

OFF-CIRCUIT TAP CHANGER (LINEAR FORM)



Address: No.1 Shuitian Road, Binshuixi Avenue,
Nankai District, Tianjin China 300110
Tel: +86 22 8110 7952
Email: info@cmtc-group.com

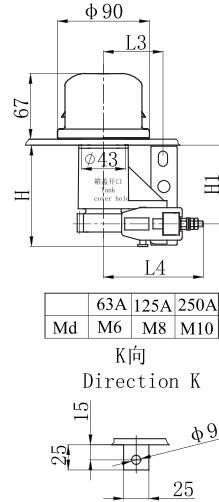
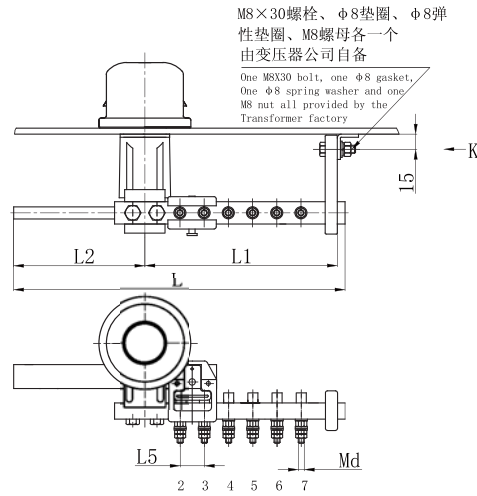


无励磁单相条形分接开关

OFF-CIRCUIT SINGLE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-35KV
- 额定电流63A-250 A
- 分接位置数: 3-7
- 每个位置调压2.5%

- Used in mineral oil or silicon oil
- Rated voltage 10KV-35KV
- Rated current from 63A-250A
- Tapping position: 3-7
- Regulation 2.5% per position



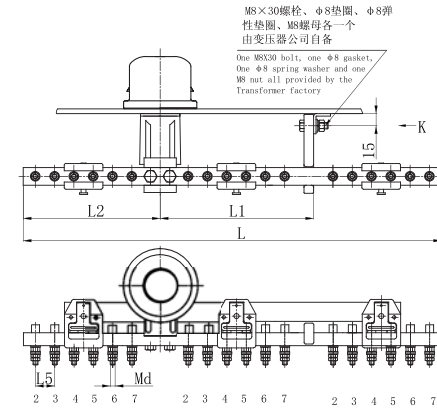
序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm						
			L	L1	L2	L3	L4	L5	H
1	WDT II 63/10-4×3	中部 Central	270	147	113	67	99	24	100
2	WDT II 125/10-4×3		290	162	118	67	107	29	100
3	WDT II 250/10-4×3		290	162	118	67	112	29	100
4	WDT II 63/35-4×3		338	215	114	67	103	24	120
5	WDT II 125/35-4×3		380	228	128	67	107	34	120
6	WDT II 250/35-4×3		380	228	128	67	112	34	120
7	WDT II 63/10-6×5		366	195	161	67	99	24	100
8	WDT II 125/10-6×5		405	221	175	67	107	29	100
9	WDT II 250/10-6×5		405	221	175	67	112	29	100
10	WDT II 63/35-6×5		441	266	166	67	103	24	120
11	WDT II 125/35-6×5		516	296	196	67	107	34	120
12	WDT II 250/35-6×5		516	296	196	67	112	34	120
13	WDT II 63/10-8×7		462	239	209	78	110	24	100
14	WDT II 125/10-8×7		528	279	239	78	118	29	100
15	WDT II 250/10-8×7		528	279	239	78	123	29	100
16	WDT II 63/35-8×7		532	314	209	78	114	24	120
17	WDT II 125/35-8×7		588	329	234	78	123	29	120
18	WDT II 250/35-8×7		588	329	234	78	128	29	120

无励磁三相条形分接开关

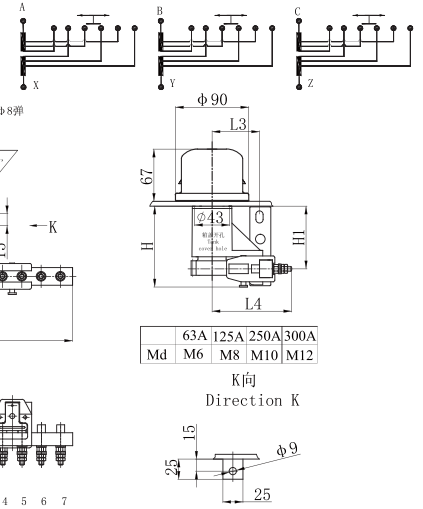
OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-35KV
- 额定电流63A-300A
- 分接位置数: 3-9
- 每个位置调压2.5%

- Used in mineral oil or silicon oil
- Rated voltage 10KV-35KV
- Rated current from 63A-300A
- Tapping position: 3-9
- Regulation 2.5% per position



