

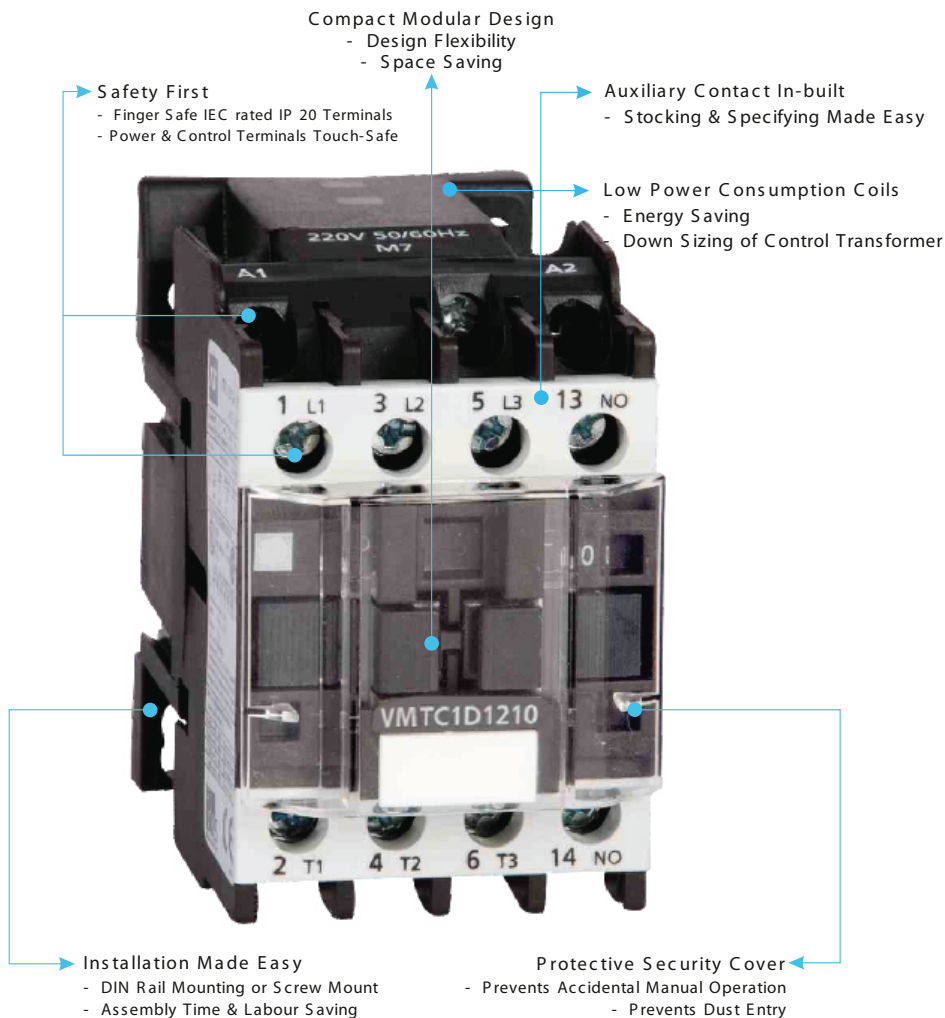
ВЫСОКОНАДЕЖНЫЕ МОДУЛЬНЫЕ КОНТАКТОРЫ VMTEC 3P, 4P



Высоконадежные модульные контакторы VMtec созданы для обеспечения высокой производительности, гибкости, безопасности и экономически эффективных решений.

Все компоненты контакторов VMtec имеют высокие показатели электрической и механической стойкости и сертифицированы по стандартам ISO 90001, IEC60947-4-1.

Introduction



Industrial Applications

- Motor Controls
- Pumps
- Machine Tools
- Printing & Packaging Machines
- Compressors
- Power Supply Solutions
- HVAC
- Cranes
- Elevator & Escalators
- Wind Mills
- Solar System

VMtec Contactor is manifestation of understanding discerning customer's requirements and applications. As the name suggests, VMtec Contactor are built for high performance assuring designs flexibility, safety and cost effective solutions.

VMtec Contactor are manufactured in our 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.

VMtec Contactors are user friendly, highly reliable & its modular design affords product selection with cost effective solutions.

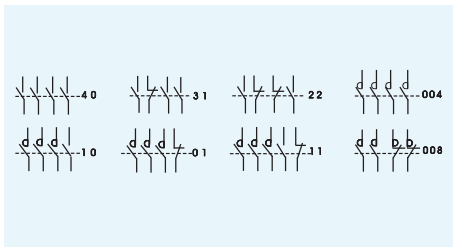
VMtec Contactor & Overload Relay meets latest IEC, UL, CSA & CE Standards possessing Global accreditation. They conform to IEC60947-4-1.

