



Tem²Contact

Contactors and Thermal Overload Relays



OUR CUSTOMER CARE COMMITMENTS

Quality is Guaranteed

All products supplied from this catalogue carry a guarantee against defects in materials and workmanship for a period of 12 months from date of purchase as standard.

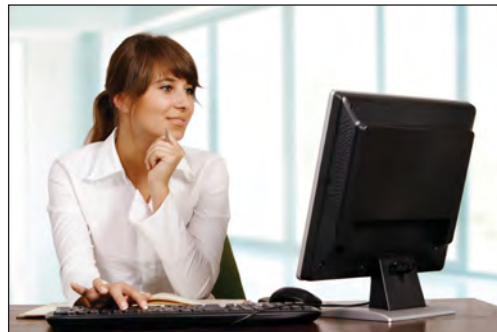
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Terasaki has ISO 9001 accreditation for the supply of all products featured in this catalogue.



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Technical Support is Free

Our helpful Applications Team are at your disposal. They provide free, detailed advice on the application of our products and use industry-leading electrical design software packages.

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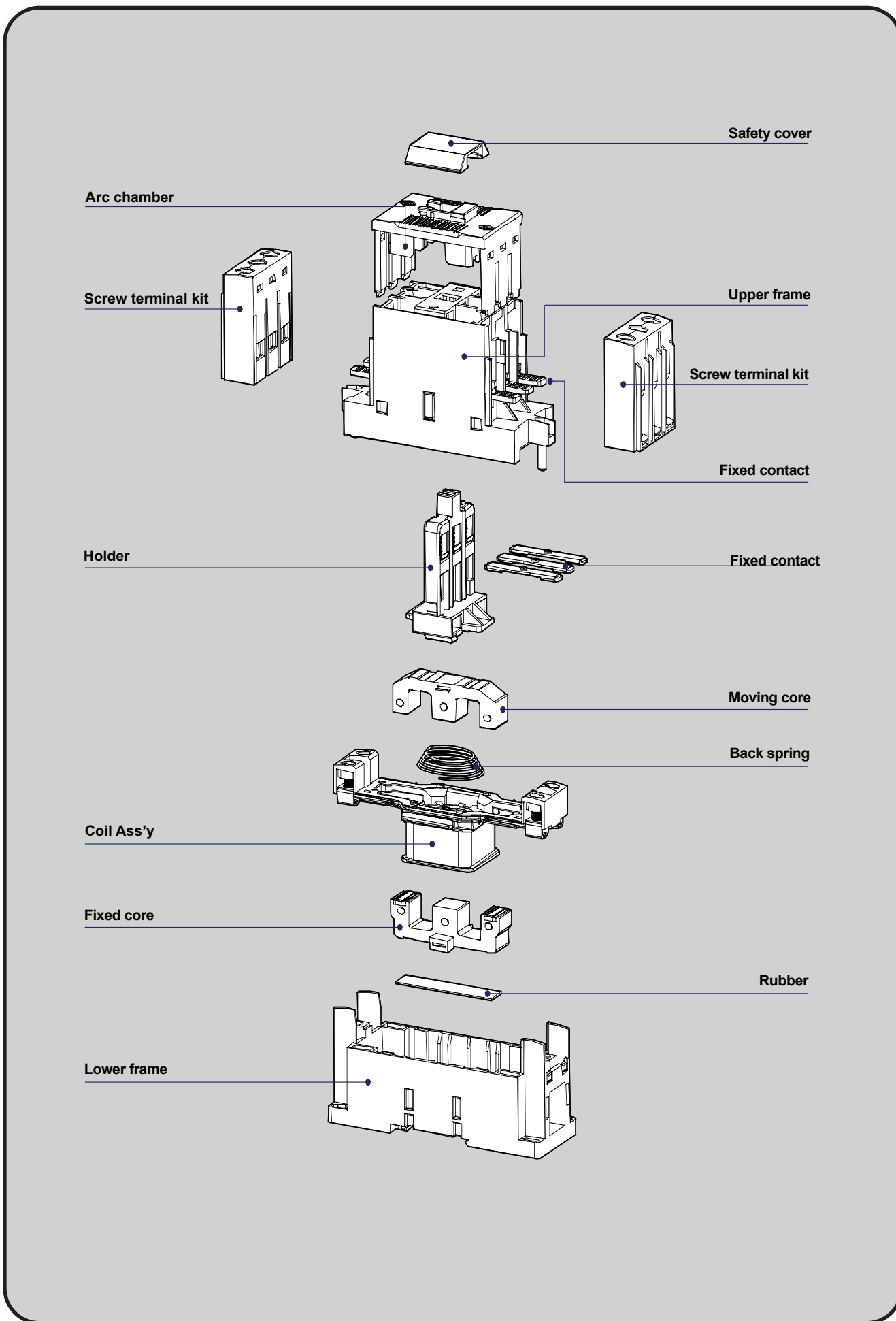
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TEMCONTACT 2

