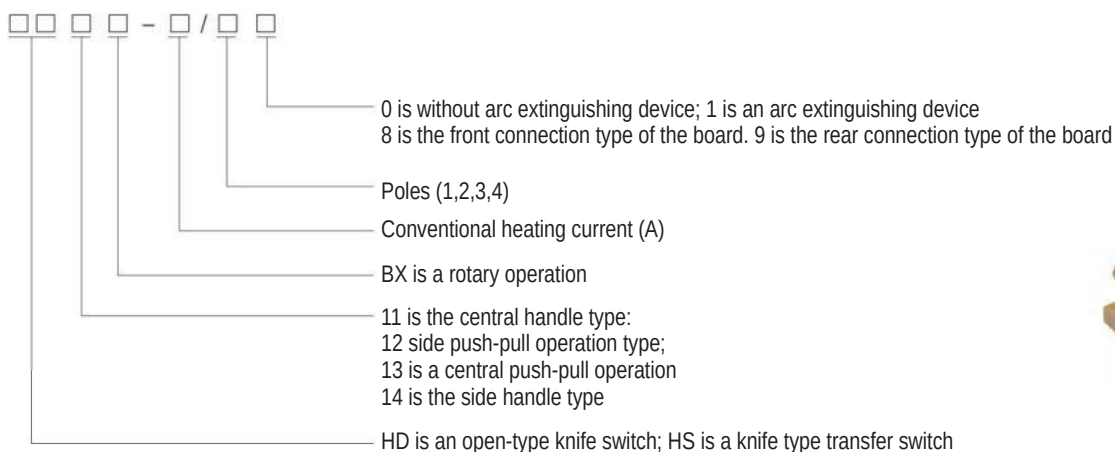


Scope of Application

HD series open knife switch and HS series knife switch (hereinafter referred to as switch), suitable for AC 50Hz, rated voltage up to 380V. Direct current to 220V, rated current to 1600A in the complete set of distribution devices, as infrequent in the dynamic switch and break, direct current circuit or as an isolation switch.

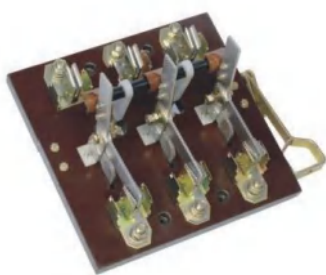
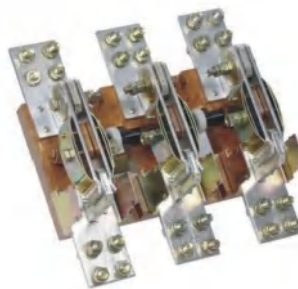
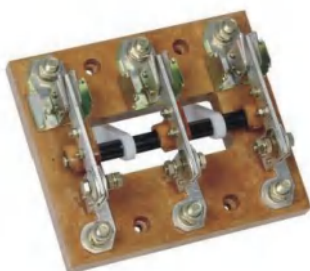
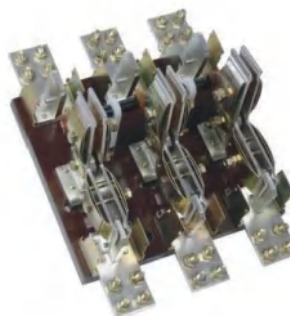
Meet the standard; GB14048.3, IEC 60947-3.

Type & Meaning



Normal operating conditions

- ▲ The ambient air temperature is not higher than +40℃, not lower than -5℃;
- ▲ The elevation of the installation site shall not exceed 2000m;
- ▲ When the maximum temperature is +40℃, the relative humidity of the air does not exceed 50%, and a higher relative humidity can be allowed at a lower temperature. Special measures should be taken for condensation occasionally caused by temperature changes;
- ▲ The pollution level of the surrounding environment is level 3;
- ▲ The switch should be installed in a place where there is no significant shaking, shock vibration and no rain or snow attack. At the same time, the installation site should be free from explosive dangerous media, and the media should be free of gas and dust enough to corrode metal and destroy insulation.