接线原理图 connection diagram



序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm						
			L	L1	L2	L3	L4	L5	H
1	WST II 63/10-4×3	中部 Central	376	143	122	59	99	24	100
3	WST II 125/10-4×3		431	163	142	59	107	29	100
4	WST II 250/10-4×3		431	163	142	59	112	29	100
5	WST II 300/10-4×3		530	203	169	69	112	34	106
6	WST II 63/20-4×3		426	168	137	59	99	24	100
7	WST II 125/20-4×3		475	183	154	59	107	29	102
8	WST II 250/20-4×3		530	203	169	59	112	34	102
9	WST II 63/35-4×3		526	218	157	59	103	24	120
10	WST II 125/35-4×3		580	228	179	59	107	34	120
11	WST II 250/35-4×3		580	228	179	59	112	34	120
12	WST II 63/10-6×5		520	191	170	59	99	24	100
14	WST II 125/10-6×5		605	221	200	59	107	29	100
15	WST II 250/10-6×5		605	221	200	59	112	29	100
16	WST II 300/10-6×5		734	271	237	69	112	34	106
17	WST II 63/20-6×5		570	216	185	59	99	24	100
18	WST II 125/20-6×5		649	241	212	59	107	29	102
19	WST II 250/20-6×5		734	271	237	59	112	34	102
20	WST II 63/35-6×5		670	266	205	59	103	24	120
21	WST II 125/35-6×5		784	296	247	59	107	34	120
22	WST II 250/35-6×5		784	296	247	59	112	34	120
23	WST II 63/10-8×7		674	244	223	70	110	24	100
24	WST II 125/10-8×7		783	279	260	70	118	29	100
25	※WST II 250/10-8×7T		803	283	260	—	128	29	100
26	WST II 63/35-8×7		818	314	255	70	113	24	120
27	WST II 125/35-8×7		883	329	278	70	123	29	120
28	※WST II 250/35-8×7T		883	323	280	—	128	29	120
29	WST II 63/10-10×9		818	292	271	70	110	24	100

※需求型号后面有“T”的产品请与我们联系，以我公司提供的外形图为准。

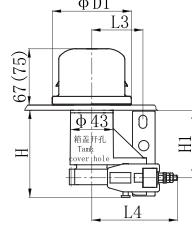
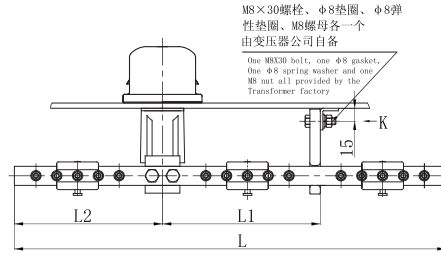
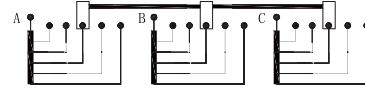
无励磁三相条形分接开关

OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-35KV
- 额定电流63A -300A
- 分接位置数: 3-9
- 每个位置调压2.5%

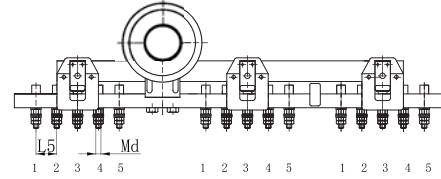
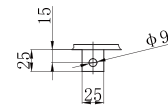
Used in mineral oil or silicon oil
Rated voltage 10KV-35KV
Rated current from 63A -300A
Tapping position : 3-9
Regulation 2.5% per position

接线原理图
connection
diagram



	63A	125A	250A	300A
Md	M6	M8	M10	M12

K向
Direction K



序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm							
			L	L1	L2	L3	L4	L5	H	H1
1	WSTIII63/10-3×3	中性点 Neutral point	362	139	122	59	99	24	100	78
2	WSTIII125/10-3×3		394	149	133	59	107	29	100	78
3	WSTIII250/10-3×3		394	149	133	59	112	29	100	78
4	WSTIII63/20-3×3		362	139	122	59	99	24	120	98
5	WSTIII125/20-3×3		394	149	133	59	107	29	120	98
6	WSTIII250/20-3×3		446	169	144	59	112	34	120	98
7	WSTIII63/35-3×3		362	139	122	59	103	24	140	118
8	WSTIII125/35-3×3		424	159	143	59	107	34	140	118
9	WSTIII250/35-3×3		424	159	143	59	112	34	140	118
10	WSTIII63/10-5×5		506	187	170	59	99	24	100	78
11	WSTIII125/10-5×5		568	207	191	59	107	29	100	78
12	WSTIII250/10-5×5		568	207	191	59	112	29	100	78
13	WSTIII300/10-5×5		628	227	211	69	112	34	106	78
14	WSTIII63/20-5×5		506	187	170	59	100	24	120	98
15	WSTIII125/20-5×5	端部 Terminal point	568	207	191	59	107	29	120	98
16	WSTIII250/20-5×5		628	227	211	59	112	34	120	98
17	WSTIII63/35-5×5		506	187	170	59	103	24	140	118
18	WSTIII125/35-5×5		628	227	211	59	107	34	140	118
19	WSTIII250/35-5×5		628	227	211	59	112	34	140	118
20	WSTIII63/10-7×7		650	235	218	70	110	24	100	78
21	WSTIII125/10-7×7		742	265	249	70	118	29	100	78
22	WSTIII250/10-7×7		742	265	249	77.5	123	29	100	78
23	WSTIII63/10-9×9		796	283	267	70	110	24	100	78

