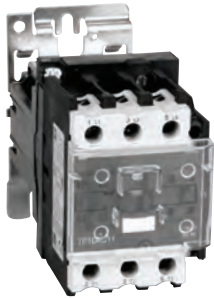


T-Line Contactors (9A ~ 95A)

3 & 4 Pole Contactors with DC operating coil



TP1D40 ••-XX

3 Pole Contactor with DC operating coil										
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	480V	600V			
9	25	0.5	1	2	2	5	7.5	1	0	TP1-D0910-XX
								0	1	TP1-D0901-XX
12	25	1	2	3	3	7.5	10	1	0	TP1-D1210-XX
								0	1	TP1-D1201-XX
18	32	1	3	5	5	10	15	1	0	TP1-D1810-XX
								0	1	TP1-D1801-XX
22	32	1	3	5	5	10	15	1	0	TP1-D2210-XX
								0	1	TP1-D2201-XX
25	40	2	3	5	7.5	15	20	1	0	TP1-D2510-XX
								0	1	TP1-D2501-XX
32	50	2	5	10	10	20	25	1	0	TP1-D3210-XX
								0	1	TP1-D3201-XX
38	50	2	5	10	10	20	25	1	0	TP1-D3810-XX
								0	1	TP1-D3801-XX
40	60	3	5	10	10	30	30	1	1	TP1-D4011-XX
50	80	3	7.5	15	15	40	40	1	1	TP1-D5011-XX
65	80	5	10	20	20	50	50	1	1	TP1-D6511-XX
80	125	7.5	15	20	25	60	60	1	1	TP1-D8011-XX

Note : Standard Fault Ratings High Fault Ratings (100kA with class J/CC Fuse)



TP1D2500•-XX

4 Pole Contactor with DC operating coil										
Maximum Current		Maximum HP						Main Pole Configuration		Catalog Number
Inductive	Resistive	Single Phase		Three Phase				NO	NC	
AC-3 A	AC-1 A	120V	230V	200V	230V	480V	600V			
9	25	0.5	1	2	2	5	7.5	4	0	TP1-D09004-XX
		0.5	1	2	2	5	7.5	0	4	TP1-D09006-XX
		0.5	1	-	-	-	-	2	2	TP1-D09008-XX
12	25	1	2	3	3	7.5	10	4	0	TP1-D12004-XX
		1	2	3	3	7.5	10	0	4	TP1-D12006-XX
		1	2	-	-	-	-	2	2	TP1-D12008-XX
25	40	2	3	5	7.5	15	20	4	0	TP1-D25004-XX
		2	3	5	7.5	15	20	0	4	TP1-D25006-XX
		2	3	-	-	-	-	2	2	TP1-D25008-XX
40	60	3	5	10	10	30	30	4	0	TP1-D40004-XX
		3	5	-	-	-	-	2	2	TP1-D40008-XX
		5	10	20	20	50	50	4	0	TP1-D65004-XX
65	80	5	10	-	-	-	-	2	2	TP1-D65008-XX
		7.5	15	20	25	60	60	4	0	TP1-D80004-XX
		7.5	15	-	-	-	-	2	2	TP1-D80008-XX

Note : Standard & High Fault Ratings (100kA with class J/CC Fuse)

Low Height DC Contactor : 9A ~ 25A *									
Maximum Current		Maximum HP 1 Phase			Maximum HP 3 Phase				Catalog Number
Inductive AC-3 A	Resistive AC-1 A	120V	230V	200V	230V	480V	600V		
9	25	0.5	1.0	2	2	5	7.5	TP1-DC09-XX	
12	25	1.0	2.0	3	3	7.5	10	TP1-DC12-XX	
25	40	2.0	3.0	5	7.5	15	20	TP1-DC25-XX	

Replace XX with voltage code from table - 2

Table - 2: XX-DC Coil Voltages									
Volts DC	12	24	48	72	110	125	220	250	440
	JD	BD	ED	SD	FD	GD	MD	UD	RD

*Under UL approval

T-Line Contactors (9A ~ 95A)