VMtec Contactor starting solutions advantages

- World Class Superior functional aesthetics
- Complete & harmonized 3& 4P Contactor range
 - 3P Contactor AC3 rating 9~95A, 4 frame sizes, AC/ DC
 - 3P Contactor AC3 rating 115~800A, 8 frame sizes, AC/ DC
 - 4P Contactor AC1 rating 25~125A, 4 frame sizes, AC /DC
 - 4P Contactor AC1 rating 200~1600A, 8 frame sizes, AC /DC
- Safety first - Power & Control terminals are finger touch proof.
- Energy Saving magnet coils in both AC & DC variants
- Compact Modular design for flexibility
- Saves inventory cost - Common Add-On Accessories
- High Mechanical & Electrical life
- Short Circuit Protection, Type -1 & 2 Co-ordination

ВЫСОКОНАДЕЖНЫЕ МОДУЛЬНЫЕ КОНТАКТОРЫ

Conforming: IS 13947-4-1 / IEC 60947-4-1



Technical Parameters - Contactor: 9A ~ 95A

Types	3 Pole	AC DC	VMTC1-D09	VMTC1-D12	VMTC1-D18	VMTC1-D22	VMTC1-D25	VMTC1-D32	VMTC1-D38	VMTC1-D40	VMTC1-D50	VMTC1-D65	VMTC1-D80	VMTC1-D95	
			VMTP1-D09	VMTP1-D12	VMTP1-D18	VMTP1-D22	VMTP1-D25	VMTP1-D32	VMTP1-D38	VMTP1-D40	VMTP1-D50	VMTP1-D65	VMTP1-D80	VMTP1-D95	
Maximum Rated Current for AC3 Duty			9A	12A	18A	22A	25A	32A	38A	40A	50A	65A	80A	95A	
Rated Operational Voltage: Ue			690						690						
Thermal Current: Ith			25A		32A		40A		50A		60A	80A		125A	
Power Rating for Motor Control for AC3 Duty Ø <=55°C, Conforming to UL, CSA	415V	kW / HP 4 / 5.5	kW / HP 5.5 / 7.5	kW / HP 9 / 12.5	kW / HP 11 / 15	kW / HP 11 / 15	kW / HP 15 / 20	kW / HP 18.5 / 25	kW / HP 22 / 30	kW / HP 25 / 35	kW / HP 37 / 50	kW / HP 45 / 60	kW / HP 45 / 60		
	230V	2	3	5	-	7.5	10	-	10	15	20	25	25		
	460/480V	5	7.5	10	-	15	20	-	30	40	50	60	60		
	575/600V	7.5	10	15	-	20	25	-	30	40	50	60	60		
Mounting Position			± 30						± 30						
Ambient Air Temperature (Operational)			- 5 to + 55°C						- 5 to + 55°						
Maximum Operating Rate Operations / Hrs.			3600						3600						
Mechanical Life			20						16						10
Thermal / Electronic Overload Relay			0.10~13.0						13.0~37.0			40.0~63.0		63.0~93.0	
Auxillary Contact Block	Front Mounted:	1 NO, 1NC, 2NO, 1 NO+1NC, 2NC, 4NO, 3NO+1NC, 2NO+2NC, 1NO+3NC, 4NC													
	Side Mounted:	1NO+1NC, 2NC													
Pneumatic Timer	Front Mounted:	On Delay 1NO+1NC (0.1~180 Sec) OFF Delay 1NO+1NC (0.1~180 Sec)													
	Star Delta Timer:	1 NO+1NC (0.1~30 Sec)													
Mechanical Interlock	Horizontally Mounted:	AC: TC1D09 - TC1D95 DC: TP1D09 - TP1D80													
Surge Suppressor			Varistor AC/DC: 24~48V, 110~240V RC Circuit AC: 24~48V, 110~240V, 380~440V												

AC Coil Voltage for 3 Pole Contactors 9A~95A & Control Relays	Contactor		Voltage					DC Coil Voltage for 3 Pole Contactors 9A~95A & Control Relays	Contactor		Voltage				
	VMTCA2-DN/VMTC1-D	24	48	110*	220*	240*	415		VMTCA3-DN/VMTP1-D	24	48	72	110	220	
	50Hz	B5	E5	F5	M5	U5	N5		Normal Coil	BD	ED	SD	FD	MD	
	50/60Hz	B7	E7	F7	M7	U7	N7		Wide band Coil#	BW	EW	-	FW	-	

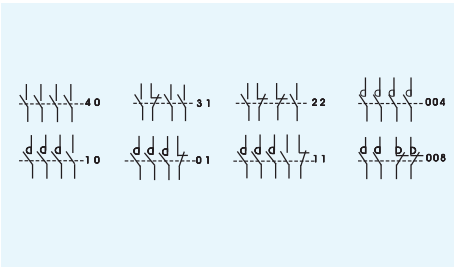
Over-all dimensions in (mm)	AC													
	DC													