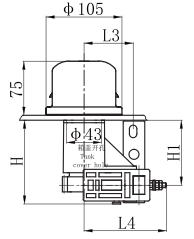
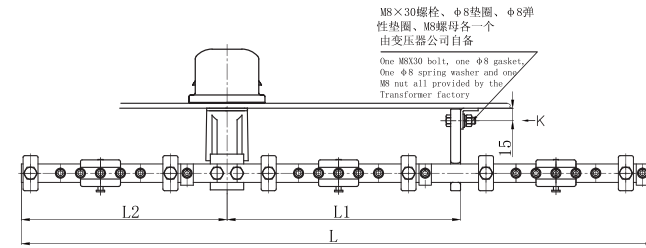
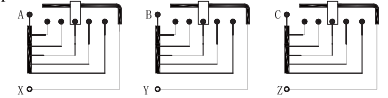
无励磁三相条形分接开关

OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-35KV
- 额定电流63A -250A
- 分接位置数: 3-7
- 每个位置调压2.5%

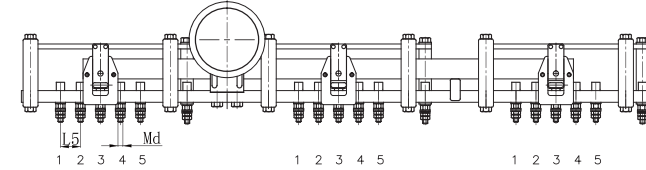
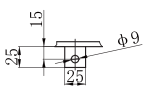
Used in mineral oil or silicon oil
Rated voltage 10KV-35KV
Rated current from 63A -250A
Tapping position: 3-7
Regulation 2.5% per position

接线原理图
connection
diagram



	63A	125A	250A
Md	M6	M8	M10

K向
Direction K



序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm							
			L	L1	L2	L3	L4	L5	H	H1
1	WST I 63/10-3×3	端部 Terminal point	617	232	199	59	99	24	100	78
2	WST I 125/10-3×3		665	248	215	59	107	29	100	78
3	WST I 250/10-3×3		665	248	215	59	112	29	100	78
4	WST I 63/35-3×3		686	266	211	59	103	24	120	98
5	WST I 125/35-3×3		735	284	228	59	107	34	120	98
6	WST I 250/35-3×3		735	284	228	59	112	34	120	98
7	WST I 63/10-5×5		760	280	247	59	99	24	100	78
8	WST I 125/10-5×5		839	306	273	59	107	29	100	78
9	WST I 250/10-5×5		839	306	273	59	112	29	100	78
10	WST I 63/35-5×5		830	314	259	59	103	24	120	98
11	WST I 125/35-5×5T		939	346	296	--	107	34	120	98
12	WST I 250/35-5×5T		939	346	296	--	112	34	120	98
13	WST I 63/10-7×7		912	331	300	70	110	24	100	78
14	WST I 125/10-7×7T		1048	375	336	--	118	29	100	78
15	WST I 250/10-7×7T		1048	375	336	--	118	29	100	78

※需求型号后面有“T”的产品请与我们联系，以我公司提供的外形图为准。

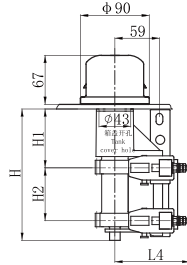
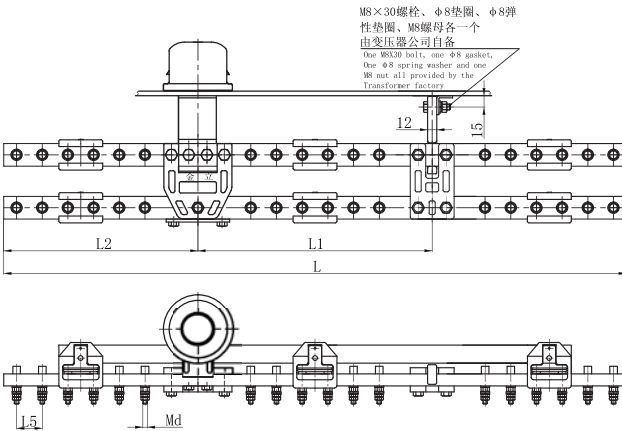
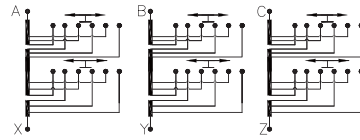
无励磁三相条形组合 (ZH2)分接开关

OFF-CIRCUIT COMBINATION LINEAR TYPE(ZH2) THREE PHASE TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-35KV
- 额定电流63A -250A
- 分接位置数: 3-5
- 每个位置调压2. 5%

Used in mineral oil or silicon oil
Rated voltage 10KV-35KV
Rated current from 63A -250A
Tapping position : 3-5
Regulation 2.5% per position