3 & 4 Pole Contactors with DC operating coil

General Characteristics												
Type		Unit	TP1-D09 ~ TP1-D80									
Rated insulation voltage (Ui) Conforming to standards	IEC 60947-4-1	V	1000									
Approvals			NFCEN60947, VDE0660, BSEN60947, IEC 60947 & IS 13947									
Degree of Protection	Conforming to VDE 0106		Protection against direct finger contacts									
Protective treatment	Standard version		"TH"									
Ambient air temperature (around the device)	Storage	°C	-60 to +80									
Maximum operating altitude	Operation	°C	-5 to +55 (0.8 to 1.1 Uc)									
	Permissible	°C	-40 to +70, for operation at Uc									
Operating Position	Without derating	Mtr.	3000									
	Without derating		+30° possible, in relation to normal vertical mounting plane									

Pole Characteristics														
Type TP1-		Unit	D09	D12	D18	D22	D25	D32	D38	D40	D50	D65	D80	
Number of poles (Power) Power + Auxiliary			3or4 3+1	3or4 3+1	3 3+1	3 3+1	3 or 4 3+1	3 3+1	3 3+1	3or4 3+2	3or4 3+2	3or4 3+2	3or4 3+2	
Rated current (Ie)	AC3 up to 440V @ 55°C	A	9	12	18	22	25	32	38	40	50	65	80	
Rated operating Voltage (Ue)	Upto	V	690	690	690	690	690	690	690	690	690	690	690	
Frequency limits	Of the operational current	Hz						25-400						
Rated thermal current (Ith) θ < 40°C		A	25	25	32	32	45	50	50	60	80	80	125	
Rated making capacity	Irms conforming to IEC-60947-4	A	250	250	300	300	450	550	550	800	900	1000	1100	
Rated breaking capacity	Irrms conforming to 220-440V IEC-60947-4	500V	A	250	250	300	300	450	550	550	800	900	1000	1100
			A	175	175	250	250	400	450	450	800	900	1000	1000
			A	85	85	120	120	180	180	180	400	500	630	640
Average impedance per pole	At Ith and 50Hz	Milli Ω	Max.	2.5	2.5	2.5	2.5	2	2	2	1.5	1.5	1	0.8
Power dissipation per pole for the above operational currents	AC-3	W	0.2	0.36	0.8	0.8	1.25	2	2	2.4	3.7	4.2	5.1	

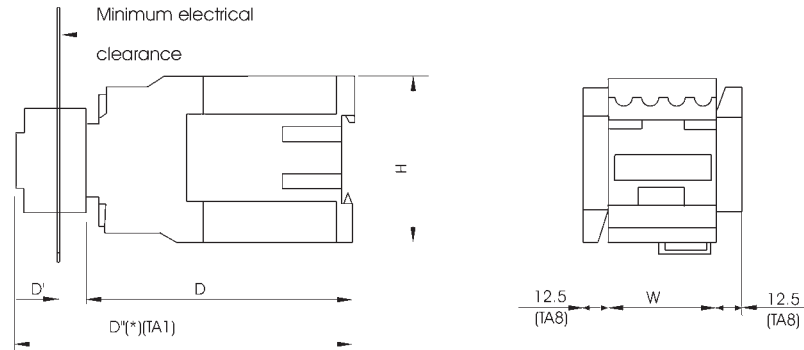
Control Circuit Characteristics							
Type		Unit	TP1-D09-D22	TP1-D25-D38	TP1-D4011-D65	TP1-D80	
Rated control circuit voltage (Uc)	DC	V	12 to 660		12 to 660		
Control voltage limits (θ < 55°C)	Operational	Standard Coil	0.8 - 1.1 Uc		0.85 - 1.1 Uc		
		Wide Range Coil	0.7 - 1.25 Uc		0.75 - 1.25 Uc		
Average consumption DC at 20°C and at Uc	Drop out		0.1 - 0.25 Uc		0.1 - 0.3 Uc		
	DC	Inrush	W	9	11	22	22
		Sealed	W	9	11	22	22
Average operating time at Uc	Closing time "C"		msec	40-48	52-64	85-110	95-130
	Opening time "O"		msec	6-14	8-14	20-35	20-35
Mechanical life Uc (mechanical durability)	In millions of operating cycles			30	25	20	20
Maximum operating rate (at ambient temp. of θ < 55°C)	In operating cycle/hour			3600	3600	3600	3600