ВЫСОКОНАДЕЖНЫЕ МОДУЛЬНЫЕ КОНТАКТОРЫ



Conforming: IS 13947-4-1 / IEC 60947-4-1



Technical Parameters - Contactor: 115A ~ 780A

Types	3 Pole	AC DC	VMLC1-F115	VMLC1-F150	VMLC1-F185	VMLC1-F225	VMLC1-F265	VMLC1-F330	VMLC1-F400	VMLC1-F500	VMLC1-F630	VMLC1-F780		
			VMLC1-F115A	VMLC1-F150A	VMLC1-F185A	VMLC1-F225A	VMLC1-F265A	VMLC1-F330A	VMLC1-F400A	VMLC1-F500A	VMLC1-F630A	VMLC1-F780A		
Maximum Rated Current for AC3 Duty			115A	150A	185A	225A	265A	330A	400A	500A	630A	780A		
Thermal Current: I _{th}			200A	250A	275A	315A	350A	400A	500A	700A	1000A	1600A		
Rated Operational Voltage : U _e			1000A						1000A					
Power Rating for Motor Control for AC3 Duty Ø <=55°C,415V			kW / HP 59 / 80	kW / HP 80 / 108	kW / HP 100 / 136	kW / HP 110 / 148	kW / HP 140 / 190	kW / HP 180 / 240	kW / HP 220 / 300	kW / HP 280 / 380	kW / HP 375 / 500	kW / HP 425 / 580		
Conforming to UL, CSA			230V	40	50	60	65	75	100	125	200	300	-	
			460/480V	75	100	125	130	150	200	250	400	600	-	
			575/600V	100	125	150	155	200	250	300	500	800	-	
Mounting Position			± 30						± 30					
Ambient Air Temperature Operation			-5 to + 55°C						-5 to + 55°C					
Maximum Operating Rate (Operations/hrs)			AC/DC	2400						2400		1200	600	
Mechanical Life			50 OR 60 Hz	10						10				5
Thermal/electronic Overload Relay			65.0~200.0						200.0~630.0			630.0~1000.0		
Auxillary Contact Block			Front Mounted:	1NO, 1NC, 2NO, 1 NO+1NC, 2NC, 4NO, 3NO+1NC, 2NO+2NC, 1NO+3NC, 4NC										
			Side Mounted:	1NO+1NC , 2NO										
Pneumatic Timer			Front Mounted:	On Delay 1NO+1NC (0.1~180 Sec) OFF Delay 1NO+1NC (0.1~180 Sec)										
			Star Delta Timer:	1NO+1NC (0.1~30 Sec)										
Mechanical Interlock			Horizontally Mounted:	AC/DC: LC1-F115A~LC1-F630A										
			Vertically Mounted:	AC/DC: LC1-F115A-LC1~F780A										
Surge Suppressor			Varistor AC/DC: 24~48V, 110~240V, RC Circuit (AC): 24~48V, 110~240V, 380~440V											

AC Coil Voltage for 3 Pole Contactors 115A~780A	Contactor				Voltage			
	Type	110	220	240t	415			
	VMLC1FDP	F	M	U	N			

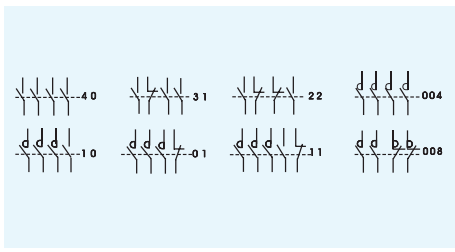
DC Coil Voltage for 3 Pole Contactors 115A~780A	Contactor				Voltage			
	Type	24#	48	110	220			
	VMLC1FDP	BD	ED	FD	MD			

Over-all dimensions in mm											



ВЫСОКОНАДЕЖНЫЕ МОДУЛЬНЫЕ КОНТАКТОРЫ

Conforming: IS 13947-4-1 / IEC 60947-4-1



Technical Parameters - Control Relay/Contactor: 9A ~ 80A

Types	4 Pole	AC DC	VMTCA2-DN VMTCA3-DN	VMTC1-D09004 VMTP1-D09004	VMTC1-D12004 VMTP1-D12004	VMTC1-D25004 VMTP1-D25004	VMTC1-D40004 VMTP1-D40004	VMTC1-D65004 VMTP1-D65004	VMTC1-D80004 VMTP1-D80004
Rated Thermal Current: I_{th} , AC-1, 40 °C			10A	25A	25A	40A	60A	80A	125A
Main Pole Configuration			4NO	4NO	4NO	4NO	4NO	4NO	4NO
Rated Operational Voltage: U_e			660	690	690	690	690	690	690
Mounting Position			± 30	± 30	± 30	± 30	± 30	± 30	± 30
Ambient Air Temperature Operation			-5 to + 55°C	-5 to + 55°C	-5 to + 55°C	-5 to + 55°C	-5 to + 55°C	-5 to + 55°C	-5 to + 55°C
Maximum Operating Rate (operations/hr)	AC/DC		10800/3600	3600	3600	3600	3600	3600	3600
Mechanical Life	50 or 60 Hz		30	20	16	16	16	16	16
Auxiliary Contact Block	Front Mounted:		1NO, 1NC, 2NO, 1NO+1NC, 2NC, 4NO, 3NO+1NC, 2NO+2NC, 1NO+3NC, 4NC						
	Side Mounted:		1NO+1NC, 2NO						
Pneumatic Timer	Front Mounted:		On Delay 1NO+1NC (0.1~180 Sec) OFF Delay 1NO+1NC (0.1~180 Sec)						
	Star Delta Timer:		1NO+1NC (0.1~30 Sec)						
Mechanical Interlock	Horizontally Mounted:		AC: TC1-D09~TC1D95 DC: TP1~D09 - TP1-D80						
Surge Suppressor			Varistor AC/DC: 24~48V, 110~240V RC Circuit AC: 24~48V, 110~240V, 380~440V						