接线原理图
connection
diagram



	63A	125A	250A	300A
Md	M6	M8	M10	M12

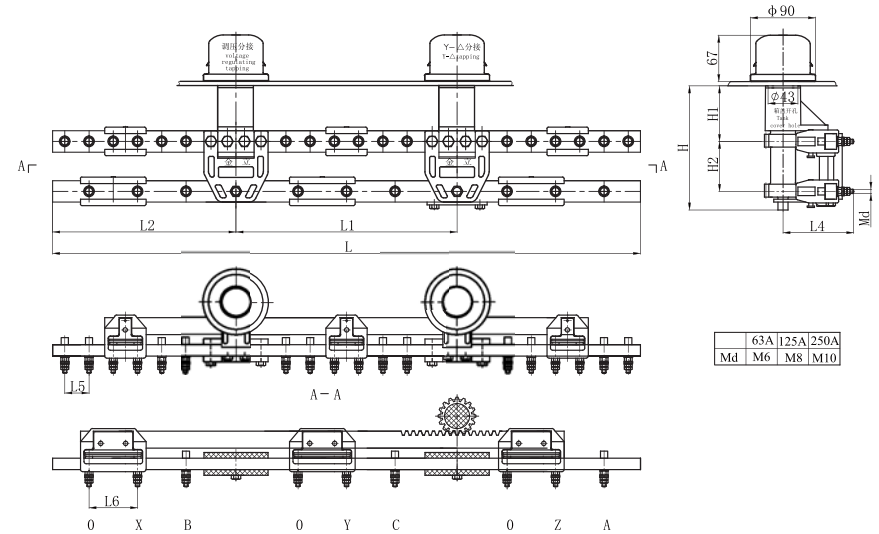
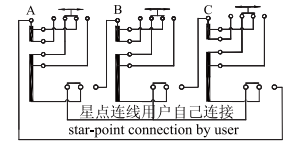
无励磁三相条形组合 (ZH2)分接开关

OFF-CIRCUIT COMBINATION LINEAR TYPE(ZH2) THREE PHASE TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-35KV
- 额定电流63A -250A
- 分接位置数: 3-5
- 每个位置调压2. 5%

Used in mineral oil or silicon oil
Rated voltage 10KV-35KV
Rated current from 63A-250A
Tapping position: 3-5
Regulation 2.5% per position

接线原理图
connection
diagram

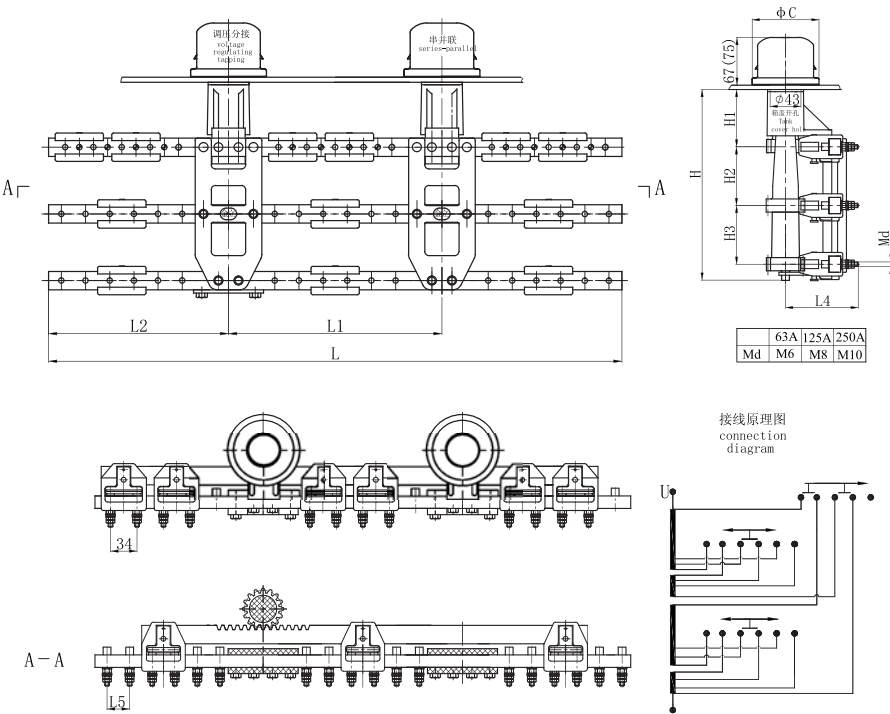


序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm								
			L	L1	L2	L4	L5	L6	H	H1	H2
1	WSTIV63/10-4×3ZH2	Y-△ 中部 Central	478	188	145	99	24	34	180	78	70
2	WSTIV125/10-4×3ZH2		705	265	220	107	29	70	180	78	70
3	WSTIV250/10-4×3ZH2		705	265	220	112	29	70	180	78	70
4	WSTIV63/35-4×3ZH2		705	265	220	103	29	70	210	98	80
5	WSTIV125/35-4×3ZH2		705	265	220	107	34	70	210	98	80
6	WSTIV250/35-4×3ZH2		705	265	220	112	34	70	210	98	80
7	WSTIV63/10-6×5ZH2		622	236	193	99	24	34	180	78	70
8	WSTIV125/10-6×5ZH2		705	265	220	107	29	70	180	78	70
9	WSTIV250/10-6×5ZH2		705	265	220	112	29	70	180	78	70
10	WSTIV63/35-6×5ZH2		755	285	235	103	29	70	210	98	80
11	WSTIV125/35-6×5ZH2		784	290	247	107	34	70	210	98	80
12	WSTIV250/35-6×5ZH2		784	290	247	112	34	70	210	98	80

无励磁三相条形组合 (ZH3)分接开关 OFF-CIRCUIT COMBINATION LINEAR TYPE(ZH3) THREE PHASE TAP CHANGER

- 在变压器油中使用
- 额定电压20KV
- 额定电流63A -250A
- 分接位置数: 3-5
- 每个位置调压2.5%

- Used in mineral oil or silicon oil
- Rated voltage20KV
- Rated currentfrom 63A -250A
- Tapping position: 3-5
- Regulation 2.5% per position