Integral Auxiliary Contact Characteristics			
Type		Unit	TP1-D09 ~ TP1-D80
Rated thermal current (Ith)	θ < 40°C	A	10
Rated operational voltage (Ue)	Upto	V	660

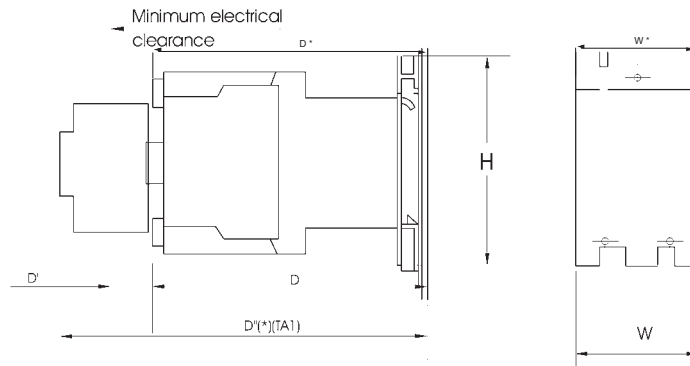
T-Line Contactors (9A ~ 95A)

Contactors' Dimensions with DC operating coil

Product Dimensions
TP1D09~D3810



TP1D4011~D80



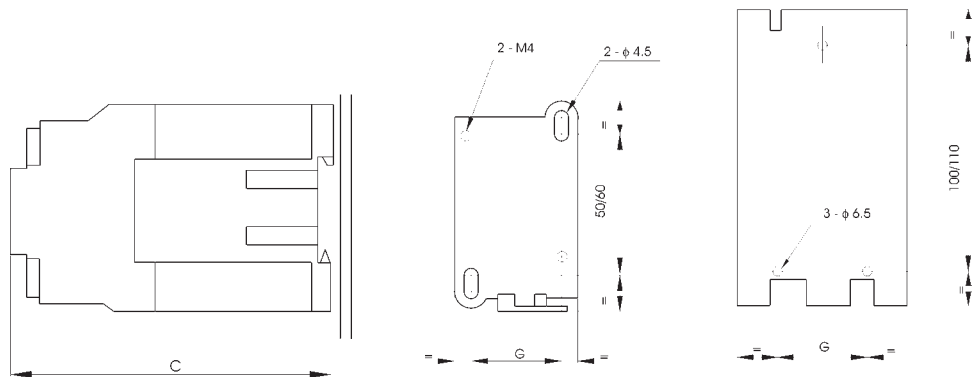
TP1 -	D09	D12	D18	D22	D25	D32	D38	D40	D50	D65	D80
W (3 Pole)	45	45	45	45	56	56	56	75	75	75	85
W* (4 Pole)	45	45	-	-	56	-	-	85	85	85	96
H (3/4 Pole)	74	74	74	74	84	84	84	127	127	127	127
D (3/4 Pole)	115	115	120	120	130	135	135	171	171	171	181
D' (3/4 Pole)	10	10	10	10	10	10	10	12	12	12	12
D* (3/4 Pole)	148	148	153	153	163	168	168	202	202	202	210
D*(008)	-	-	-	-	-	-	-	181	181	181	191

