

NEW!



UL CE SP RoHS
COMPLIANT

Contactors 7A ~ 38A NO & NC Auxiliary Contacts

 **SHAMROCK
CONTROLS**

5/2013-RevF

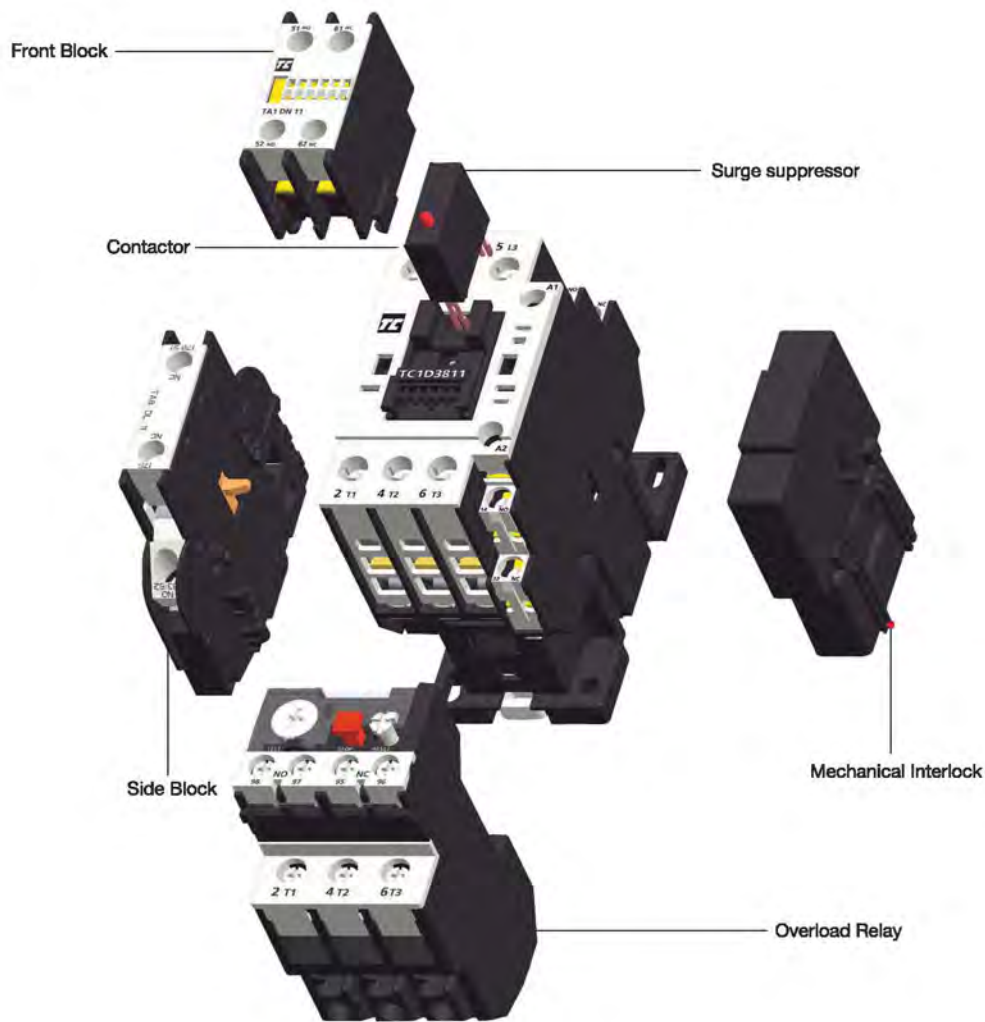
Contactors at a glance

Shamrock Contactors are designed considering customer application requirements which offer high pitched performance assuring compactness, designs flexibility, safety and effective solutions.

Shamrock Contactors are manufactured in a State-of-the-Art fully integrated ISO 90001 Certified manufacturing facility possessing comprehensive infrastructure inclusive of design, tooling, component manufacturing, assembling and testing to ensure World Class Products.

Shamrock contactors are easy to use, dependable & its flexible design allows product selection with most accurate and cost-effective solutions.