Main Technical Parameters

Table 1

Conventional heating current (A)		100	200	400	600	1000	1600
Rated operating current (A)		100	200	400	600	1000	1600
On-off capability (A)	AC 380V、 $\cos \phi = 0.72 \sim 0.8$	100	200	400	600	1000	1600
	DC T=0.01~0.011S 220V	100	200	400	600	1000	1600
Mechanical life (second)		10000	10000	10000	5000	5000	5000
Electrical life		1000	1000	1000	500	500	500
1S Short Time Withstand Current (kA)		6	10	20	25	30	40
Peak dynamic stable current (kA)	Operating mechanism	20	30	40	50	60	80
	Handle type	15	20	30	40	50	
Operating force (N)		≤300	≤300	≤400	≤400	≤450	≤450

Outline and Installation Dimension

5.1 Connect cables to the front HD11 board (see Figure 1 and Table 2).

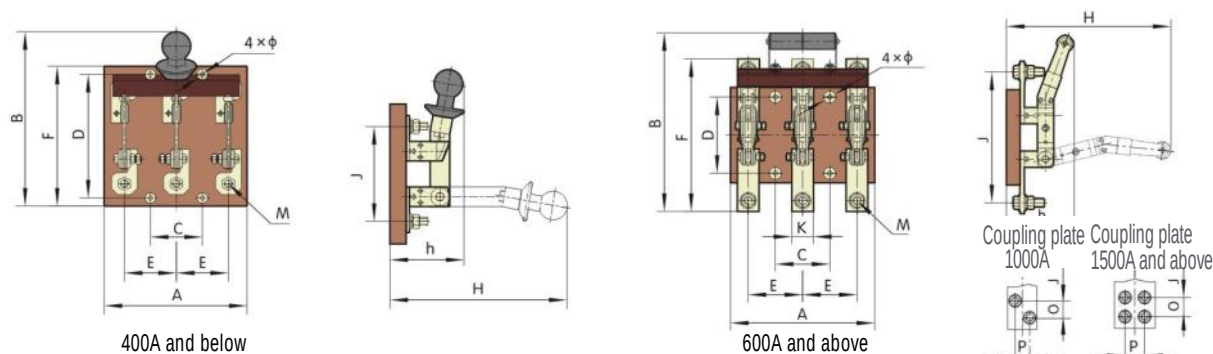


Figure 1

Table 2

[illegible]

5.2HD11 board rear wiring (see Figure 2, Table 3).

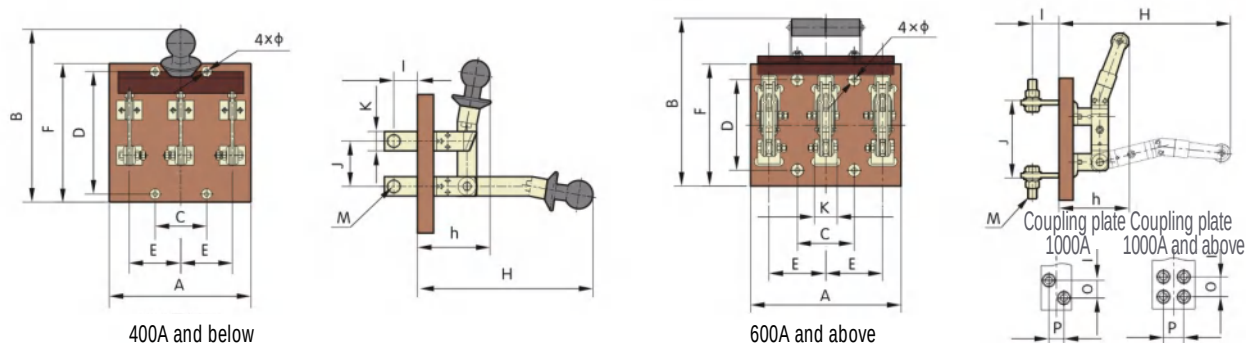


Figure 2

Table 3(mm)

Model	Specification	100A、200A				400A				600A				1000A				1600A			
		1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P
HD11 Central handle type board rear wiring open knife switch	A	100	200	200	270	120	200	220	300	140	240	270	370	160	280	330	450	170	300	380	510
	B	230	230	230	250	280	280	280	310	340	340	320	320	380	380	360	360	410	410	390	390
	C	70	140	70	140	80	160	80	160	100	200	100	200	120	240	120	240	130	260	130	260
	D	160	160	160	160	190	190	190	190	220	220	220	220	260	260	260	260	300	300	300	300
	E	-	70	70	70	-	80	80	80	-	100	100	100	-	120	120	120	-	130	130	130
	F	190	190	190	190	215	215	215	215	260	260	260	260	290	290	290	290	340	340	340	340
	H	220	220	220	240	270	270	270	300	330	330	310	310	380	380	360	360	390	390	370	370
	h	120	120	120	120	135	135	135	145	140	140	125	125	175	175	160	160	175	175	160	160
	I	35	35	35	35	26	26	26	26	36	36	36	36	36	36	36	36	32	32	32	32
	J	60	60	60	60	70	70	70	70	140	140	140	140	160	160	160	160	180	180	180	180
	K	20	20	20	20	30	30	30	30	40	40	40	40	50	50	50	50	70	70	70	70
	O	-	-	-	-	-	-	-	-	-	-	-	-	25	25	25	25	35	35	35	35
	P	-	-	-	-	-	-	-	-	-	-	-	-	25	25	25	25	35	35	35	35
	M	8	8	8	8	12	12	12	12	16	16	16	16	12	12	12	12	12	12	12	12
	φ	7	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9	9	9	9