Panel Mounting Reference

TP1-D09~D38

TP1-D40~D80

Mounting



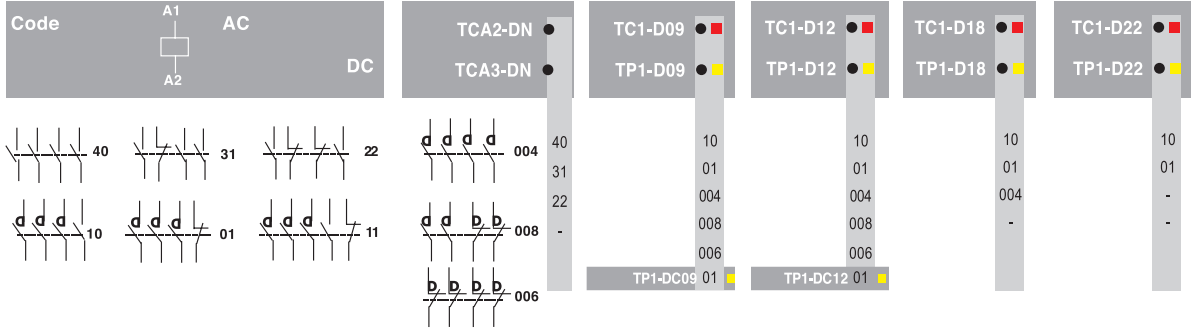
TP1-	D09	D12	D18	D22	D25	D32	D38	D40	D50	D65	D80
C	115	115	120	120	130	135	135	171	171	171	181
G	35	35	35	35	40	40	40	40	40	40	40

Control Relays

Synopsis - Contactors / Control Relays

Conforming to
IEC-VDE-BS-IS

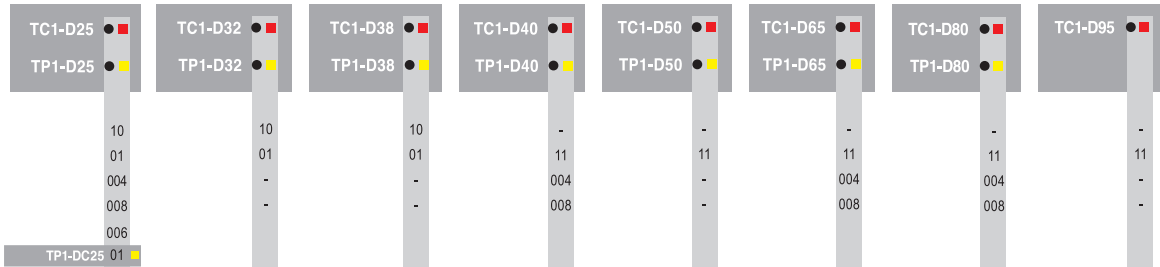
For other standards, please refer to us



Maximum rated operational voltage	
Maximum rated current for motor control 3 phase 440V,50-60Hz for AC3 Duty)	
Maximum standard power rating for motor control for AC3 Duty $\theta < 55^{\circ}\text{C}$, 415V	
230V HP 460/480V HP UL-Continuous Current	3 phase AC3
	575/600V HP
	Mounting position (w.r.t. normal vertical mounting plane)*
Maximum terminal current I _{th} ($\theta < 40^{\circ}\text{C}$)	
Maximum operating rate (operations / hr)	
Average coil consumption (inrush / sealed)	
TP1-D TP1-DC	TC1-D 50 Hz 60 Hz 50/60 Hz DC
Power dissipation per pole at	
Mechanical life (in millions of operations)	
Power contact terminal capacity mm ²	
Overall dimensions in mm	
Projection (TCA2-D/TC1-D/TP1-DC)	
Over-all dimensions in mm	
Projection (TCA3-D/TP1-D)	
Weight (TC1-D/TP1-D/TP1-DC)	
Weight (TCA2/TCA3)	

660V	690V	690V	690V	690V
AC 15 duty (IEC 60947-5-1) AC 11 duty (IEC 851) 6A at 500V	9A	12A	18A	22A
	Kw / hp	Kw / hp	Kw / hp	Kw / hp
	4 / 5.5	5.5 / 7.5	9 / 12.5	11 / 15
-	2	3	5	-
-	5	7.5	10	-
-	7.5	10	15	-
+ 30 °	+ 30°	+ 30°	+ 30°	+ 30°
10A	25A	25A	32A	32A
10800 3600	3600 3600	3600 3600	3600 3600	3600 3600
60 / 7 VA 70 / 7.5 VA 70 / 8 VA 9 / 9W	60 / 7 VA 70 / 7.5 VA 70 / 8 VA 9 / 9W 150 / 2.75W	60 / 7 VA 70 / 7.5 VA 70 / 8 VA 9 / 9W 150 / 2.75W	60 / 7 VA 70 / 7.5 VA 70 / 8 VA 9 / 9W	60 / 7 VA 70 / 7.5 VA 70 / 8 VA 9 / 9W
1.56W 0.20W	1.56W 0.20W	1.56W 0.36W	2.5w 0.80W	1.56W 0.80W
30 20	20 15/15	20 15/15	20 15/-	20 15/-
30	30	30	30	30
2.5	4	4	6	6
80mm	80mm	80mm	85mm	85mm
115mm	115mm	115mm	120mm	120mm
	0.32/0.58/0.32	0.32/0.60/0.32	0.35/.85/-	0.35/0.85/-
0.32/0.58				