The new range of NO-NC Contactor & Overload Relays meet latest IEC, UL, CSA & CE Standards possessing Global accreditation. They conform to IEC60947-4-1.



Technical characteristics

Description	Reference / Condition	Unit	TC1D0711	TC1D0811	TC1D1211	TC1D1811	TC1D2511	TC1D3211	TC1D3811
Pole Characteristics									
Rated Operational Current (Ie) (Ue≤440V)	In AC-3, $\phi \leq 40^\circ$	A	7	9	12	18	25	32	38
	In AC-1, $\phi \leq 40^\circ$	A	25	25	25	32	40	50	50
Rated Operational Voltage (Ue)		V	-	-	-	690	-	-	-
Frequency Limits	Of the operational current	Hz	-	-	-	25-400	-	-	-
Conventional Thermal Current (Ith)	$\phi \leq 40^\circ$	A	25	25	25	32	40	50	50
Rated Making Capacity (440 V)	Conforming to IEC 60947	A	450	450	450	450	450	550	550
Rated Breaking Capacity (440 V)	Conforming to IEC 60947	A	450	450	450	450	450	550	550
Average Impedance per pole(max)	at Ith and 50 Hz.	m Ω	2	2	2	2	2	2	2
Electrical Durability		Million	2	2	2	2	2	2	2
Maximum operating rate (on load)AC3		Cycles / Hr	600	600	600	600	600	600	600
Control Circuit Characteristics									
Rated control circuit voltage (Uc)	50/60 Hz.	V				24 - 690			
Control Voltage Limits	Operation at 50 Hz					0.85 to 1.2 Uc			
	Operation at 60 Hz					0.85 to 1.1 Uc			
	Drop out					0.3 to 0.6 Uc			
	Average Consumption 50 Hz at 20° and at Uc	Inrush	VA				70		
	Sealed	VA				7			
Average Consumption 60 Hz at 20° and at Uc	Inrush	VA				70			
	Sealed	VA				7.5			
Operating Time	Closing	ms				12 10 22			
	Opening	ms				4 to 19			
Mechanical Durability		Million				15			
Maximum Operating Rate		Cycles / Hr				3600			
Environment									
Rated Insulation Voltage (Ui)	Conforming to IEC 60947-4-1	V				1000			
	Over Voltage category III, Degree of Pollution: 3	V				690			
Rated Impulse withstand Voltage (Uimp)	Conforming to IEC 60947	kV				6			
Degree of Protection	IEC 60529					Ip20			
Protective Treatment	IEC 60068-2-30								
Ambient Temperature around device	Storage	°C				-60 to +80			
	Operation (0.85 -1.1 Uc)	°C				-5 to +60			
	Permissible (at Uc)	°C				-40 to +70			
Flame Resistance	UL 94	°C				V0 V0			
Power Circuit Connections									
Flexible Cable without cable end	1 conductor	mm ²				0.75 - 16		0.75 - 10	
	2 conductors	mm ²				0.75 - 16		0.75 - 10	
Flexible Cable with cable end	1 conductor	mm ²				0.75 - 16		0.75 - 10	
	2 conductors	mm ²				0.75 - 16		0.75 - 10	
Solid Cable without cable end	1 conductor	mm ²				0.75 - 16		0.75 - 10	
	2 conductors	mm ²				0.75 - 16		0.75 - 10	
Tightening Torque		Nm				1.8		2.5	
Dimensions									
Height x Width x Depth		mm				85 x 45 x 90		85 x 45 x 95	
Mounting									
Length x Width		mm				60/70 x 35			



3 Pole Contactor with AC Operating Coil - NO & NC Aux Contacts

Maximum Current		Maximum HP						Aux Contacts Built-in per contactor		Catalog Number
Inductive	Resistive	Single Phase		Three Phase				NO	NC	
AC-3 A	AC-1 A	120V	230V	200V	230V	400V	660V			
7	25	0.5	1	2	2	5	7.5	1	1	TC1-D0711-XX
9	25	0.5	1	2	2	5	7.5	1	1	TC1-D0911-XX
12	25	1	2	3	3	7.5	10	1	1	TC1-D1211-XX
18	32	1	3	5	5	10	15	1	1	TC1-D1811-XX
25	40	2	3	5	7.5	15	20	1	1	TC1-D2511-XX
32	50	2	5	10	10	20	25	1	1	TC1-D3211-XX
38	50	2	5	10	10	20	25	1	1	TC1-D3811-XX

