



Tem²Contact

Contactors and Thermal Overload Relays

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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.

Quality is Accredited

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



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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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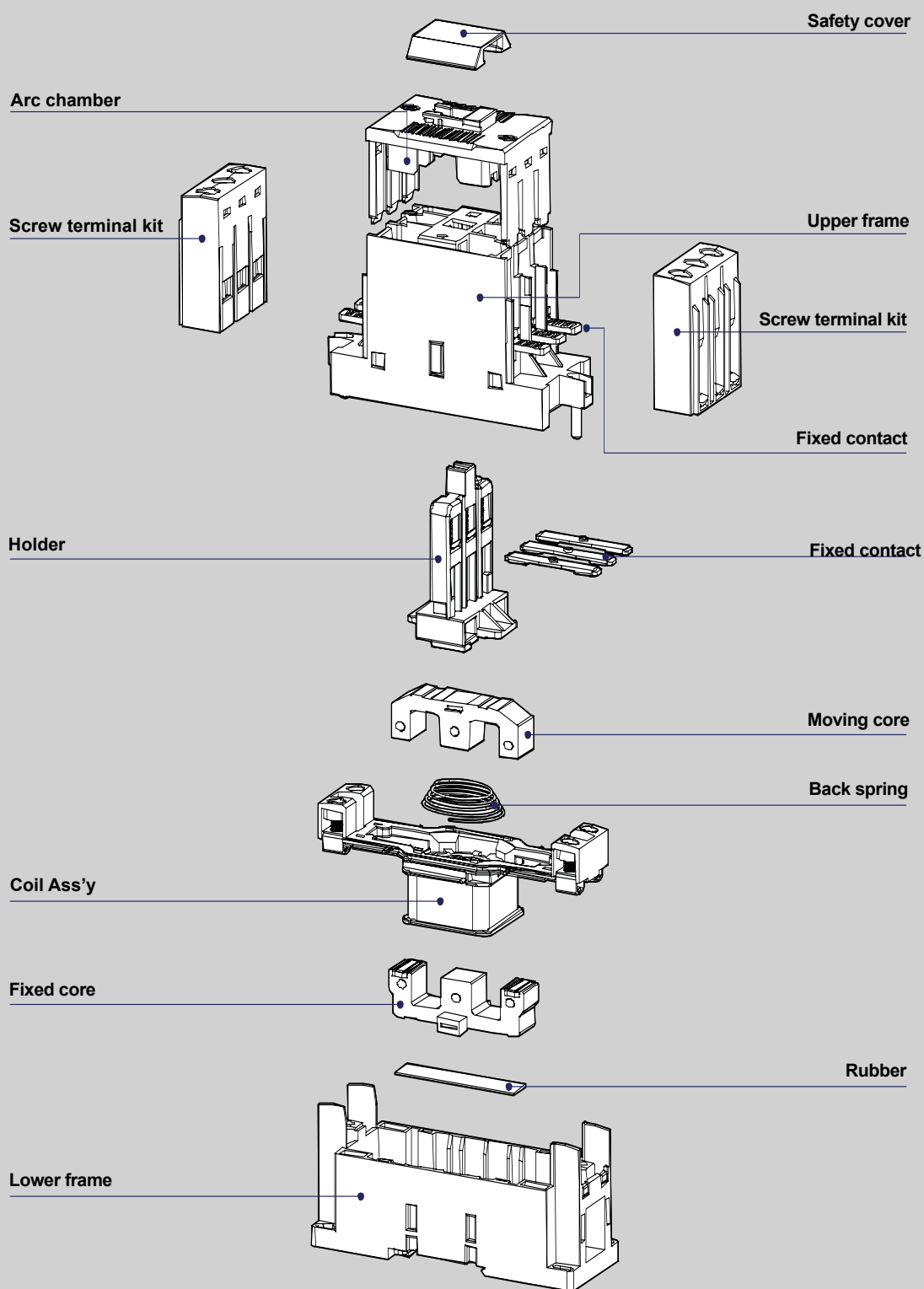
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TEMCONTACT 2