Coil Selection Chart																						
For Contactor Type	Coil Reference	Volts →	Replace with ■ or ■ following codes																			
			12	24	48	72	110	120	125	208	220	230	240	250	277	380	400	415	440	480	575	600
TC1-D09-22	TX1-D2 ■	50 Hz		B5	E5			F5						M5	P5	U5						
TC1-D25-38	TX1-D4 ■	60 Hz		B6	E6			F6	G6		L6			M6	P6	U6		W6	Q6	V5	N5	R5
TC1-D40-95	TX1-D6 ■	50/60 Hz		B7	E7			F7	G7					M7	P7	U7			Q7	V7	N7	R7
TP1-D09-22	TX4-D2 ■			BD	ED	SD	FD			GD				MD	PD		UD		QD	VD	ND	RD
TP1-D25-38	TX4-D4 ■			BD	ED	SD	FD			GD				MD	PD		UD		QD	VD	ND	RD
TP1-D40-80	TX4-D6 ■			BD	ED	SD	FD			GD				MD	PD		UD		QD	VD	ND	RD
TP1-DC09-12	TX4-DC2 ■			BD	ED		FD							MD								
TP1-DC25	TX4-DC4 ■			BD	ED		FD							MD								



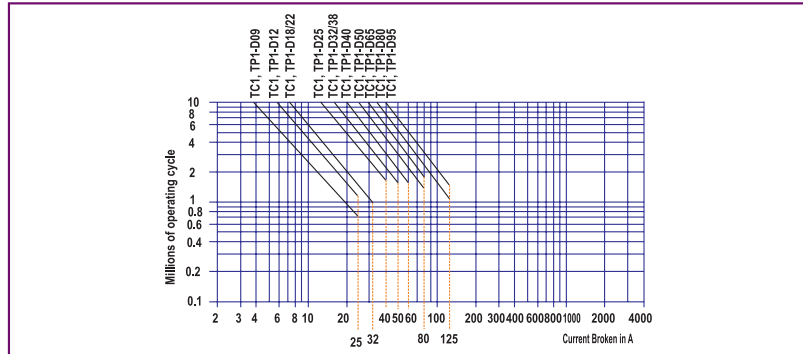
690V	690V	690V	690V	690V	690V	690V	690V
25A	32A	38A	40A	50A	65A	80A	95A
Kw / hp	Kw / hp	Kw / hp	Kw / hp	Kw / hp	Kw / hp	Kw / hp	Kw / hp
11 / 15	15 / 20	18.5 / 25	22 / 30	25 / 35	37 / 50	45 / 60	45 / 60
7.5	10	-	10	15	20	25	25
15	20	-	30	40	50	60	60
20	25	-	30	40	50	60	60
+ 30°	+ 30°	+ 30°	+ 30°	+ 30°	+ 30°	+ 30°	+ 30°
40A	50A	50A	60A	80A	80A	125A	125A
3600 3600	3600 3600	3600 3600	3600 3600	3600 3600	3600 3600	3600 3600	3600 3600
90 / 7.5VA 100 / 8.5 VA 100 / 8.5 VA 11/11W [250 / 3.5W]	90 / 7.5VA 100 / 8.5 VA 100 / 8.5 VA 11/11W	90 / 7.5VA 100 / 8.5 VA 100 / 8.5 VA 11/11W	200 / 20 VA 200 / 22 VA 245 / 26 VA 22 / 22W	200 / 20 VA 200 / 22 VA 245 / 26 VA 22 / 22W	200 / 20 VA 200 / 22 VA 245 / 26 VA 22 / 22W	200 / 20 VA 200 / 22 VA 245 / 26 VA -	200 / 20 VA 200 / 22 VA 245 / 26 VA -
3.2W 1.25W	5W 2W	5W 2W	5.4W 2.4W	9.6W 3.7W	6.4W 4.2W	12.5W 5.1W	12.5W 7.2
16 12/12	16 12/-	16 12/-	16 6/-	16 6/-	16 6/-	10 4/-	10 4/-
25	25	25	20	20	20	20	-
10	10	10	25	25	25	50	50
93mm	98mm	98mm	114mm	114mm	114mm	125mm	125mm
130mm	135mm	135mm	171mm	171mm	171mm	181mm	
0.505 / 0.88 / 0.505	0.525 / 0.88 / -	0.525 / 0.88 / -	1.15 / 2.1 / -	1.15 / 2.12 / -	1.15 / 2.16 / -	1.5 / 2.22 / -	1.5 / - / -