5.3 HS11 board forward wire board rear wire (see Figure 3, Table 4).



Figure 3

Table 4(mm)

Model	Specification	100A、200A				400A				600A				1000A				1600A			
		1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P
HS11 central handle type board forward wire board rear wire knife switch	A	100	160	190	265	120	200	220	300	140	240	270	370	160	280	330	450	170	300	380	510
	B	330	330	330	370	395	395	395	455	500	500	460	460	560	560	520	520	580	580	540	540
	C	60	120	70	140	80	160	80	160	100	200	100	200	120	240	120	240	130	260	130	260
	D	220	220	220	220	260	260	260	260	220	220	220	220	220	220	220	220	260	260	260	260
	E	—	70	70	70	—	80	80	80	—	100	100	100	—	120	120	120	—	130	130	130
	F	245	245	245	245	285	285	285	285	354	354	354	354	374	374	374	374	434	434	434	434
	H	240	240	240	240	280	280	280	300	390	390	370	370	450	450	430	430	470	470	450	450
	h	100	100	100	100	110	110	110	110	100	100	95	95	150	150	145	145	160	160	150	150
	I	35	35	35	35	26	26	26	26	36	36	36	36	36	36	36	36	32	32	32	32
	J	170	170	170	170	216	216	216	216	320	320	320	320	304	304	304	304	340	340	340	340
	K	20	20	20	20	30	30	30	30	40	40	40	40	50	50	50	50	70	70	70	70
	N	—	—	—	—	—	—	—	—	30	30	30	30	40	40	40	40	46	46	46	46
	O	—	—	—	—	—	—	—	—	—	—	—	—	25	25	25	25	35	35	35	35
	P	—	—	—	—	—	—	—	—	—	—	—	—	25	25	25	25	35	35	35	35
	M	8	8	8	8	12	12	12	12	16	16	16	16	12	12	12	12	12	12	12	12
	φ	7	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9	9	9	9

5.4 HS11 board rear wiring (see Figure 4, Table 5).

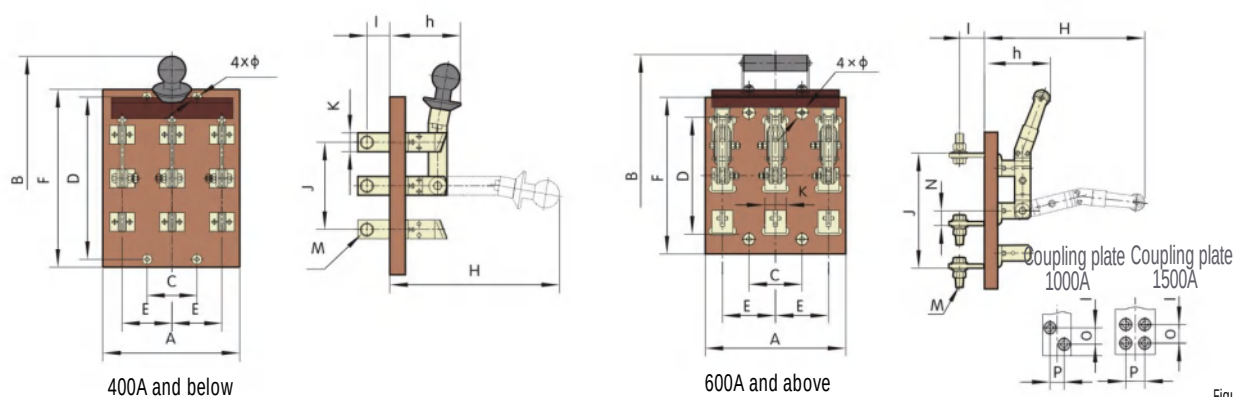


Figure 4

Table 5(mm)