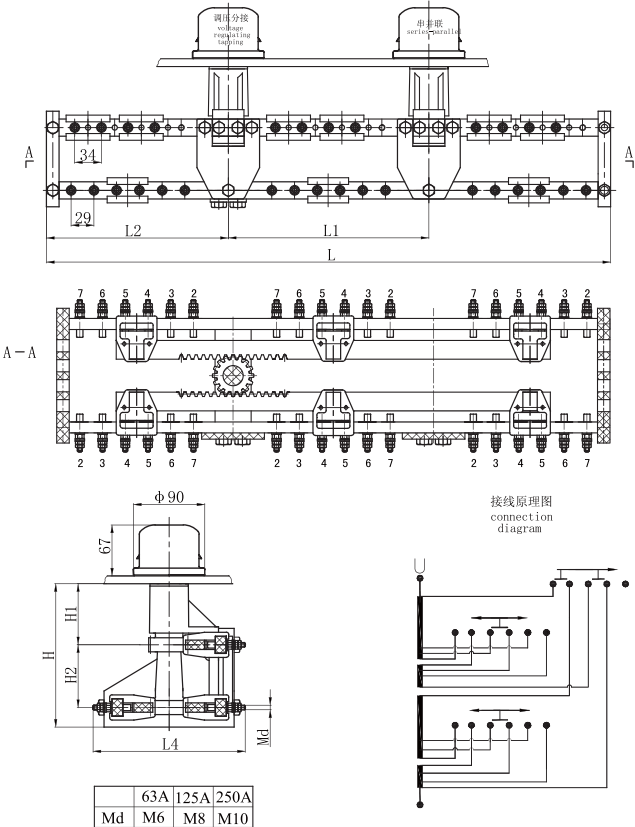


序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm									
			L	L1	L2	L4	L5	H	H1	H2	H3	φ C
1	WST V 63/20-4×3ZH3	串并联 Series-parallel 中部 Central	688	256	216	99	29	230	78	70	60	90
2	WST V 125/20-4×3ZH3		688	256	216	107	29	275	78	80	80	90
3	WST V 250/20-4×3ZH3		766	284	241	112	34	275	78	80	80	105
4	WST V 63/20-6×5ZH3		688	256	216	99	29	230	78	70	60	90
5	WST V 125/20-6×5H3		688	256	216	107	29	275	78	80	80	90
6	WST V 250/20-6×5ZH3		766	284	241	112	34	275	78	80	80	105

无励磁三相条形组合 (ZH3)分接开关 OFF-CIRCUIT COMBINATION LINEAR TYPE(ZH3) THREE PHASE TAP CHANGER

- 在变压器油中使用
- 额定电压20KV
- 额定电流63A -125A
- 分接位置数: 3-5
- 每个位置调压2.5%

- Used in mineral oil or silicon oil
- Rated voltage 20KV
- Rated current from 63A -125A
- Tapping position: 3-5
- Regulation 2.5% per position

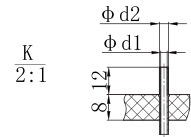
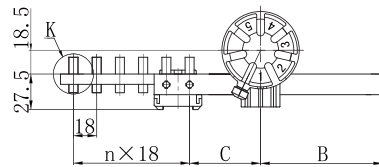
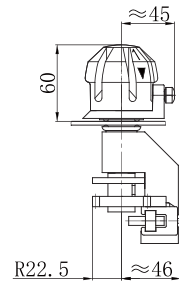
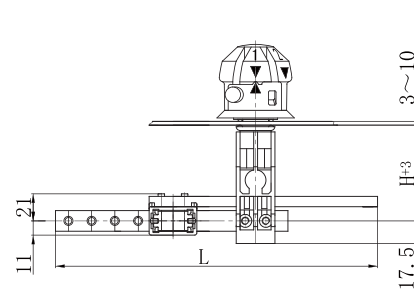
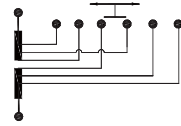


序号	开关型号 Model No.	调压部位 Regulating position	安装尺寸 mm Install dimension mm							
			L	L1	L2	L4	H	H1	H2	
1	WST V 63/20-4×3ZH3 (两层)	串并联	706	256	225	194	183	78	80	
2	WST V 125/20-4×3ZH3 (两层)		720	256	232	214	183	78	80	
3	WST V 63/20-6×5ZH3 (两层)	中部 Central	706	256	225	194	183	78	80	
4	WST V 125/20-6×5H3 (两层)		720	256	232	214	183	78	80	

无励磁单相条形分接开关 OFF-CIRCUIT SINGLE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
 - 额定电压10KV-24KV
 - 额定电流30A-63A
 - 分接位置数：3-7
 - 每个位置调压2.5%
- Used in mineral oil or silicon oil
Rated voltage 10KV-24KV
Rated current from 30A- 63A
Tapping position: 3-7
regulation 2.5% per position