Replace XX with Voltage Code from Table - 1

Table - 1: XX-AC Coil Voltages

Volts AC	24	48	110	120	208	220	230	240	277	380	400	415	440	480	575	600
50Hz	B5	E5	F5	-	-	M5	P5	U5	-	Q5	V5	N5	R5	-	-	-
60Hz	B6	E6	F6	G6	L6	M6	-	U6	W6	Q6	-	-	R6	T6	S6	X6
50/60Hz	B7	E7	F7	G7	-	M7	P7	U7	-	Q7	V7	N7	R7	-	-	-



Overload Relays

Shamrock Thermal Overload Relay provides protection against operation overload & single phasing or loss of phase. Overload is selectable for single phase or three-phase operation.



SILENT FEATURES

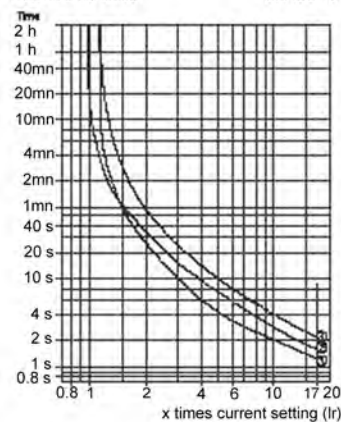
- Built-in single phase protection
- Potention free 1NO and 1NC contacts
- Yellow flag indicator for possible relay tripping
- Manual reset facility
- IP 20 finger touch proof

Relay Reference	Relay setting range (A)	Standard power ratings of 3-Phase Motors 50/60Hz, ACS Category				
		220V	380V	415V	440V	660V
		KW	KW	KW	KW	KW
TR2-DM09301	0.1 TO 0.16	-	-	-	-	-
TR2-DM09302	0.16 TO 0.25	-	-	-	-	-
TR2-DM09303	0.25 TO 0.4	-	-	-	-	-
TR2-DM09304	0.4 TO 0.63	-	-	-	-	0.37
TR2-DM09305	0.63 TO 1	-	-	-	-	0.55
TR2-DM09306	1 TO 1.6	-	0.37	-	0.55	1.1
TR2-DM093X6	1.25 TO 2	-	0.55	0.75	0.75	1.3
TR2-DM09307	1.6 TO 2.5	0.37	0.75	1.1	1.1	1.5
TR2-DM09308	2.5 TO 4	0.75	1.5	1.5	1.5	3
TR2-DM09310	4 TO 6	1.1	2.2	2.2	2.2	4
TR2-DM09312	5.5 TO 8	1.5	3	3.7	3.7	5.5
TR2-DM09314	7 TO 10	2.2	4	4	4	7.5
TR2-DM12316	9 TO 13	3	5.5	5.5	5.5	10
TR2-DM18321	12 TO 18	4	7.5	9	9	15
TR2-DM25322	17 TO 25	5.5	11	11	11	18.5
TR2-DM32353	23 TO 32	7.5	15	15	15	-
TR2-DM38355	28 TO 36	9	15	18.5	18.5	-

Tripping Curve

TR2DM09 TO DM38

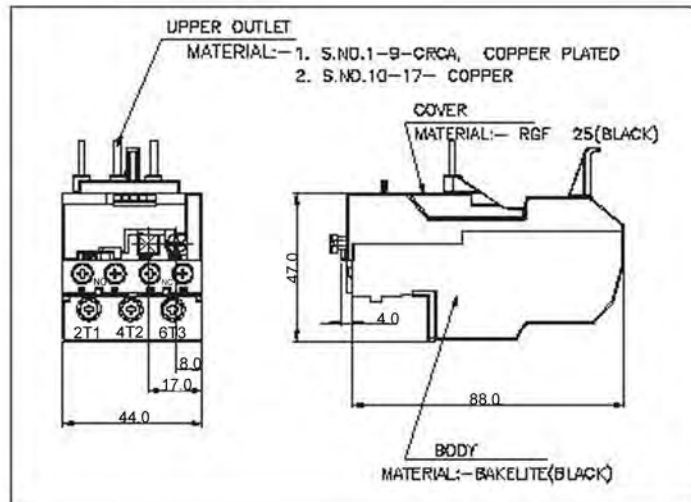
CLASS 10



- Balanced operation, 3-phase, from cold state.
- - - Balanced operation, 3-phase, after prolonged period at the set current (hot state).
- ... Operation, 2-phase, following the loss of one phase, from cold state.