VMTEC Common Add - On Accessories

Auxiliary Contact Block (Side mounted)
VMTA8-DN



NO	NC	
2	0	VMTA8-DN20
1	1	VMTA8-DN11

Auxiliary Contact Block (Front mounted)
VMTA1-DN



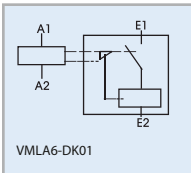
NO	NC	
0	1	VMTA1-DN01
1	0	VMTA1-DN10

Auxiliary Contact Block (Front mounted)
VMTA1-DN

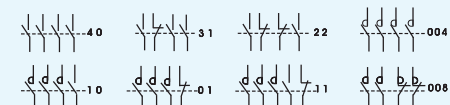


NO	NC	
1	1	VMTA1-DN11
0	2	VMTA1-DN02
2	0	VMTA1-DN20

Latch Add-on Block (Front mounted)
VMLA6-DK01



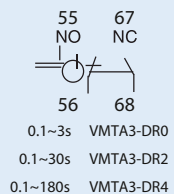
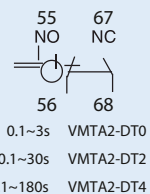
UL CE SAA RoHS Compliant



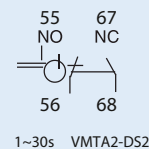
Types	4 Pole	AC DC	VMLC1-F115	VMLC1-F150	VMLC1-F185	VMLC1-F225	VMLC1-F265	VMLC1-F330	VMLC1-F400	VMLC1-F500	VMLC1-F630	VMLC1-F780
			VMLC1-F1154	VMLC1-F1504	VMLC1-F1854	VMLC1-F2254	VMLC1-F2654	VMLC1-F3304	VMLC1-F4004	VMLC1-F5004	VMLC1-F6304	VMLC1-F7804
Rated Thermal Current: I _b , AC-1, 40 °C			200A	250A	275A	315A	350A	400A	500A	700A	1000A	1600A
Main Pole Configuration			4 NO				4 NO		4 NO		4 NO	
Rated Operational Voltage:Ue			1000				1000		1000		1000	
Mounting Position			± 30				± 30		± 30		± 30	
Ambient air temperature operation			- 5 to + 55°C				- 5 to + 55°C		- 5 to + 55°C		- 5 to + 55°C	
Maximum operating rate (operations/hrs) AC/DC			2400				2400		2400		1200	600
Mechanical Life 50 OR 60 Hz												
Auxillary Contact Block			Front Mounted: 1NO, 1NC, 2NO, 1NO+1NC, 2NC, 4NO, 3NO+1NC, 2NO+2NC, 1NO+3NC, 4NC									
			Side Mounted: 1NO+1NC, 2NO									
Pneumatic Timer			Front Mounted: ON Delay 1NO+1NC (0.1~180 Sec) OFF Delay 1NO+1NC (0.1~180 Sec)									
			Star Delta Timer: 1NO+1NC (1~30 Sec)									
Mechanical Interlock			Horizontally Mounted: AC/DC: LC1-F115A-LC1-F630A									
			Vertically Mounted: AC/DC: LC1-F115A-LC1-F780A									
Surge Suppressor			Varistor AC/DC: 24~48V, 110~240V RC Circuit (AC): 24~48V, 110~240V, 380V~440V									

Common Add - On Accessories

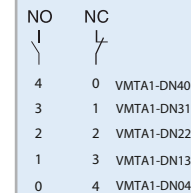
Off Delay Timer Block (Front mounted)
VMTA3-DR2