CONTACTOR INTERNAL STRUCTURE



TemContact 2 is a new range of magnetic contactors and thermal overload relays. Current ratings from 6A to 800A are available in 9 frame sizes and in 3 or 4 pole versions.

Safer

TemContact 2 has upgraded insulation voltage (from 690 to 1000V AC) and impulse withstand voltage (from 6kV to 8kV) in contactors over 40AF.

The electrical arc is extinguished entirely within the sealed unit, so that no arc flash is exposed. The sealed structure also prevents dust and humidity from entering the contactor. An optional safety cover is available which prohibits any unintended manual operation.

Applications



RATINGS AND SPECIFICATIONS

3P CONTACTORS TO IEC 60947-4-1



Model	Parameter	Unit	TC-9b	TC-12b	TC-18b	TC-22b
Number of poles			3 pole			
Frame size			22AF			
Current and Power Ratings						
Thermal current	AC1 (440V AC)	A	25	25	32	40
Switching power	200/240V AC3	kW	2.5	3.5	4.5	5.5
Switching current	200/240V AC3	A	11	13	18	22
Switching power	380/440V AC3	kW	4	5.5	7.5	11
Switching current	380/440V AC3	A	9	12	18	22
Switching power	500/550V AC3	kW	4	7.5	7.5	15
Switching current	500/550V AC3	A	7	12	13	20
Switching power	690V AC3	kW	4	7.5	7.5	15
Switching current	690V AC3	A	6	9	9	18
Electrical Characteristics						
Rated operational voltage, Ue	Ue	V	690			
Rated insulation voltage, Ui	Ui	V	690			
Rated frequency		Hz	50/60			
Rated impulse withstand voltage,	Uimp	kV	6			
Operation						
Maximum operating rate in operating cycles per hour	(AC3)	ops/hr	1800			
Endurance	Mechanical	million	15			
	Electrical	million	2.5			
Size and Weight						
AC Control	Weight	kg	0.34			
	Size (WxHxD)	mm	45x73.5x86			
DC Control	Weight	kg	0.51			
	Size (WxHxD)	mm	45 x 73.5 x 104			
Nema size			00	00	0	1
Auxilliary Contacts						
Auxiliary (standard)			1NO 1NC			
Side mount (optional)			TSU-01			
Front mount (optional)			TSU-20, TSU-40			

TK TYPE THERMAL OVERLOAD RELAYS



Model	Parameter	Unit	TK-32
Electrical Characteristics			
Rated operational voltage,	Ue	V	690
Rated insulation voltage,	Ui	V	690
Rated impulse withstand voltage, Uimp		kV	6
Setting range			
Setting range		A	0.1~40
trip class			10A,20
Size and weight			
weight		kg	0.17
Size (WxHxD)		mm	45 x 75 x 90



TC-32a		TC-40a		TC-50a		TC-65a	
3 pole 40AF				3 pole 65AF			
50		60		70		100	
7.5		11		15		18.5	
32		40		55		65	
15		18.5		22		30	
32		40		50		65	
18.5		22		30		33	
28		32		43		60	
18.5		22		30		33	
20		23		28		35	
690				690			
1000				1000			
50/60				50/60			
8				8			
1800				1800			
15				12			
2.5				2			
0.55				1.05			
69x83x93				79x106x127			
0.77				1.3			
69 x 83 x 120				79 x 106 x 144			
1		1		2		2	
2NO2NC TSU-01 TSU-20, TSU-40				2NO2NC TSU-01 TSU-20, TSU-40			



TK-32		TK-63	
690		690	
690		690	
6		6	
0.1~40		4~65	
10A,20		10A,20	
0.17		0.31/0.33	
45 x 75 x 90		55 x 81 x 100	