Model	Specification	100A、200A				400A				600A				1000A				1600A			
		1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P	1P	2P	3P	4P
HS11 Central handle type blade transfer switch	A	100	170	200	270	120	200	220	300	140	240	270	370	160	280	330	450	170	300	380	510
	B	330	330	330	370	395	395	395	455	500	500	460	460	560	560	520	520	580	580	540	540
	C	70	140	70	140	80	160	80	160	100	200	100	200	120	240	120	240	130	260	130	260
	D	220	220	220	220	260	260	260	260	300	300	300	300	350	350	350	350	410	410	410	410
	E	—	70	70	70	—	80	80	80	—	100	100	100	—	120	120	120	—	130	130	130
	F	245	245	245	245	285	285	285	285	340	340	340	340	390	390	390	390	450	450	450	450
	H	240	240	240	240	280	280	280	300	330	330	310	310	380	380	360	360	390	390	370	370
	h	120	120	120	120	135	135	135	145	140	140	125	125	175	175	160	160	175	175	160	160
	I	35	35	35	35	26	26	26	26	36	36	36	36	36	36	36	36	32	32	32	32
	J	120	120	120	120	140	140	140	140	220	220	220	220	250	250	250	250	285	285	285	85
	K	20	20	20	20	30	30	30	30	40	40	40	40	50	50	50	50	70	70	70	70
	N	—	—	—	—	—	—	—	—	30	30	30	30	40	40	40	40	46	46	46	46
	O	—	—	—	—	—	—	—	—	—	—	—	—	25	25	25	25	35	35	35	35
	P	—	—	—	—	—	—	—	—	—	—	—	—	25	25	25	25	35	35	35	35
	M	8	8	8	8	12	12	12	12	16	16	16	16	12	12	12	12	12	12	12	12
	φ	7	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9	9	9	9

5.5 HD12 appearance and installation dimensions (see Figure 5, Table 6).

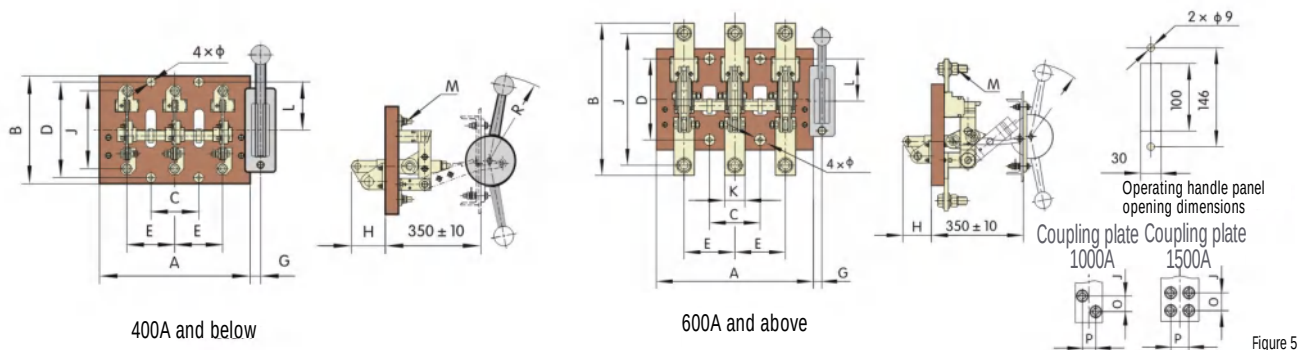


Figure 5

Table 6(mm)

Model	Specification	100A、200A			400A			600A			1000A		1600A	
		2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	2P	3P
HD12 side front lever operated mechanism open knife switch	A	200	280	360	220	310	400	250	330	430	300	400	330	440
	B	200	200	200	210	210	210	294	294	294	314	314	354	354
	C	160	80	160	180	90	180	200	100	200	240	120	260	130
	D	160	160	160	160	160	160	160	160	160	160	160	160	160
	E	80	80	80	90	90	90	100	100	100	120	120	130	130
	G	40	40	40	30	30	30	30	30	30	30	30	30	30
	H	80	80	80	90	90	90	95	95	95	110	110	110	110
	J	130	130	130	166	166	166	254	254	254	238	238	254	254
	K	—	—	—	—	—	—	40	40	40	50	50	70	70
	L	75	75	75	75	75	75	80	80	80	80	80	80	80
	O	—	—	—	—	—	—	—	—	—	25	25	35	35
	P	—	—	—	—	—	—	—	—	—	25	25	35	35
	R	180	180	180	180	180	180	180	180	180	230	230	230	230
	M	8	8	8	12	12	12	16	16	16	12	12	12	12
	φ	7	7	7	7	7	7	9	9	9	9	9	9	9

5.6HS12 outline and mounting dimensions (see Figure 6 and Table 7).