NOTE: Tolerance on operating times \pm 30%

Dimensions



Common Add-On Accessories



Auxiliary Contact Block (Side mounted) **TA8-DN**

NO	NC	
2	0	TA8-DN20
1	1	TA8-DN11



Auxiliary Contact Block (Front mounted) **TA1-DN**

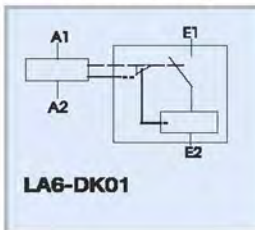
NO	NC	
0	1	TA1-DN01
1	0	TA1-DN10

NO	NC	
1	1	TA1-DN11
0	2	TA1-DN02
2	0	TA1-DN20

NO	NC	
4	0	TA1-DN40
3	1	TA1-DN31
2	2	TA1-DN22
1	3	TA1-DN13
0	4	TA1-DN04



Latch Add-on Block (Front mounted) **LA6-DK01**



On Delay Timer Block (Front mounted) **TA2-DT2**

55	67	
56	68	
0.1~3s		TA2-DT0
0.1~30s		TA2-DT2
0.1~180s		TA2-DT4



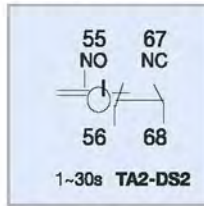
Off Delay Timer Block (Front mounted) **TA3-DR2**