RATINGS AND SPECIFICATIONS

3P CONTACTORS TO IEC 60947-4-1



Model	Parameter	Unit	TC-75a	TC-85a	TC-100a
Number of poles				3 pole	
Frame size				100AF	
Current and Power Ratings					
Thermal current	AC1 (440V AC)	A	110	135	160
Switching power	200/240V AC3	kW	22	25	30
Switching current	200/240V AC3	A	75	85	105
Switching power	380/440V AC3	kW	37	45	55
Switching current	380/440V AC3	A	75	85	105
Switching power	500/550V AC3	kW	37	45	55
Switching current	500/550V AC3	A	64	75	85
Switching power	690V AC3	kW	37	45	55
Switching current	690V AC3	A	42	45	65
Electrical Characteristics					
Rated operational voltage, Ue	Ue	V		690	
Rated insulation voltage, Ui	Ui	V		1000	
Rated frequency		Hz		50/60	
Rated impulse withstand voltage,	Uimp	kV		8	
Operation					
Maximum operating rate in operating cycles per hour	(AC3)	ops/hr		1800	
Endurance	Mechanical	million		12	
	Electrical	million		2	
Size and Weight					
AC Control	Weight	kg	1.6		
	Size (WxHxD)	mm	70 x 140 x 137		
DC Control	Weight	kg	2.8		
	Size (WxHxD)	mm	70 x 140 x 172.3		
Nema size			2	3	3
Auxilliary Contacts					
Auxilliary (standard)			2NO2NC		
Side mount (optional)			TSU-01		
Front mount (optional)			TSU-20, TSU-40		

TK TYPE THERMAL OVERLOAD RELAYS



Model	Parameter	Unit	TK-95
Electrical Characteristics			
Rated operational voltage,	Ue	V	690
Rated insulation voltage,	Ui	V	690
Rated impulse withstand voltage, Uimp		kV	6
Setting range			
Setting range			7~100
trip class			10A,20
Size and weight			
weight		kg	0.48/0.5
Size (WxHxD)		mm	70 x 97 x 110



TC-130a		TC-150a		TC-185a		TC-225a		TC-265a			TC-330a			TC-400a			TC-500a			TC-630a			TC-800a																																																																																										
3 pole 150AF				3 pole 225AF								3 pole 400AF						3 pole 800AF																																																																																															
160	210	230	275	300	350	450	580	660	900	37	45	55	75	80	90	125	147	190	220	130	150	185	225	265	330	400	500	630	800	60	75	90	132	147	160	200	265	330	440	130	150	185	225	265	330	400	500	630	800	60	70	110	132	147	160	225	265	330	500	90	100	180	200	225	280	350	400	500	720	55	55	110	140	160	200	250	300	400	500	60	60	120	150	185	225	300	380	420	630																								
690	1000	690	1000	690	1000	690	1000	690	1000	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	8	8	8	8	8	8	8	8	8	8	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	5	5	5	5	5	5	5	5	5	5	1	1	1	1	1	1	1	1	1	1	2.4	5.4	9.2	22.4	9.2	9.2	22.4	22.4	22.4	22.4	95 x 158 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	163 x 243 x 198	163 x 243 x 198	285 x 312 x 242	285 x 312 x 242	285 x 312 x 242	285 x 312 x 242	2.3	5.4	9.2	22.4	9.2	9.2	22.4	22.4	22.4	22.4	95 x 158.5 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	163 x 243 x 198	163 x 243 x 198	285 x 312 x 242	285 x 312 x 242	285 x 312 x 242	285 x 312 x 242	3	4	4	4	5	5	5	6	6	7	2NO2NC TSU-01 TSU-20, TSU-40	2NO2NC TSU-100, TSU-100E -	2NO2NC TSU-100, TSU-100E -	2NO2NC TSU-100, TSU-100E -



TK-150		TK-225		TK-400			TK-800																												
690	690	690	690	690	690	690	690	690	690	6	6	6	6	6	6	6	6	6	6	34~150	64~240	85~400	200~800A	10A,20	10A,20	10A,20	10A,20	0.67	2.5	2.6	11.5	95 x 109 x 113	147 x 141 x 184	151 x 171 x 198	360 x 530 x 212