On Delay Star Delta Timer Block (Front Mounted)
VMTA2-DS2

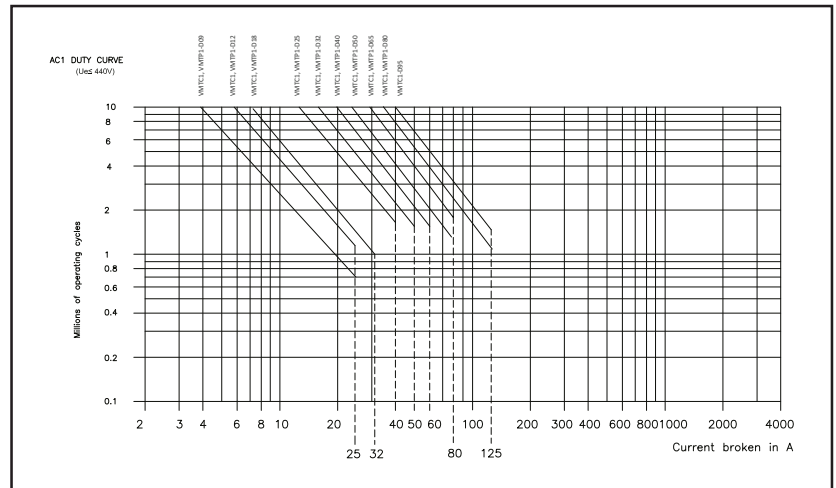


Auxiliary Contact Block (Front mounted)
VMTA1-DN2

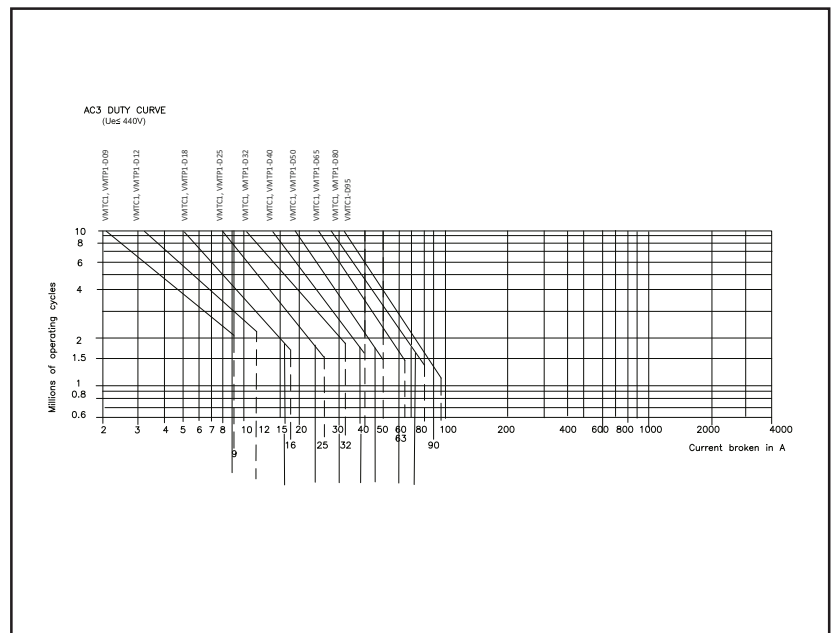


Electrical Life Curve

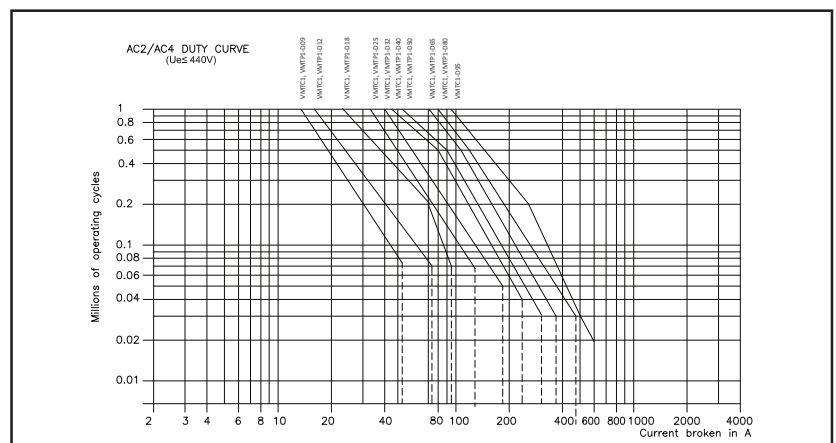
Use in Category AC-1 ($U_e \leq 440V$).
Control of resistive circuits ($\cos \Phi > 0.95$).
The current broken (I_c) in category AC-1 is equal to the current (I_n) normally drawn by the load.



Use in Category AC-3 ($U_e \leq 440V$).
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_n) normally drawn by the load.



Use in Categories AC-2, AC-4 ($U_e \leq 440V$).
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 $6xI_n$. (I_n =rated operational current of the motor).