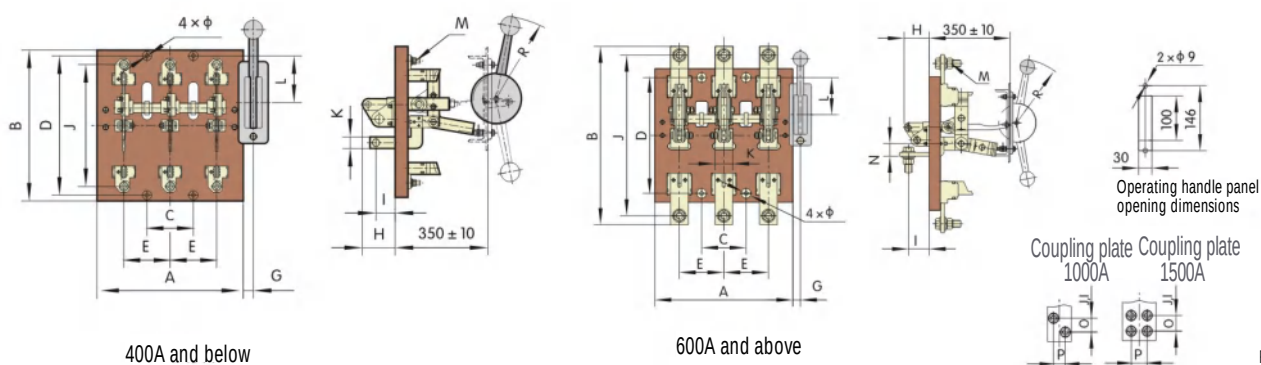


Figure 6

Table 7(mm)

Model	Specification	100A、200A			400A			600A			1000A		1600A	
		2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	2P	3P
HS12 side front lever operated mechanism knife transfer switch	A	200	280	360	220	310	400	250	330	430	300	400	330	440
	B	280	280	280	300	300	300	394	394	394	434	434	504	504
	C	160	80	160	180	90	180	200	100	200	240	120	260	130
	D	240	240	240	240	240	240	240	240	240	240	240	280	280
	E	80	80	80	90	90	90	100	100	100	120	120	130	130
	G	40	40	40	30	30	30	30	30	30	30	30	30	30
	H	80	80	80	90	90	90	95	95	95	110	110	110	110
	I	35	35	35	26	26	26	36	36	36	36	36	32	32
	J	210	210	210	256	256	256	354	354	354	358	358	404	404
	K	20	20	20	30	30	30	40	40	40	50	50	70	70
	L	75	75	75	75	75	75	70	70	70	60	60	70	70
	N	—	—	—	—	—	—	30	30	30	40	40	46	46
	O	—	—	—	—	—	—	—	—	—	25	25	35	35
	P	—	—	—	—	—	—	—	—	—	25	25	35	35
	R	180	180	180	180	180	180	180	180	180	230	230	230	230
	M	8	8	8	12	12	12	16	16	16	12	12	12	12
	φ	7	7	7	7	7	7	9	9	9	9	9	9	9

5.7 HD13 appearance and installation dimensions (see Figure 7, Table 8).

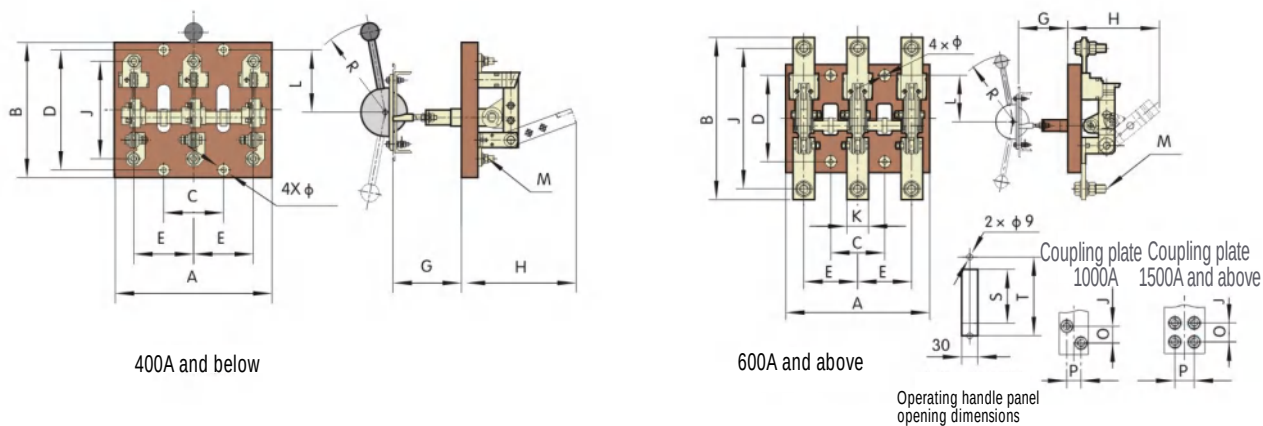


Figure 7

Table 8(mm)