RATINGS AND SPECIFICATIONS

4P CONTACTORS TO IEC 60947-4-1



Model	Parameter	Unit	TC-6a/4	TC-9a/4	TC-12a/4	TC-18a/4
Number of poles			4 pole			
Frame size			18AF			
Current and Power Ratings						
Thermal current		A	25	25	25	40
Switching power	200/240V AC1	kW	9	9	9	15
Switching current	200/240V AC1	A	25	25	25	40
Switching power	380/440V AC1	kW	17	17	17	27
Switching current	380/440V AC1	A	25	25	25	40
Switching power	200/240V AC3	kW	2.2	2.5	3.5	4.5
Switching current	200/240V AC3	A	9	11	13	18
Switching power	380/440V AC3	kW	3	4	5.5	7.5
Switching current	380/440V AC3	A	7	9	12	18
Electrical Characteristics						
Rated operational voltage, Ue	Ue	V	690			
Rated insulation voltage, Ui	Ui	V	690			
Rated frequency		Hz	50/60			
Rated impulse withstand voltage,	Uimp	kV	6			
Operation						
Maximum operating rate in operating cycles per hour	(AC3)	ops/hr	1800			
Endurance	Mechanical	million	15			
	Electrical	million	2.5			
Size and Weight						
AC Control	Weight	kg	0.33			
	Size (WxHxD)	mm	45 x 73.5 x 82			
DC Control	Weight	kg	0.5			
	Size (WxHxD)	mm	45 x 73.5 x 113.7			
Nema size			00	00	0	0
Auxilliary Contact						
Auxilliary (standard)			-			
Side mount (optional)			TSU-01			
Front mount (optional)			TSU-20, TSU-40			



TC-22a/4	TC-32a/4	TC-40a/4	TC-50a/4	TC-65a/4	TC-75a/4	TC-85a/4
4 pole 22AF		4 pole 40AF			4 pole 85AF	
40	50	60	80	100	110	135
15	18	22	30	37	41	51
40	50	60	80	100	110	135
27	35	42	56	70	76	95
40	50	60	80	100	110	135
5.5	7.5	11	15	18.5	22	25
22	32	40	55	65	75	85
11	15	18.5	22	30	37	45
22	32	40	50	65	75	85
690	690			690		
690	690			1000		
50/60	50/60			50/60		
6	6			8		
1800	1800			1800		
15	15			12		
1	1			1		
0.4	0.59			1.2		
47.2 x 80 x 86.8	59 x 83.5 x 94.5			91 x 123.5 x 117.8		
0.5	0.7			1.29		
47.2 x 80 x 113.2	59 x 83.5 x 121			91 x 123.5 x 117.8		
1	1	1	2	2	2	3
-	-			-		
TKU-1	TKU-1			TKU-1		
TSU-20, TSU-40	TSU-20, TSU-40			TSU-20, TSU-40		