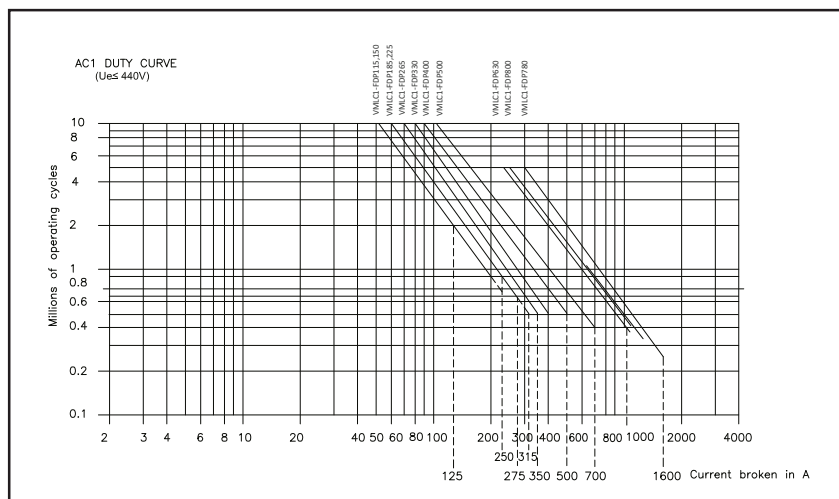


* Product Innovation is a continuous process, hence data given is subject to change without notice

Electrical Life Curve

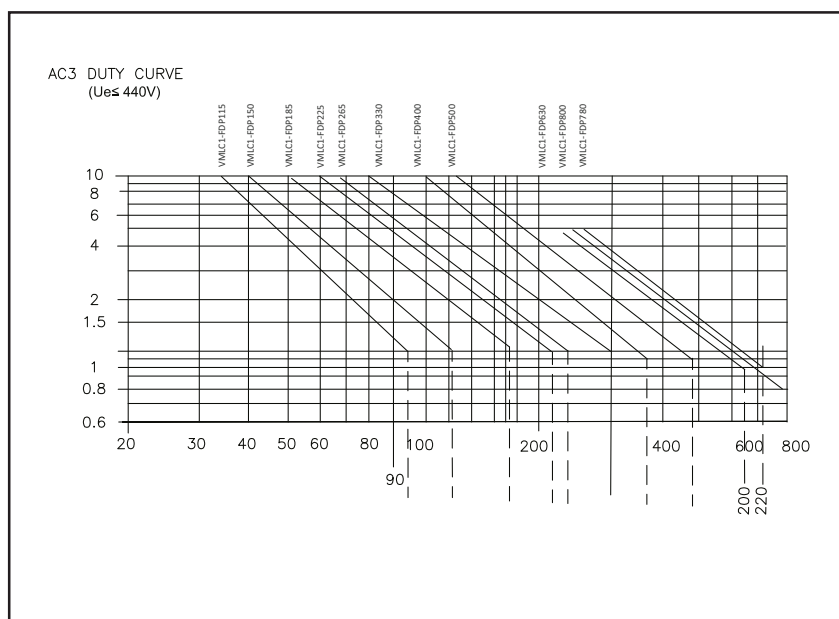
Use in Category AC-1 ($U_e \leq 440V$).

Control of resistive circuits ($\cos \Phi \geq 0.95$).
The current broken (I_b) in category AC-1 is equal to the current (I_n) normally drawn by the load.



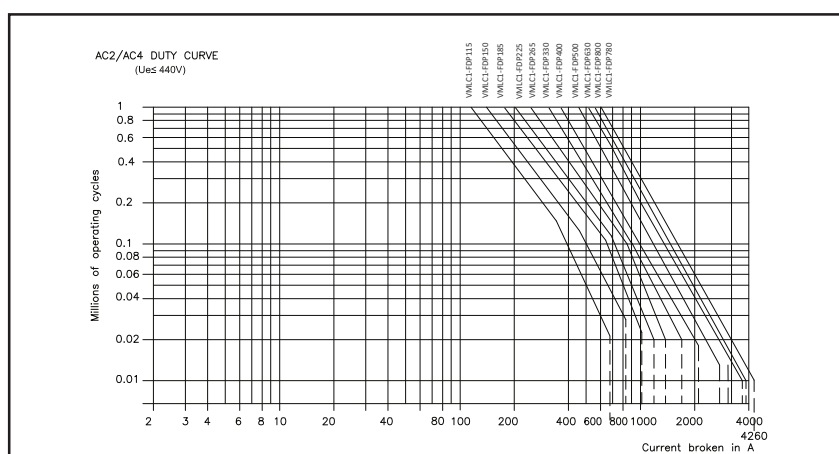
Use in Category AC-3 ($U_e \leq 440V$).

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



Use in Categories AC-2, AC-4 ($U_e \leq 440V$).

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 $6 \times I_n$. (I_n = rated operational current of the motor).