Model	Specification	100A、200A			400A			600A			1000A			1600A		
		2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P
HD13 central lever operated mechanism type open knife switch	A	190	210	300	220	245	335	240	260	360	280	320	460	310	350	510
	B	200	200	200	210	210	210	294	294	294	314	314	314	354	354	354
	C	160	80	160	180	90	180	200	100	200	240	120	240	260	130	260
	D	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
	E	80	80	80	90	90	90	100	100	100	120	120	120	130	130	130
	G前	350~370			350~370			350~370			350~370			350~370		
	G后	245~265			245~265			245~265			245~265			245~265		
	H	160	160	160	185	185	185	190	190	190	230	230	230	235	235	235
	J	130	130	130	166	166	166	254	254	254	238	238	238	254	254	254
	K	-	-	-	-	-	-	40	40	40	50	50	50	70	70	70
	L	75	75	75	75	75	75	80	80	80	80	80	80	80	80	80
	O	-	-	-	-	-	-	-	-	-	25	25	25	35	35	35
	P	-	-	-	-	-	-	-	-	-	25	25	25	35	35	35
	R	180	180	180	180	180	180	180	180	180	230	230	230	230	230	280
	S	100	100	100	100	100	100	100	100	100	100	100	100	100	100	130
	T	146	146	146	146	146	146	146	146	146	146	146	146	146	146	164
	M	8	8	8	12	12	12	16	16	16	12	12	12	12	12	12
	φ	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9

Note: Before G: indicates the installation distance before the board, after G: indicates the installation distance after the board

5.8HS13 Outline and mounting dimensions (see Figure 8, Table 9).

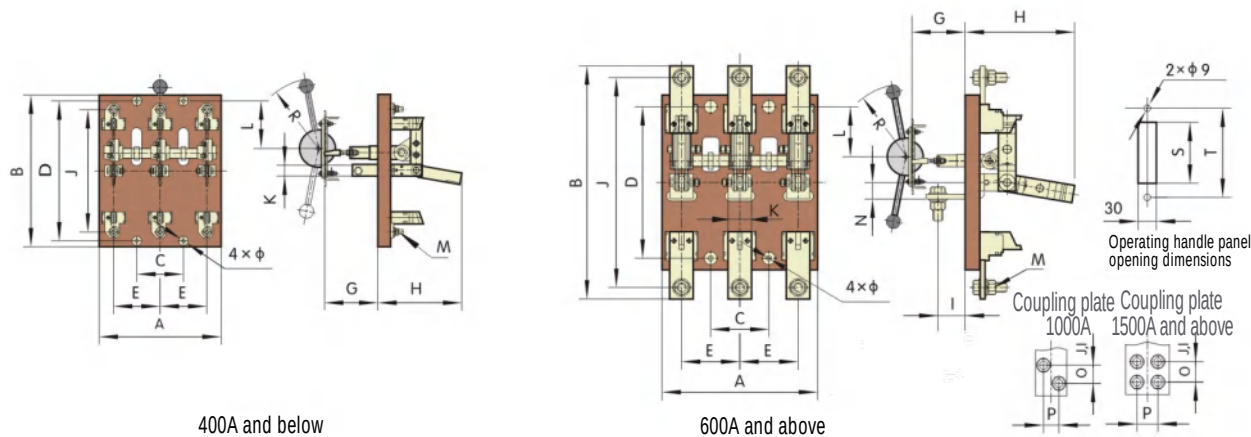


Figure 8

Table 9(mm)