55	67	
56	68	
0.1~3s		TA3-DR0
0.1~30s		TA3-DR2
0.1~180s		TA3-DR4

Common Add-On Accessories



On Delay Star Delta Timer Block (Front Mounted) TA2-DS2

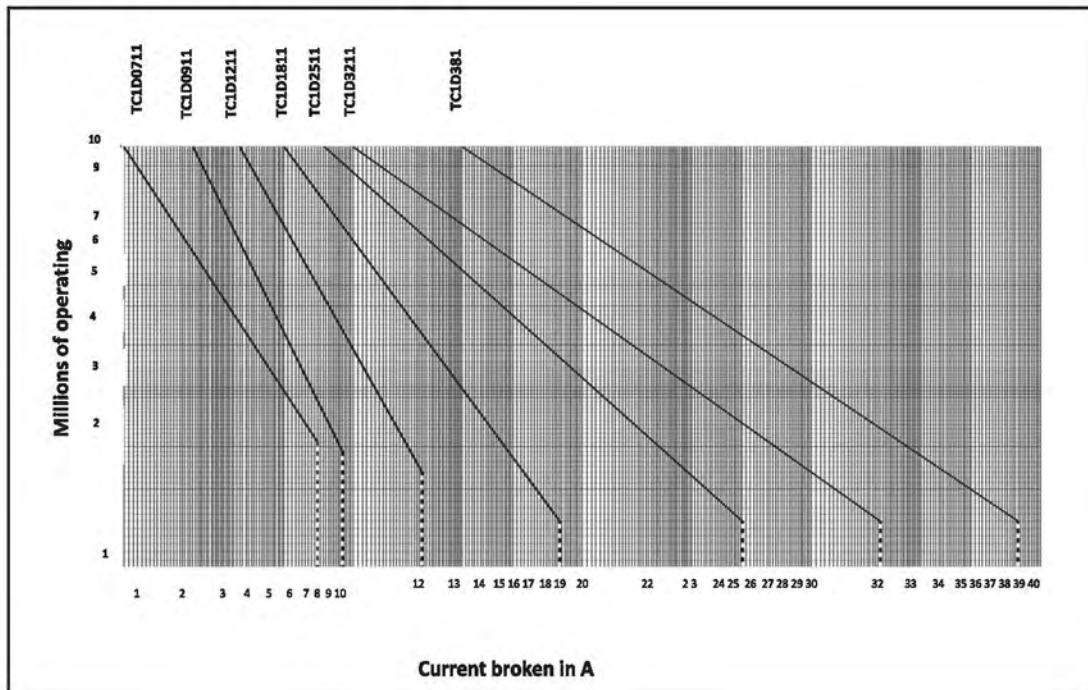


Mechanical Interlock
LA9-D09967



Coil Suppressor
TAD-4VN

Characteristic Curve



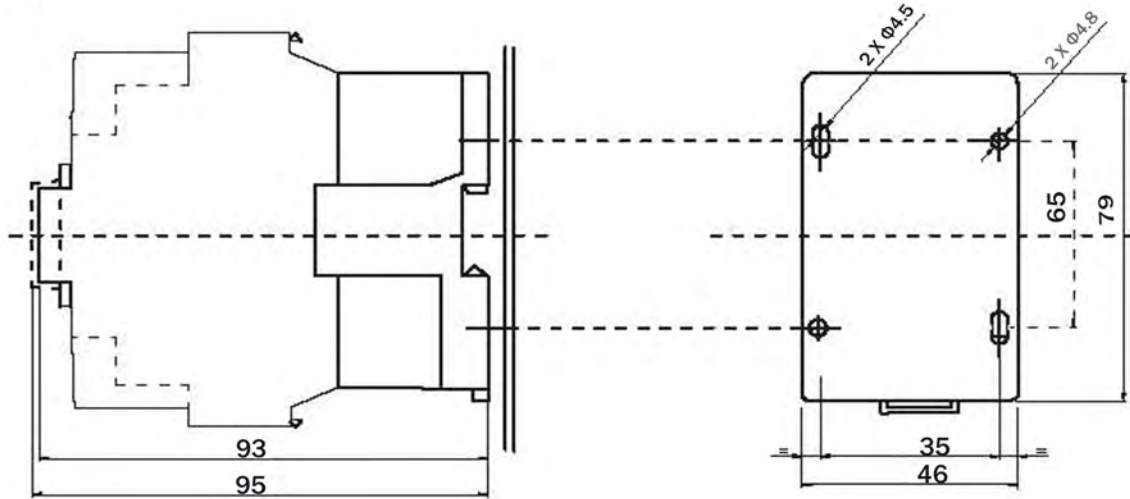
Contactors Coils

COILS FOR TC1-D0711 to TC1-D3811 CONTACTORS (NO & NC AUX CONTACTS)