VMtec Thermal Overload Relay provides protection against operational overload & single phasing having prior of site selectable auto or manual facility

Silent Features

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

Specifications

Relay Reference	Relay setting range (A)	Standard power ratings of 3-Phase Motors 50/60Hz, AC3 Category					Back Up		Base Plate* reference
		220V	380V	415V	440V	660V	Fuse Rating		
		KW	KW	KW	KW	KW	aM (A)	g1 (A)	
VMTR2-D09301	0.1 to 0.16	-	-	-	-	-	0.25	2	VMTA7D0964
VMTR2-D09302	0.16 to 0.25	-	-	-	-	-	0.5	2	
VMTR2-D09303	0.25 to 0.4	-	-	-	-	-	1	2	
VMTR2-D09304	0.4 to 0.63	-	-	-	-	0.37	1	2	
VMTR2-D09305	0.63 to 1	-	-	-	-	0.55	2	4	
VMTR2-D09306	1 to 1.6	-	0.37	-	0.55	1.1	2	4	
VMTR2-D093X6	1.25 to 2	-	0.55	0.75	0.75	1.3	4	6	
VMTR2-D09307	1.6 to 2.5	0.37	0.75	1.1	1.1	1.5	4	6	
VMTR2-D09308	2.5 to 4	0.75	1.5	1.5	1.5	3	6	10	
VMTR2-D09310	4 to 6	1.1	2.2	2.2	2.2	4	8	16	
VMTR2-D09312	5.5 to 8	1.5	3	3.7	3.7	5.5	12	20	
VMTR2-D09314	7 to 10	2.2	4	4	4	7.5	12	20	
VMTR2-D12316	9 to 13	3	5.5	5.5	5.5	10	16	25	VMTA7D3264
VMTR2-D18321	12 to 18	4	7.5	9	9	15	20	35	
VMTR2-D25322	17 to 25	5.5	11	11	11	18.5	25	50	
VMTR2-D32353	23 to 32	7.5	15	15	15	-	40	63	
VMTR2-D32355	28 to 36	9	15	18.5	18.5	-	40	80	VMTA7D4064
VMTR2-D40355	30 to 40	10	18.5	22	22	30	40	100	
VMTR2-D65357	37 to 50	11	22	25	25	37	63	100	
VMTR2-D65359	48 to 65	18.5	25	30	30	50	63	100	
VMTR2-D65361	55 to 70	20	30	37	37	55	80	125	
VMTR2-D80363	63 to 80	22	33	40	40	59	80	125	
VMTR2-D95365	80 to 93	25	45	49	50	80	100	160	-
VMLR1-F105	65 to 105	25	51	55	59	90	0.25	160	
VMLR1-F125	80 to 125	30	59	59	63	110	125	200	
VMLR1-F160	100 to 160	45	80	80	90	140	160	250	
VMLR1-F200	125 to 200	55	90	100	110	160	200	315	
VMLR1-F250	160 to 250	63	110	129	140	200	250	400	
VMLR1-F315	200 to 315	80	150	160	160	257	315	500	
VMLR1-F400	250 to 400	110	185	200	220	335	400	630	
VMLR1-F500	315 to 500	140	250	257	280	445	500	800	
VMLR1-F630	400 to 630	180	315	355	375	500	630	800	
*VMLR1-F800	500 to 800	220	400	425	450	—	-	1000	
*VMLR1-F1000	630 to 1000	295	500	500	500	—	-	1250	

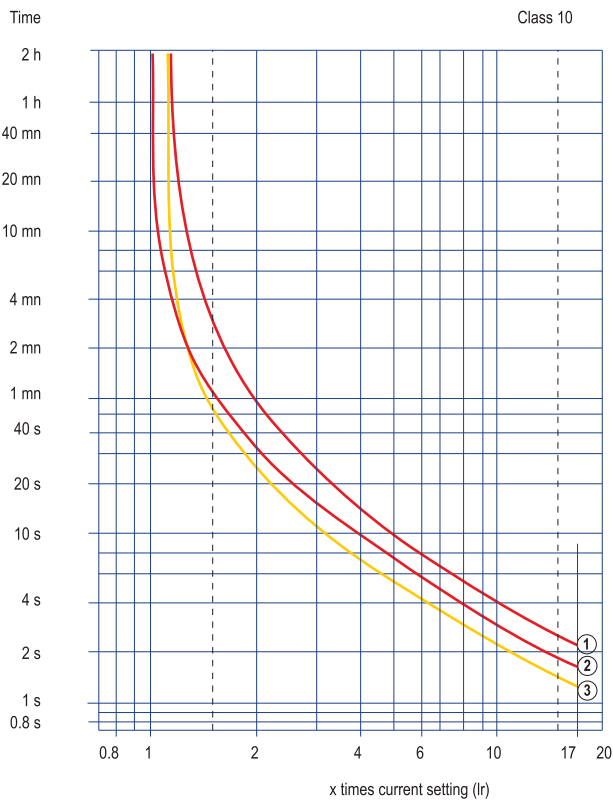
Notes : 1. Protected shrouds for main poles or power poles to be ordered separately for VMLR1 Relays
2. Standard Fault Ratings with VMTR2 Relay.