Model	Specification	100A、200A			400A			600A			1000A			1600A		
		2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P
HS13 Central lever operated mechanism knife transfer switch	A	190	210	300	220	245	335	240	260	360	280	320	460	310	370	510
	B	280	280	280	300	300	300	394	394	394	434	434	434	504	504	504
	C	160	80	160	180	90	180	200	100	200	240	120	240	260	130	260
	D	240	240	240	240	240	240	240	240	240	240	240	240	280	280	280
	E	80	80	80	90	90	90	100	100	100	120	120	120	130	130	130
	G	245~265			245~265			245~265			245~265			245~265		
	H	160	160	160	185	185	185	190	190	190	235	235	235	255	255	255
	I	35	35	35	26	26	26	36	36	36	36	36	36	32	32	32
	J	210	210	210	256	256	256	354	354	354	358	358	358	404	404	404
	K	-	-	-	-	-	-	40	40	40	50	50	50	70	70	70
	L	75	75	75	70	70	70	70	70	70	60	60	60	70	70	70
	N	-	-	-	-	-	-	30	30	30	40	40	40	46	46	46
	O	-	-	-	-	-	-	-	-	-	25	25	25	35	35	35
	P	-	-	-	-	-	-	-	-	-	25	25	25	35	35	35
	R	180	180	180	180	180	180	180	180	180	230	230	230	280	280	280
	S	100	100	100	100	100	100	100	100	100	100	100	100	130	130	130
	T	146	146	146	146	146	146	146	146	146	146	146	146	164	164	164
	M	8	8	8	8	8	8	16	16	16	12	12	12	12	12	12
	φ	7	7	7	7	7	7	9	9	9	9	9	9	11	11	11

5.HD13BX outline and installation dimensions (see Figure 9, Table 10).

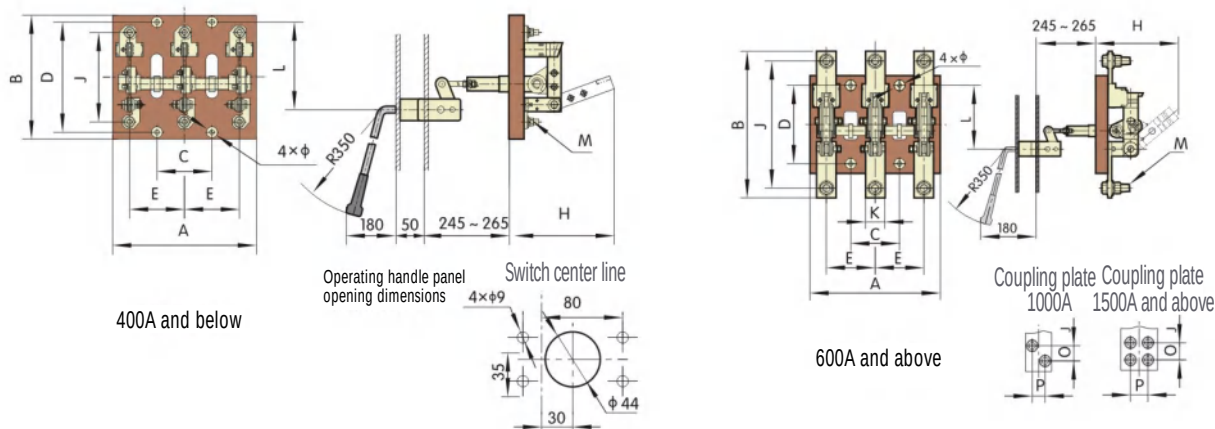


Figure 9

Table 10(mm)

Model	Specification	100A、200A			400A			600A			1000A			1600A		
		2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P
HD13BX central rotary operating mechanism type open knife switch	A	190	210	300	220	245	335	240	260	360	280	320	460	310	350	510
	B	200	200	200	210	210	210	294	294	294	314	314	314	354	354	354
	C	160	80	160	180	90	180	200	100	200	240	120	240	260	130	260
	D	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
	E	80	80	80	90	90	90	100	100	100	120	120	120	130	130	130
	H	160	160	160	185	185	185	190	190	190	230	230	230	235	235	235
	J	130	130	130	166	166	166	254	254	254	238	238	238	254	254	254
	K	-	-	-	-	-	-	40	40	40	50	50	50	70	70	70
	L	125	125	125	125	125	125	135	135	135	137	137	137	137	137	137
	O	-	-	-	-	-	-	-	-	-	25	25	25	35	35	35
	P	-	-	-	-	-	-	-	-	-	25	25	25	35	35	35
	M	8	8	8	12	12	12	16	16	16	12	12	12	12	12	12
	φ	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9