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, UL 508



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
Continuous current, UL rating 50/60Hz		A	25	25	40	40
Switching power, single phase (UL rating 50/60Hz)	100-120V	HP	0.5	0.75	1	2
Switching power, single phase (UL rating 50/60Hz)	220-240V	HP	1.5	2	3	3
Switching power, three phase (UL rating 50/60Hz)	200-208V	HP	2	3	5	7.5
Switching power, three phase (UL rating 50/60Hz)	220-240V	HP	3	5	7.5	10
Switching power, three phase (UL rating 50/60Hz)	440-480V	HP	5	7.5	10	15
Switching power, three phase (UL rating 50/60Hz)	550-600V	HP	7.5	10	15	20
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	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						
Auxilliary (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	Ue	V	690
Rated insulation voltage, Ui	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-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	160	210	230	275	300	350	450	580	660	900	10	15	15	15	-	-	-	-	-	-	20	25	30	40	-	-	-	-	-	-	40	40	60	60	75	100	125	150	200	200	40	50	60	75	100	125	150	200	250	300	75	100	125	150	200	250	300	400	500	600	75	75	125	150	200	250	300	400	500	600	690	1000	690	1000	690	1000	690	690	1000	690	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	2.5	2.5	2.5	2.5	2.5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	2.4	5.4	9.2	22.4	95 x 158 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	2.3	5.4	9.2	22.4	95 x 158.5 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	3	4	4	4	5	5	5	6	6	7	-	2N02NC	2N02NC	2N02NC	TSU-01	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-20, TSU-40	-	-	-
160	210	230	275	300	350	450	580	660	900	10	15	15	15	-	-	-	-	-	-	20	25	30	40	-	-	-	-	-	-	40	40	60	60	75	100	125	150	200	200	40	50	60	75	100	125	150	200	250	300	75	100	125	150	200	250	300	400	500	600	75	75	125	150	200	250	300	400	500	600	690	1000	690	1000	690	1000	690	690	1000	690	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	2.5	2.5	2.5	2.5	2.5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	2.4	5.4	9.2	22.4	95 x 158 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	2.3	5.4	9.2	22.4	95 x 158.5 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	3	4	4	4	5	5	5	6	6	7	-	2N02NC	2N02NC	2N02NC	TSU-01	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-20, TSU-40	-	-	-																																																																																										
690	1000	690	1000	690	1000	690	690	1000	690	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	2.5	2.5	2.5	2.5	2.5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	2.4	5.4	9.2	22.4	95 x 158 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	2.3	5.4	9.2	22.4	95 x 158.5 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	3	4	4	4	5	5	5	6	6	7	-	2N02NC	2N02NC	2N02NC	TSU-01	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-20, TSU-40	-	-	-																																																																																																																																																																
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	5	5	5	5	5	2.5	2.5	2.5	2.5	2.5	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	2.4	5.4	9.2	22.4	95 x 158 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	2.3	5.4	9.2	22.4	95 x 158.5 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	3	4	4	4	5	5	5	6	6	7	-	2N02NC	2N02NC	2N02NC	TSU-01	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-20, TSU-40	-	-	-																																																																																																																																																																																														
2.4	5.4	9.2	22.4	95 x 158 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	2.3	5.4	9.2	22.4	95 x 158.5 x 132	138 x 203 x 181	163 x 243 x 198	285 x 312 x 242	3	4	4	4	5	5	5	6	6	7	-	2N02NC	2N02NC	2N02NC	TSU-01	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-20, TSU-40	-	-	-																																																																																																																																																																																																																												
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-	2N02NC	2N02NC	2N02NC	TSU-01	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-100, TSU-100E	TSU-20, TSU-40	-	-	-																																																																																																																																																																																																																																																						



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	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
34~150	64~240	85~400	200~800A	10A,20	10A,20	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																				
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, UL 508



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
Continuous current, UL rating 50/60Hz		A	25	25	25	32
Switching power, single phase (UL rating 50/60Hz)	100-120V	HP	0.5	0.5	0.75	1
Switching power, single phase (UL rating 50/60Hz)	220-240V	HP	1.5	1.5	2	3
Switching power, three phase (UL rating 50/60Hz)	200-208V	HP	2	2	3	5
Switching power, three phase (UL rating 50/60Hz)	220-240V	HP	3	3	5	7.5
Switching power, three phase (UL rating 50/60Hz)	440-480V	HP	5	5	7.5	10
Switching power, three phase (UL rating 50/60Hz)	550-600V	HP	7.5	7.5	10	15
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)			TSU-01			
Side mount (optional)			TSU-20, TSU-40			
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
32	45	50	70	80	90	100
2	2	3	3	5	5	7.5
3	5	5	7.5	10	15	15
7.5	7.5	10	10	15	20	25
7.5	10	10	15	20	25	30
10	20	10	30	40	50	50
15	20	25	30	40	50	50
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, UL 508