*UL/VMA not available



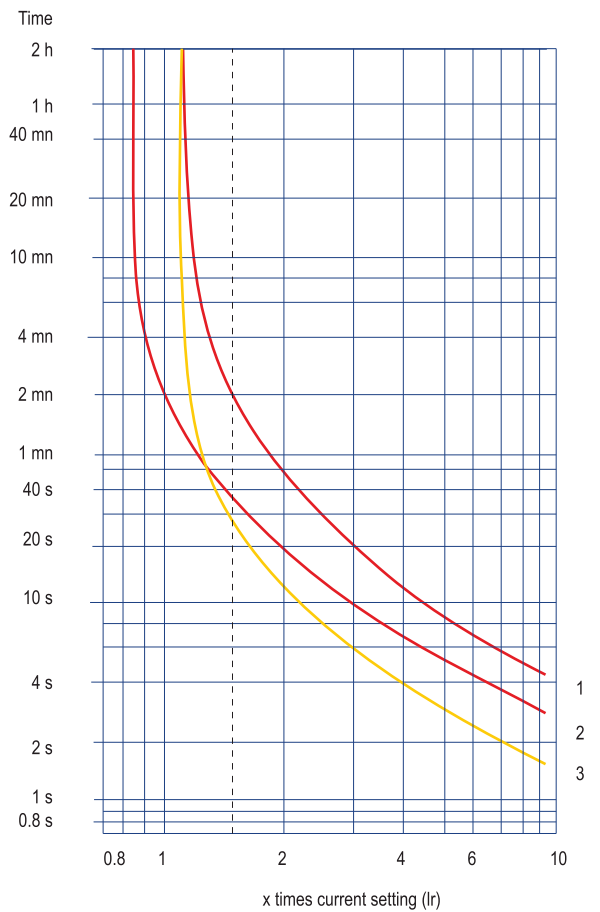
Overload Relay Tripping Curves

VMTR2D09 to D95

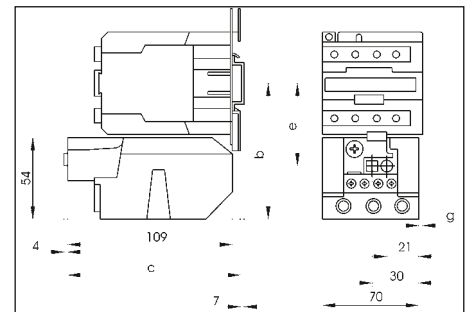
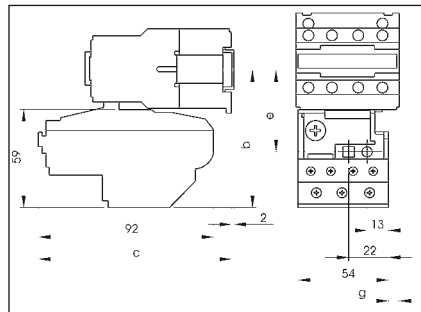
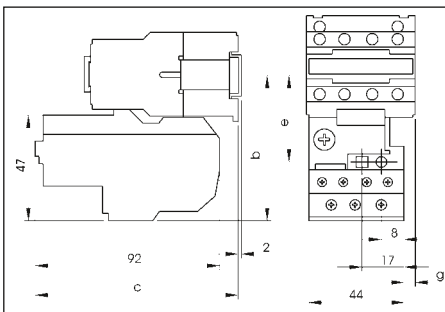


- ① Balance operation, 3 Phase, from cold state
- ② Balance operation, 2 Phase, from cold state
- ③ Balance operation, 3 Phase, after a long period at the set current (hot state)

VMLR1F(M)105 to F1000



Overload Relay Dimensions



VMTR2D09301~D25322

Mounting With	b	c	e	g
VMTC1D09, D12, D18	81	98	50	0
VMTP1DC09, DC12				
VMTC1D25/VMTP1DC25	86	108	55	10.7
VMTC1D32	86	109	55	8.1
VMTP1D09, D12, D18	81	133	50	0
VMTP1D25	86	152	55	10.7
VMTP1D32	86	153	55	8.1

VMTR2D32353~32355

Mounting With	b	c	e	g
VMTC1D25/VMTP1DC25	97.5	98	60	1.5
VMTC1D32	97.5	98	60	0.5
VMTP1D25	97.5	155	60	1.5
VMTP1D32	97.5	155	60	0.5

VMTR2D09301~D25322

Mounting With	b	c	e	g
VMTC1D40	111	119	72.4	4.5
VMTC1D50	111	119	72.4	4.5
VMTC1D65	111	119	72.4	4.5
VMTC1D80	115.5	123.4	76.9	9.5
VMTC1D95	115.5	123.4	76.9	9.5
VMTP1D40	111	176	72.4	4.5
VMTP1D50	111	176	72.4	4.5
VMTP1D65	111	176	72.4	4.5
VMTP1D80	115.5	179.4	76.9	9.5