5.10 HS13BX outline and mounting dimensions (see Figure 10 and Table 11).

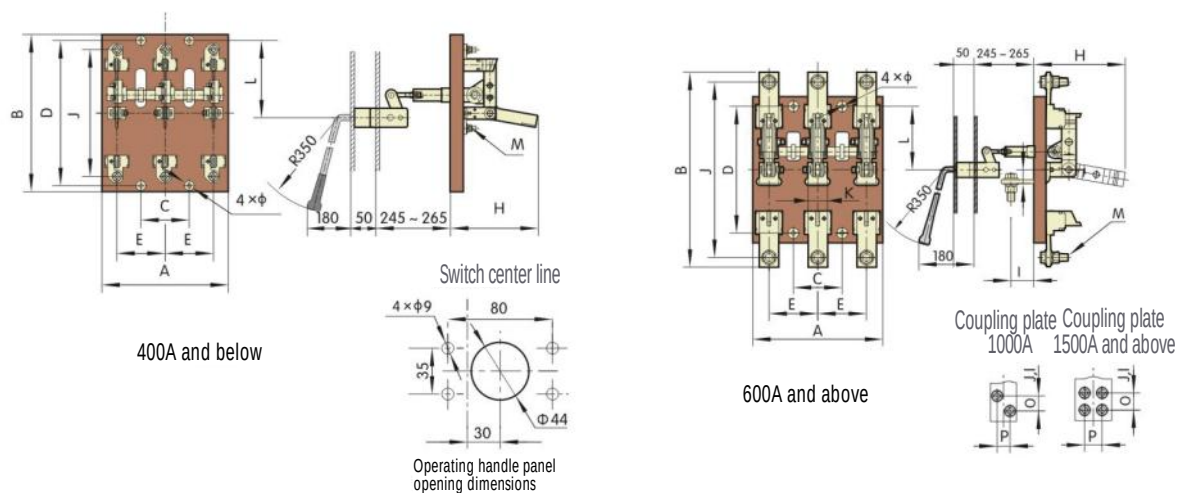


Figure 10

Table 11(mm)

Model	Specification	100A、200A			400A			600A			1000A			1600A		
		2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P
HS13BX central rotary operating mechanism type knife transfer switch	A	190	210	300	220	245	335	240	260	360	280	320	460	310	370	510
	B	280	280	280	300	300	300	394	394	394	434	434	434	504	504	504
	C	160	80	160	180	90	180	200	100	200	240	120	240	260	130	260
	D	240	240	240	240	240	240	240	240	240	240	240	240	280	280	280
	E	80	80	80	90	90	90	100	100	100	120	120	120	130	130	130
	H	160	160	160	185	185	185	190	190	190	235	235	235	255	255	255
	I	35	35	35	26	26	26	36	36	36	36	36	36	32	32	32
	J	210	210	210	256	256	256	354	354	354	358	358	358	404	404	404
	K	—	—	—	—	—	—	40	40	40	50	50	50	70	70	70
	L	125	125	125	120	120	120	125	125	125	117	117	117	127	127	127
	N	—	—	—	—	—	—	30	30	30	40	40	40	46	46	46
	O	—	—	—	—	—	—	—	—	—	25	25	25	35	35	35
	P	—	—	—	—	—	—	—	—	—	25	25	25	35	35	35
M	8	8	8	12	12	12	16	16	16	12	12	12	12	12	12	
φ	7	7	7	7	7	7	9	9	9	9	9	9	9	9	9	

5.11 HD14 appearance and installation dimensions (see Figure 11 and Table 12).

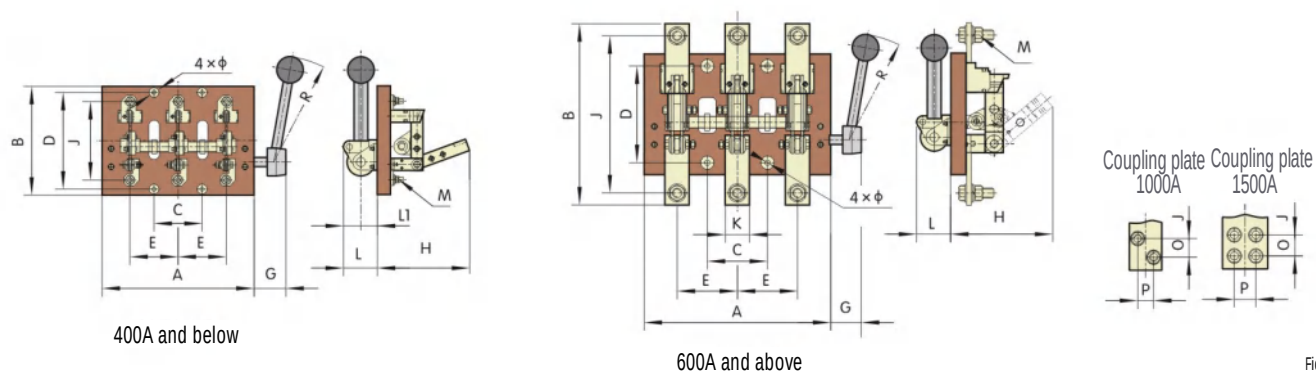


Figure 11