RATINGS AND SPECIFICATIONS

4P CONTACTORS TO IEC 60947-4-1



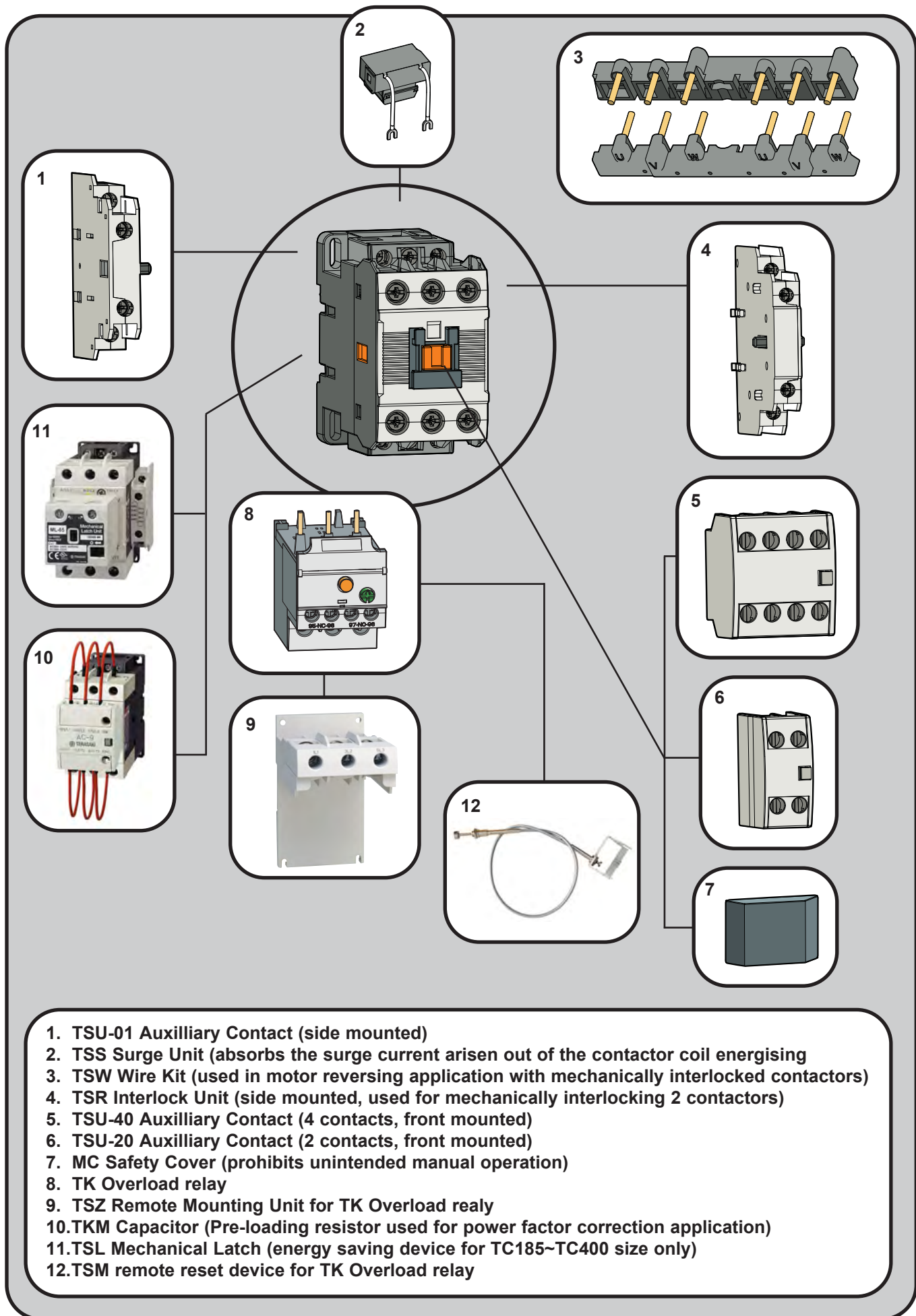
Model	Parameter	Unit	TC-100a/4	TC-130a/4	TC-150a/4	TC-185a/4	TC-225a/4
Number of poles			4 pole				
Frame size			225AF				
Current and Power Ratings							
Thermal current		A	160	165	250	300	330
Switching power	200/240V AC1	kW	57	60	76	87	100
Switching current	200/240V AC1	A	150	155	200	230	260
Switching power	380/440V AC1	kW	106	110	142	165	185
Switching current	380/440V AC1	A	150	155	200	230	260
Switching power	200/240V AC3	kW	30	37	95	55	75
Switching current	200/240V AC3	A	105	125	150	185	225
Switching power	380/440V AC3	kW	55	60	75	90	132
Switching current	380/440V AC3	A	105	120	150	185	225
Electrical Characteristics							
Rated operational voltage, Ue	Ue	V	690				
Rated insulation voltage, Ui	Ui	V	1000				
Rated frequency		Hz	50/60				
Rated impulse withstand voltage,	Uimp	kV	8				
Operation							
Maximum operating rate in operating cycles per hour	(AC3)	ops/hr	1200				
Endurance	Mechanical	million	15				
	Electrical	million	0.8				
Size and Weight							
AC Control	Weight	kg	5.6				
	Size (WxHxD)	mm	175 x 203 x 185				
DC Control	Weight	kg	5.6				
	Size (WxHxD)	mm	175 x 203 x 185				
Nema size			3	3	4	4	4
Auxilliary Contact							
Auxilliary (standard)			2N02NC				
Side mount (optional)			TSU-100, TSU100E				
Front mount (optional)			---				



TC-265a/4			TC-330a/4			TC-400a/4			TC-500a/4			TC-630a/4			TC-800a/4		
			4 pole									4 pole					
			400AF									800AF					
360			420			500			650			750			900		
115			135			160			245			255			310		
300			350			420			630			660			800		
215			250			300			450			470			570		
300			350			420			630			660			800		
80			90			125			147			190			220		
265			330			400			500			630			800		
147			160			200			265			330			440		
265			330			400			500			630			800		
			690									690					
			1000									1000					
			50/60									50/60					
			8									8					
			1200									1200					
			15									12					
			0.5									2.5					
			9.9									26.3					
			206x243x205									346x310x244					
			9.9									26.3					
			206x243x205									346x310x244					
5			5			5			6			6			7		
			2N02NC									2N02NC					
			TSU-100, TSU-100E									TSU-100, TSU-100E					
			-									-					