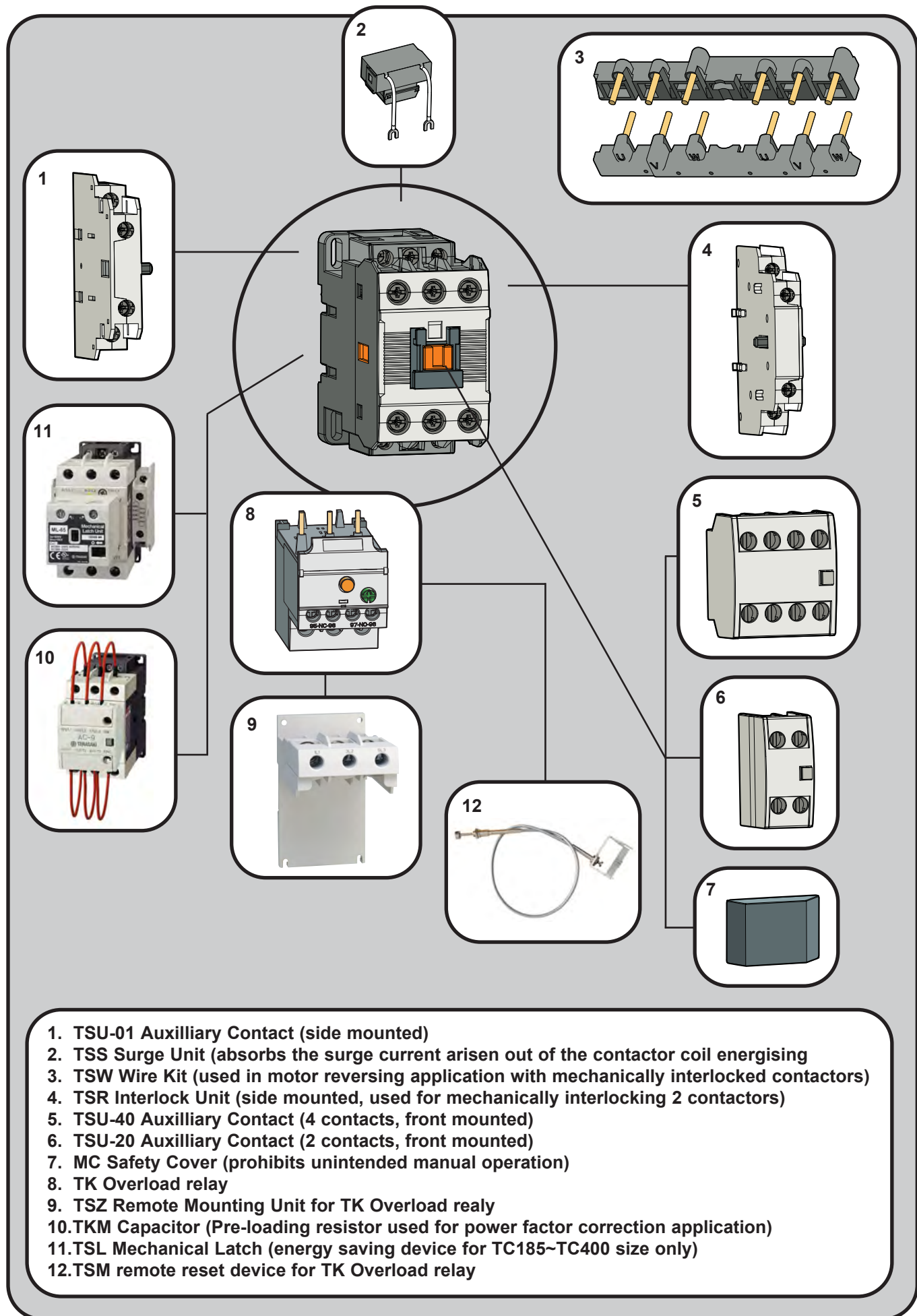
Model	Parameter	Unit	TC-100a/4	TC-130a/4	TC-150a/4	TC-185a/4	TC-225a/4
Number of poles			4 pole				
Frame size			225AF				
Current and Power Ratings							
Thermal current		A	160	165	250	300	330
Switching power	200/240V AC1	kW	57	60	76	87	100
Switching current	200/240V AC1	A	150	155	200	230	260
Switching 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
Continuous current, UL rating 50/60Hz		A	160	160	210	230	275
Switching power, single phase (UL rating 50/60Hz)	100-120V	HP	7.5	10	15	15	15
Switching power, single phase (UL rating 50/60Hz)	220-240V	HP	15	20	25	30	40
Switching power, three phase (UL rating 50/60Hz)	200-208V	HP	30	40	40	60	60
Switching power, three phase (UL rating 50/60Hz)	220-240V	HP	30	40	50	60	75
Switching power, three phase (UL rating 50/60Hz)	440-480V	HP	60	75	100	125	150
Switching power, three phase (UL rating 50/60Hz)	550-600V	HP	60	75	100	125	150
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)			TSU-100, TSU100E				