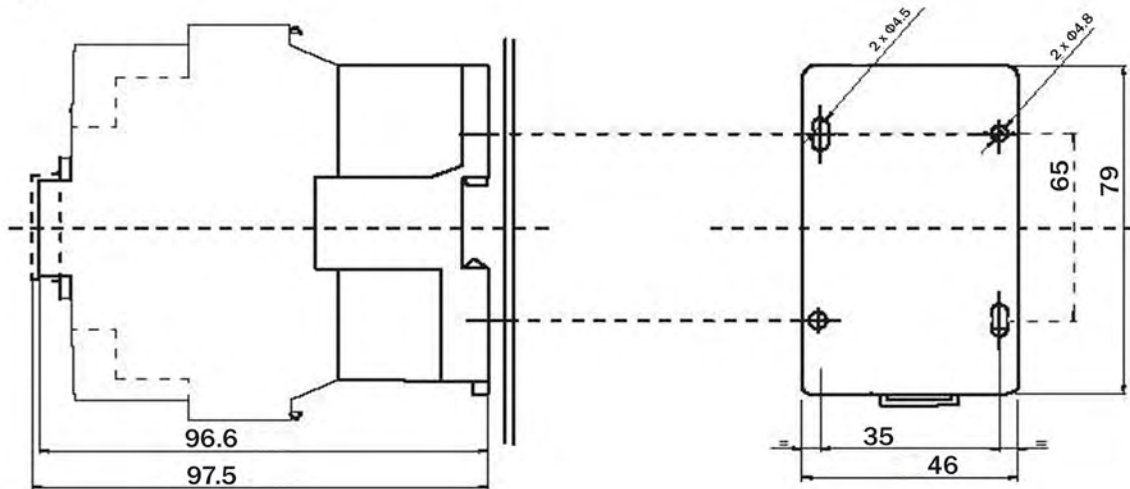
S.N.	PRODUCT CODE	VOLTAGE
1	TX1-D211-B5 (TX1-D3-B5)	24V, 50Hz
2	TX1-D211-B6 (TX1-D3-B6)	24V, 60Hz
3	TX1-D211-B7 (TX1-D3-B7)	24V, 50/60Hz
4	TX1-D211-C5 (TX1-D3-C5)	32V, 50Hz
5	TX1-D211-C7 (TX1-D3-C7)	32V, 50/60Hz
6	TX1-D211-D5 (TX1-D3-D5)	42V, 50Hz
7	TX1-D211-D7 (TX1-D3-D7)	42V, 50/60Hz
8	TX1-D211-E5 (TX1-D3-E5)	48V, 50Hz
9	TX1-D211-E6 (TX1-D3-E6)	48V, 60Hz
10	TX1-D211-E7 (TX1-D3-E7)	48V, 50/60Hz
11	TX1-D211-F5 (TX1-D3-F5)	110V, 50Hz
12	TX1-D211-F6 (TX1-D3-F6)	110, 60Hz
13	TX1-D211-F7 (TX1-D3-F7)	110V, 50/60Hz
14	TX1-D211-G6 (TX1-D3-G6)	120V, 60Hz
15	TX1-D211-G7 (TX1-D3-G7)	120V, 50/60Hz
16	TX1-D211-L6 (TX1-D3-L6)	208V, 60Hz
17	TX1-D211-M5 (TX1-D3-M5)	220V, 50Hz
18	TX1-D211-M6 (TX1-D3-M6)	220V, 60Hz
19	TX1-D211-M7 (TX1-D3-M7)	220V, 50/60Hz
20	TX1-D211-N5 (TX1-D3-N5)	415V, 50Hz
21	TX1-D211-N6 (TX1-D3-N6)	415V, 60Hz
22	TX1-D211-N7 (TX1-D3-N7)	415V, 50/60Hz
23	TX1-D211-P5 (TX1-D3-P5)	230V, 50Hz
24	TX1-D211-P7 (TX1-D3-P7)	230V, 50/60Hz
25	TX1-D211-Q5 (TX1-D3-Q5)	380V, 50Hz
26	TX1-D211-Q6 (TX1-D3-Q6)	380V, 60Hz
27	TX1-D211-Q7 (TX1-D3-Q7)	380V, 50/60Hz
28	TX1-D211-R6 (TX1-D3-R6)	440V, 60Hz
29	TX1-D211-R7 (TX1-D3-R7)	440V, 50/60Hz
30	TX1-D211-S6 (TX1-D3-S6)	575V, 60Hz
31	TX1-D211-S7 (TX1-D3-S7)	575V, 50/60Hz
32	TX1-D211-T6 (TX1-D3-T6)	480V, 60Hz
33	TX1-D211-T7 (TX1-D3-T7)	480V, 50/60Hz
34	TX1-D211-U5 (TX1-D3-U5)	240V, 50Hz
35	TX1-D211-U6 (TX1-D3-U6)	240V, 60Hz
36	TX1-D211-U7 (TX1-D3-U7)	240V, 50/60Hz
37	TX1-D211-V7 (TX1-D3-V7)	400V, 50/60Hz
38	TX1-D211-W6 (TX1-D3-W6)	277V, 60Hz
39	TX1-D211-X6 (TX1-D3-X6)	600V, 60Hz

Dimensions

TC1-D0711
TC1-D0811
TC1-D1211
TC1-D1511



TC1-D2511
TC1-D3211
TC1-D3811





Local Distributor



SHAMROCK CONTROLS

13735 Beta Road • Dallas, Texas • 75244
Ph: (972) 233-6712 • Fax: (972) 233-8039
www.shamrockcontrols.com