T-Line Contactors (9A ~ 95A)

Contactors' Selection Guide (according to the required electrical life)

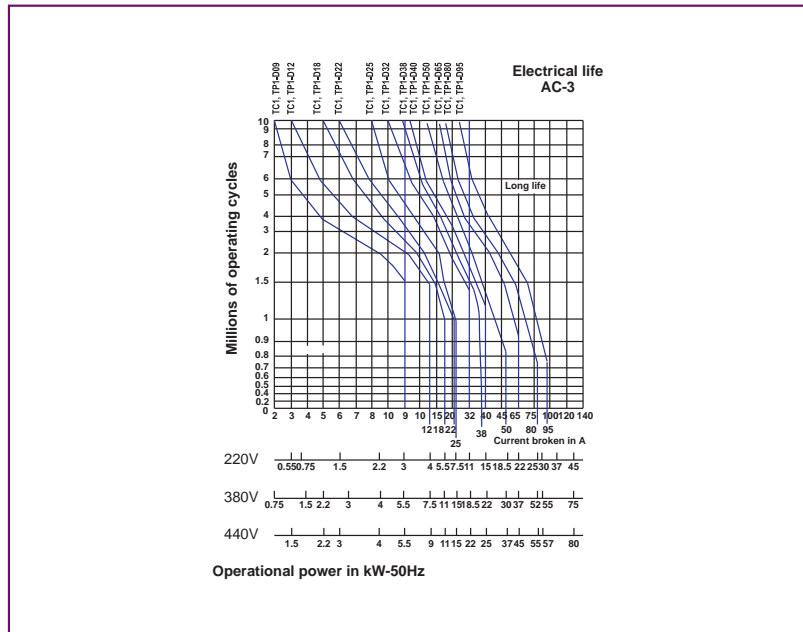
Use in Category AC-1 ($U_e < 440V$).

Control of resistive circuits ($\cos \phi > 0.95$). The current broken (I_C) in category AC-1 is equal to the current (I_e) normally drawn by the load.



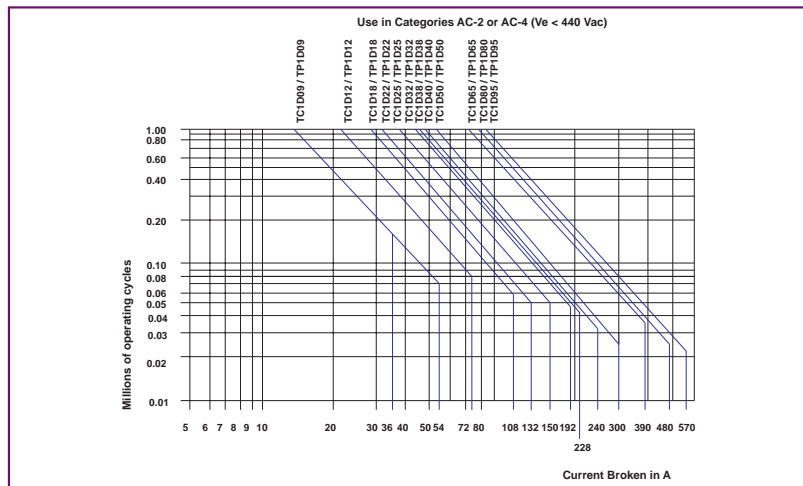
Use in Category AC-3 ($U_e < 440V$).