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		
300			350			450			580			660			900		
-			-			-			-			-			-		
-			-			-			-			-			-		
75			100			125			150			200			200		
100			100			150			200			250			300		
200			200			300			400			500			600		
200			200			300			400			500			600		
			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



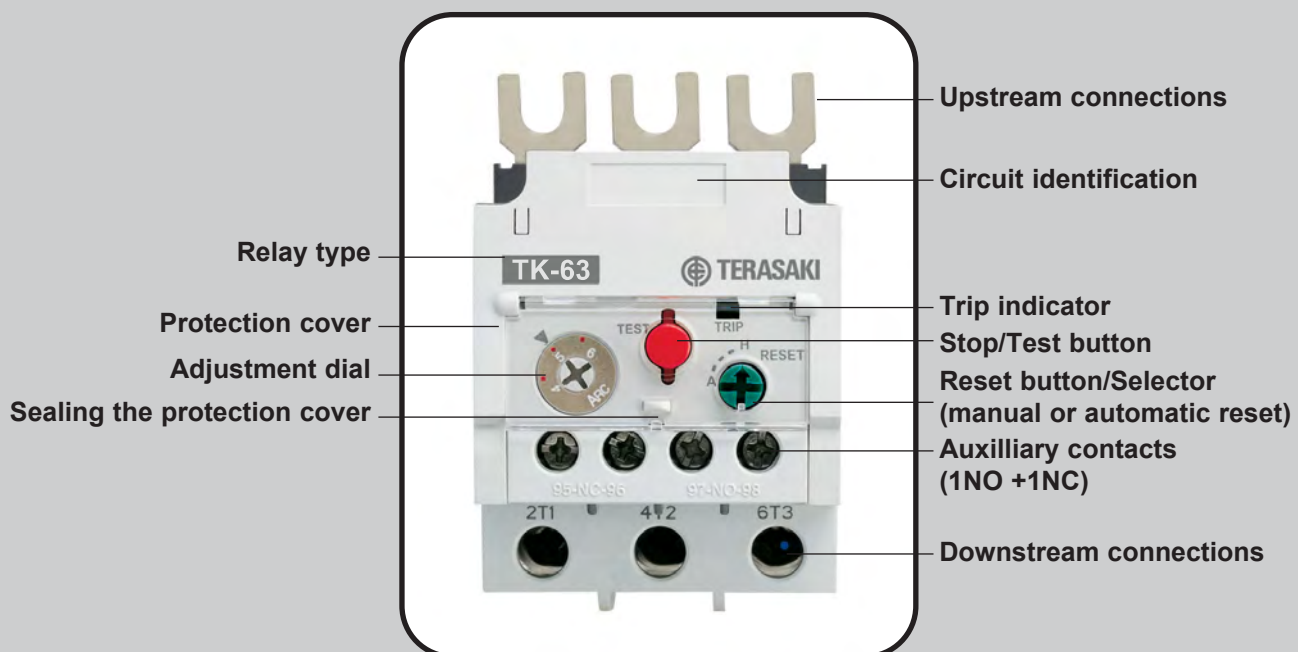
1. TSU-01 Auxilliary Contact (side mounted)
2. TSS Surge Unit (absorbs the surge current arisen out of the contactor coil energising)
3. TSW Wire Kit (used in motor reversing application with mechanically interlocked contactors)
4. TSR Interlock Unit (side mounted, used for mechanically interlocking 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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