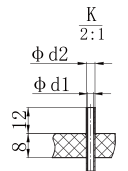
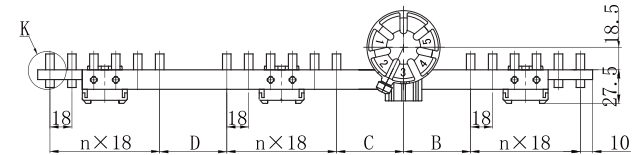
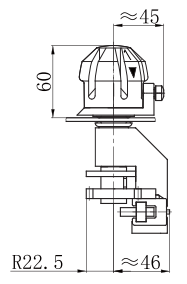
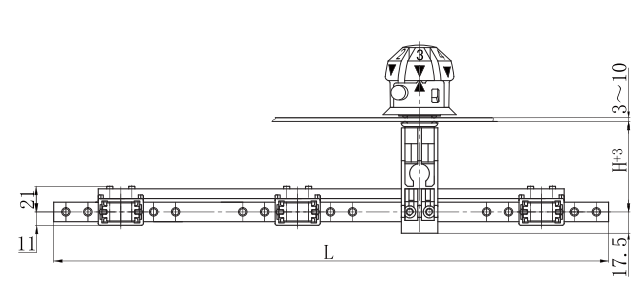
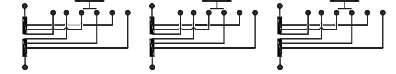
接线原理图
connection
diagram



无励磁三相条形分接开关 OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
 - 额定电压10KV-24KV
 - 额定电流30A-63A
 - 分接位置数：3-7
 - 每个位置调压2.5%
- Used in mineral oil or silicon oil
Rated voltage 10KV-24KV
Rated current from 30A- 63A
Tapping position: 3-7
Regulation 2.5% per position

接线原理图
connection
diagram



序号	开关型号 Model NO.	L	B	C	n	Φd1	Φd2	H	箱盖开孔 Tank cover hole(mm)
1	WDT II 2 30 / 10-4×3S	180.5	61.5	55	3	Φ 3.1	Φ 5	H=70、100、130、150、200 由用户定 (Decided by user)	Φ 20.5 ^{+0.5}
2	WDT II 2 63 / 10-4×3S	180.5	61.5	55	3	Φ 5.1	Φ 7		
3	WDT II 2 30 / 20~24-4×3S					Φ 3.1	Φ 5		
4	WDT II 2 63 / 20~24-4×3S					Φ 5.1	Φ 7		
5	WDT II 2 30 / 10-6×5S	249.5	94.5	55	5	Φ 3.1	Φ 5		
6	WDT II 2 63 / 10-6×5S	249.5	94.5	55	5	Φ 5.1	Φ 7		
7	WDT II 2 30 / 20~24-6×5S					Φ 3.1	Φ 5		
8	WDT II 2 63 / 20~24-6×5S					Φ 5.1	Φ 7		
9	WDT II 2 30 / 10-8×7S	319.5	128.5	55	7	Φ 3.1	Φ 5		
10	WDT II 2 63 / 10-8×7S	319.5	128.5	55	7	Φ 5.1	Φ 7		
11	WDT II 2 30 / 20~24-8×7S					Φ 3.1	Φ 5		
12	WDT II 2 63 / 20~24-8×7S					Φ 5.1	Φ 7		

序号	开关型号 Model NO.	L	B	C	D	n	Φd1	Φd2	H	箱盖开孔 Tank cover hole(mm)
1	WST II 2 30 / 10-4×3S	347	55	55	55	3	Φ 3.1	Φ 5	H=70、100、130、150、200 由用户定 (Decided by user)	Φ 20.5 ^{+0.5}
2	WST II 2 63 / 10-4×3S						Φ 5.1	Φ 7		
3	WST II 2 30 / 20~24-4×3S	347	55	55	55		Φ 3.1	Φ 5		
4	WST II 2 63 / 20~24-4×3S						Φ 5.1	Φ 7		
5	WST II 2 30 / 10-6×5S	455	55	55	55	5	Φ 3.1	Φ 5		
6	WST II 2 63 / 10-6×5S						Φ 5.1	Φ 7		
7	WST II 2 30 / 20~24-6×5S	455	55	55	55		Φ 3.1	Φ 5		
8	WST II 2 63 / 20~24-6×5S						Φ 5.1	Φ 7		
9	WST II 2 30 / 10-8×7S	563	55	55	55	7	Φ 3.1	Φ 5		
10	WST II 2 63 / 10-8×7S						Φ 5.1	Φ 7		
11	WST II 2 30 / 20~24-8×7S	563	55	55	55		Φ 3.1	Φ 5		
12	WST II 2 63 / 20~24-8×7S						Φ 5.1	Φ 7		

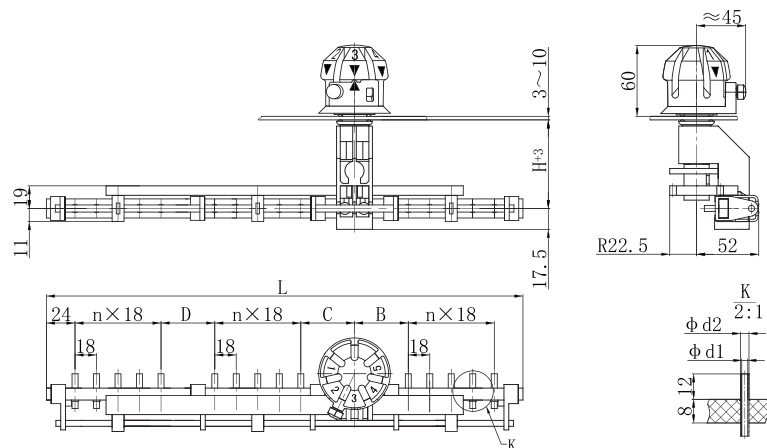
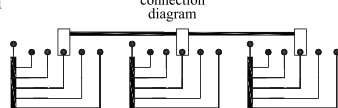
三相无励磁条形分接开关

OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-24KV
- 额定电流30A - 63A
- 分接位置数: 3-7
- 每个位置调压2.5%

Used in mineral oil or silicon oil
Rated voltage 10KV-24KV
Rated current from 30A - 63A
Tapping position: 3-7
Regulation 2.5% per position

接线原理图
connection
diagram



序号	开关型号 Model NO.	L	B	C	D	n	φ d1	φ d2	H	箱盖开孔 Tank cover hole(mm)
1	WSTIII2 30 / 10-3×3S	291	45	45	45	2	φ 3.1	φ 5	H=70、100、130、150、200 由用户定 (Decided by user)	φ 20.5 ^{±0.5}
2	WSTIII2 63 / 10-3×3S					2	φ 5.1	φ 7		
3	WSTIII2 30 / 20~24-3×3S	291	45	45	45	2	φ 3.1	φ 5		
4	WSTIII2 63 / 20~24-3×3S					2	φ 5.1	φ 7		
5	WSTIII2 30 / 10-5×5S	399	45	45	45	4	φ 3.1	φ 5		
6	WSTIII2 63 / 10-5×5S					4	φ 5.1	φ 7		
7	WSTIII2 30 / 20~24-5×5S	399	45	45	45	4	φ 3.1	φ 5		
8	WSTIII2 63 / 20~24-5×5S					4	φ 5.1	φ 7		
9	WSTIII2 30 / 10-7×7S	507	45	45	45	6	φ 3.1	φ 5		
10	WSTIII2 63 / 10-7×7S					6	φ 5.1	φ 7		
11	WSTIII2 30 / 20~24-7×7S	507	45	45	45	6	φ 3.1	φ 5		
12	WSTIII2 63 / 20~24-7×7S					6	φ 5.1	φ 7		

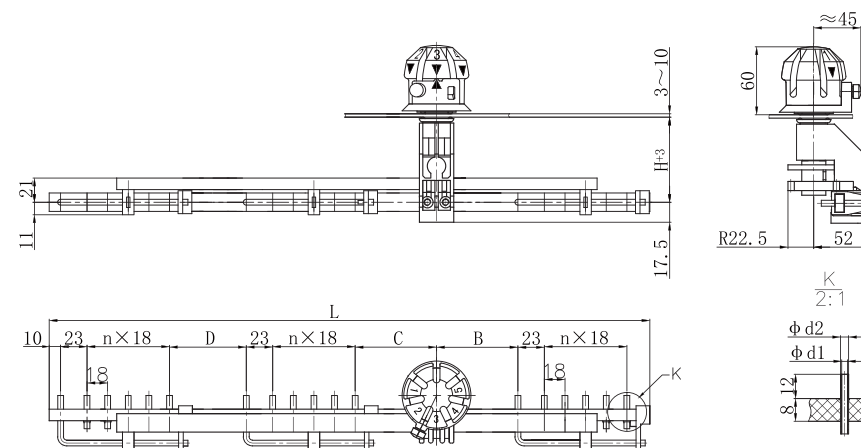
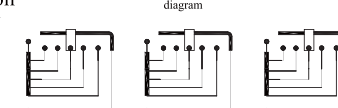
无励磁三相条形分接开关

OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
- 额定电压10KV-24KV
- 额定电流30A - 63A
- 分接位置数: 3-7
- 每个位置调压2.5%

Used in mineral oil or silicon oil
Rated voltage 10KV-24KV
Rated current from 30A- 63A
Tapping position: 3-7
Regulation 2.5% per position

接线原理图
connection
diagram

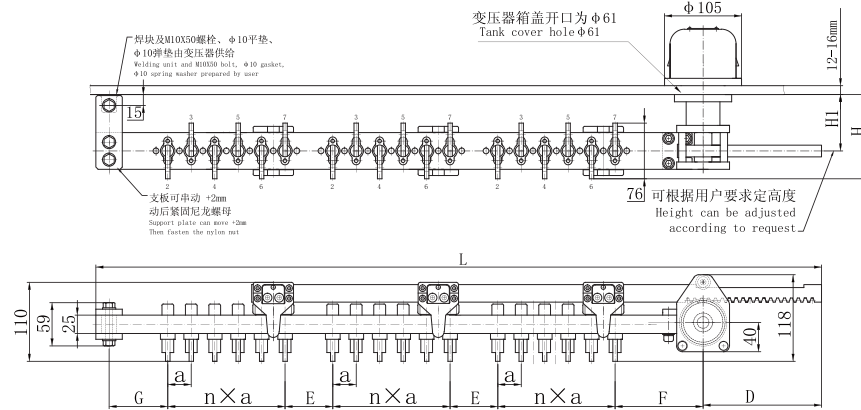
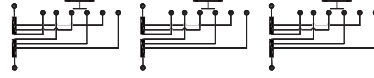