Control of 3-phase asynchronous squirrel cage motors with breaking whilst motor running. The current broken (I_C) in category AC-3 is equal to the current (I_e) normally drawn by the load.



Use in Categories AC-2, AC-4

($U_e < 440V$). Control of 3-phase asynchronous squirrel cage (AC-4) or slip ring (AC-2) motors with breaking whilst motor stalled. The current broken in category AC-4 is equal to $6 \times I_e$ (I_e =rated operational current of the motor).



T-Line Contactors (9A ~ 95A)

Accessories, Spare Coils



TA9D1269



TA9RC980U



LA9D09978



TX1D • -XX



LA6DK01

Power Connectors Wire Sets for Reversing Contactors

With Two Identical Contactors	Catalog Number
TC1-D09, TC1-D12, TP1-D09, TP1-D12	TA9-D1269
TC1-D18, TP1-D18	TA9-D1869
TC1-D25, TP1-D25	TA9-D2569
TC1-D32, TP1-D32	TA9-D3269
TP1-D40, TP1-D65, TC1-D40, TC1-D50, TC1-D65	TA9-D6569
TC1-D80, TP1-D80, TC1-D 95	TA9-D8069

Mechanical / Electric Interlocks Horizontally Mounted

Use for Contactor	Mechanical	Electromechanical
TCA2DN, TCA3DN	LA9D09978	ELA9D09978
TC1 D09 ~ D32, TP1 D09 ~ D32		ELA9D50978
TC1 D40 ~ D65, TP1 D40 ~ D65	LA9D50978	ELA9D50978
TC1D80 - D95, TP1D80	LA9D80978	ELA9D80978

Coil Suppressor

Description	Voltage Ratings	Catalog Number
Varistor (AC/DC) Clip-on mounting for 9-95A Contactor	24 ~ 48V AC/DC	TA9AMOV980E
	110 ~ 240V AC/DC	TA9AMOV980U
RC Circuit (AC) Clip-on mounting for 9A-95A Contactor	24 ~ 48V AC	TA9RC980E
	110 ~ 240V AC	TA9RC980U
	380 ~ 440V AC	TA9RC980N

Spare Coils (AC)

Use for contactor AC	Catalog Number
TC1-D09-D22	TX1-D2-XX
TC1-D25-D38	TX1-D4-XX
TC1-D40-D95	TX1-D6-XX

Replace XX with voltage code from table - 3

Table-3: XX-AC Coil Voltages

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

Spare Coils (DC)

Use for contactor DC	Catalog Number
TP1-D09 ~ TP1-D22	TX4-D2-XX
TP1-D25 ~ TP1-D38	TX4-D4-XX
TP1-D40 ~ TP1-D65	TX4-D40-XX
TP1-D80	TX4-D80-XX
TP1-DC09 ~ TP1-DC12	TX4-DC2-XX *available coil voltage
TP1-DC25	TX4-DC4-XX *available coil voltage

Replace XX with voltage code from table - 4

Table-4: XX-DC Coil Voltages

Volts DC	12	24*	48*	72	110*	125*	220*	250	440
	JD	BD	ED	SD	FD	GD	MD	UD	RD

Mechanical Latching Blocks

Description of Contactors	Catalog Number
For Contactors up to 32 Amps	LA6DK01-XX

Replace XX with voltage code from table - 5/6

For Mechanical Latching Block	Table-5: For AC Voltage										
	24	48	110-115	120-127	220-225	230-240	380	400-415	440	500	600
LA6-DK01	B	E	F	G	M	U	Q	N	R	S	Y
For Mechanical Latching Block	Table-6: For DC Voltage										
	24	48	72	110-115	120-127	220-225	230-240				
LA6-DK01	BD	ED	SD	FD	GD	MD	UD				