ACCESSORIES

EASY TO INSTALL • SIMPLE OPERATION • RELIABLE



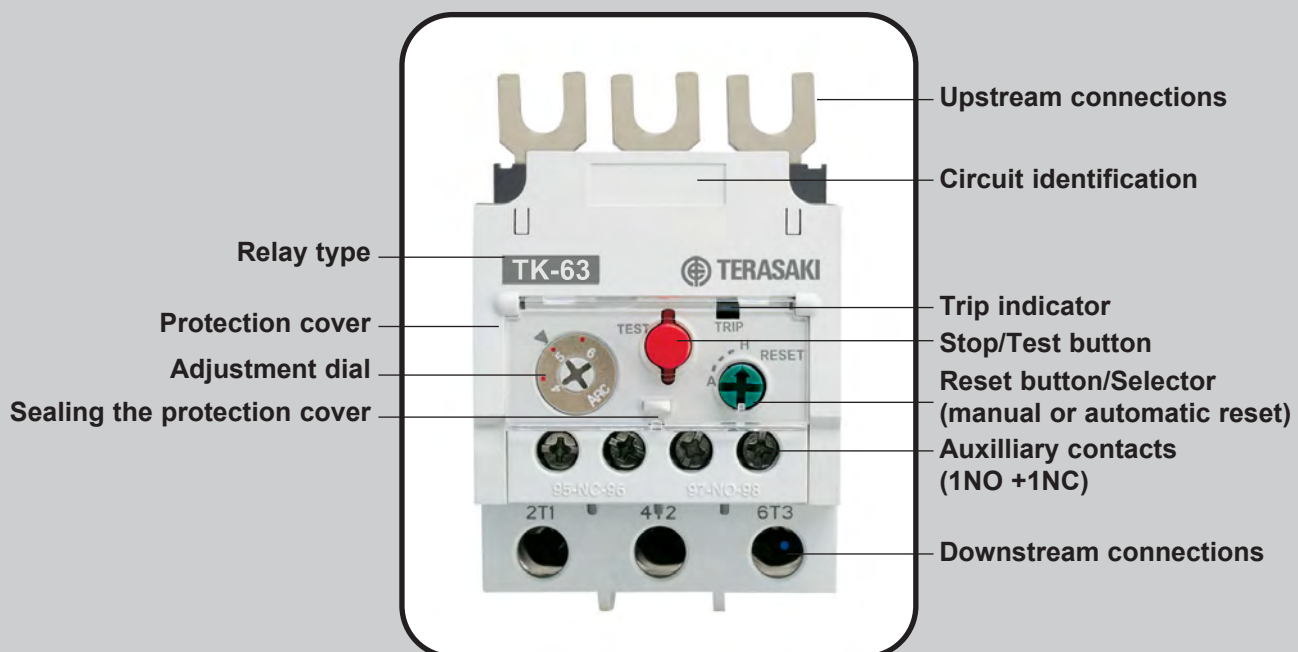
1. TSU-01 Auxilliary Contact (side mounted)
2. TSS Surge Unit (absorbs the surge current arisen out of the contactor coil energising)
3. TSW Wire Kit (used in motor reversing application with mechanically interlocked contactors)
4. TSR Interlock Unit (side mounted, used for mechanically interlocking 2 contactors)
5. TSU-40 Auxilliary Contact (4 contacts, front mounted)
6. TSU-20 Auxilliary Contact (2 contacts, front mounted)
7. MC Safety Cover (prohibits unintended manual operation)
8. TK Overload relay
9. TSZ Remote Mounting Unit for TK Overload realy
10. TKM Capacitor (Pre-loading resistor used for power factor correction application)
11. TSL Mechanical Latch (energy saving device for TC185~TC400 size only)
12. TSM remote reset device for TK Overload relay

THERMAL OVERLOAD RELAYS

General description

TK type, bimetal-style overload relays are designed to protect AC circuits and motors against overloads, phase failure, long starting times and prolonged stalling of the motor.

The protection function and trip class is Differential: 3 pole-3bimetal (heater) and trip class 20.





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Ratings and specifications are subject to change without notice.
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