序号	开关型号 Model NO.	L	B	C	D	n	φ d1	φ d2	H	箱盖开孔 Tank cover hole(mm)
1	WST I 2 30 / 10-3×3S	423	71	71	71	2	φ 3.1	φ 5	H=70、100、130、150、200 由用户定 (Decided by user)	φ 20.5 ^{±0.5}
2	WST I 2 63 / 10-3×3S					2	φ 5.1	φ 7		
3	WST I 2 30 / 20~24-3×3S	423	71	71	71	2	φ 3.1	φ 5		
4	WST I 2 63 / 20~24-3×3S					2	φ 5.1	φ 7		
5	WST I 2 30 / 10-5×5S	531	71	71	71	4	φ 3.1	φ 5		
6	WST I 2 63 / 10-5×5S					4	φ 5.1	φ 7		
7	WST I 2 30 / 20~24-5×5S	531	71	71	71	4	φ 3.1	φ 5		
8	WST I 2 63 / 20~24-5×5S					4	φ 5.1	φ 7		
9	WST I 2 30 / 10-7×7S	639	71	71	71	6	φ 3.1	φ 5		
10	WST I 2 63 / 10-7×7S					6	φ 5.1	φ 7		
11	WST I 2 30 / 20~24-7×7S	639	71	71	71	6	φ 3.1	φ 5		
12	WST I 2 63 / 20~24-7×7S					6	φ 5.1	φ 7		

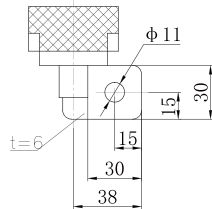
无励磁三相条形分接开关 OFF-CIRCUIT THREE PHASE LINEAR TAP CHANGER

- 在变压器油中使用
Used in mineral oil or silicon oil
- 额定电压10KV-35KV
Rated voltage 10KV-35KV
- 额定电流400A ~ 500A
Rated current from 400A-500A
- 分接位置数: 3-5
Tapping position :3-5
- 每个位置调压2.5%
Regulation 2.5% per position

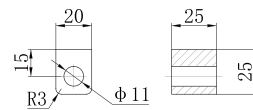
接线原理图
connection
diagram



接线片尺寸
Size of
connection terminal
2:1



焊块尺寸
Size of welding unit
2:1

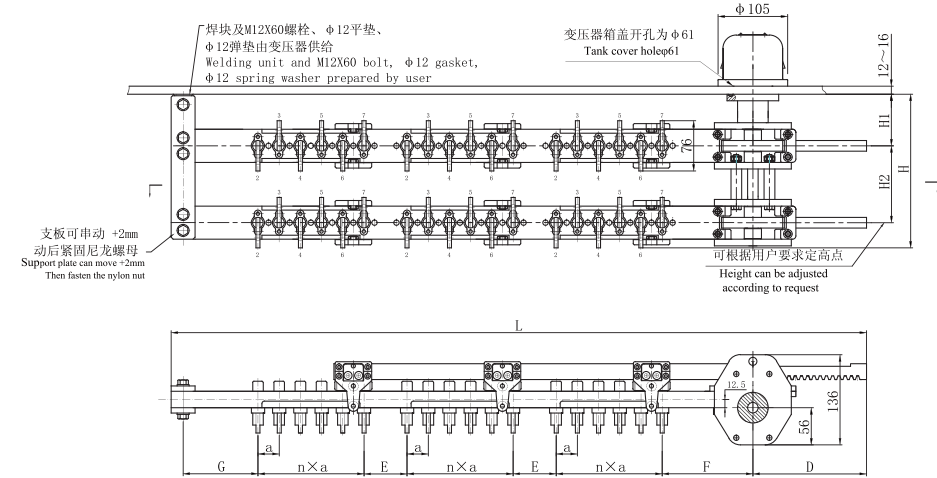
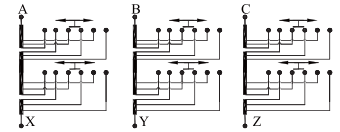


开关型号 Model No.	安装尺寸 (mm) Install Dimension								
	L	E	F	G	a	n	D	H	H1
WST II 5 400~500 / 10-4×3	746	65	120	80	32	3	110	115	78
WST II 5 400~500 / 10-6×5	990	65	120	80	32	5	162	115	78
WST II 5 400~500 / 20-6×5	1191	80	155	100	38	5	188	156	118
WST II 5 400~500 / 35-4×3	1006	120	170	100	38	3	137	156	118
WST II 5 400~500 / 35-6×5	1286	120	170	100	38	5	188	156	118

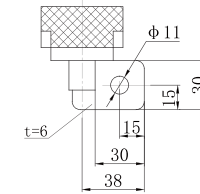
无励磁条形组合 (ZH2)分接开关 OFF-CIRCUIT COMBINATION LINEAR(ZH2) CHANGER

- 在变压器油中使用
Used in mineral oil or silicon oil
- 额定电压10KV-35KV
Rated voltage 10KV-35KV
- 额定电流400A ~ 500A
Rated current from 400A -500A
- 分接位置数: 3-5
Tapping position :3-5
- 每个位置调压2.5%
Regulation 2.5% per position

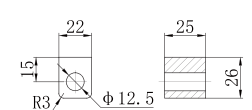
接线原理图
connection
diagram



接线片尺寸
Size of
connection terminal
2:1



焊块尺寸
Size of welding unit
2:1



开关型号 Model No.	安装尺寸 (mm) Install Dimension								
	L	E	F	G	a	n	D	H	H2
WST II 5 400~500 / 10-4×3 ZH2	803	65	137	113	32	3	117	232	116
WST II 5 400~500 / 10-6×5 ZH2	1050	65	137	113	32	5	172	232	116
WST II 5 400~500 / 35-4×3 ZH2	1060	120	188	148	38	3	124	320	156
WST II 5 400~500 / 35-6×5 ZH2	1362	120	188	148	38	5	198	320	156