



NEW 써지방지형출시



본사 및 공장 361-301
충북 청주시 흥덕구 봉명동 417-45
TEL:(043)-272-6651 FAX:(043)-272-6650
417-45, Bong Myung-Dong, Heung Duk-Gu, Cheong Ju-Shi, Choong Buk, Korea
TEL:+82-43-272-6651 FAX:+82-43-272-6650
http://www.goodymt.com http://www.goodymt.co.kr
E-mail:ymirt@chollian.net

POWER RELAY SELECTION GUIDE

<http://www.goodymt.co.kr>



대리점



We would like to gladly introduce our company. We, the Y. M. Tech, largely specialize in designing, manufacturing, and supplying relays (PCB relays, mediocre relays, and others) importantly used in the electricity, electronic and communication industries.

We make our full effort to manufacture high quality products and to give you great service.

Based on our relay-related R&D and technologies built up for 15~20 years, all of our employees do best to produce and provide a variety of high quality products.

Please do not hesitate to contact me if you have any questions and inquiries about producing and developing special relays and if you need relay-related materials.

We, the Y. M. Tech promise to do our best to strive for unique and epoch-making development of relays and continue to carry out R&D to be lead the relay-related industry.

YM YMTech 와이엠텍

DESIGNED BY CHA/DAN/02-885-8191

2001. 1. 4-02

와이엠텍은 이런 회사입니다.

Y. M. Tech은 산업전기, 전자, 정보통신산업등 여러 분야에서 매우 중요한 역할을 하는 부품(PCB RELAY, 범용RELY등)을 설계, 제조, 공급하는 RELAY전문 제조업체로서 고객을 섬기는 마음으로 제품을 제조, 공급합니다.

수년간의 연구개발과 축적된 기술(RELAY 경험 15~20년)을 바탕으로 고품질의 다양한 제품을 생산 및 공급하기위하여 전사원이 협력하고 있습니다.

특수 RELAY의 개발문의 및 RELAY기술자료 필요시 연락주십시오.

저희 Y.M.Tech만의 독자적이고 획기적인 RELAY제품개발 및 기술개발에 끊임없이 노력하여, RELAY산업분야의 선두주자가 될 것을 약속드립니다.

Thank you for your attention to us.

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0365

● 제품 일람표 RELAY SELECTION GUIDE

TYPE OF RELAY		YM 2	YM 4
		SPECIFICATIONS	
SIZE		21.5 × 28 × 36	21.5 × 28 × 36
Contact ratings	Contact material	Silver alloy	Silver alloy(Gold plated)
	Contact form	2C	4C
	Max. contact current(A)	5A	3A
	Min. permissible load (mA)	5VDC 1mA	1VDC 1mA
	Resistive load (cos φ =1)	5A 220VAC 5A 24VDC	3A 220VAC 3A 24VDC
Coil rating	Rated voltage	AC 6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240 DC 6, 12, 24, 48, 100/110, 125	
	Nominal power consumption	DC 0.9W AC 0.9~1.2VA	DC 0.9W AC 0.9~1.2VA
Expected Life (mine operations)	Mechanical(Min)	AC : 5 × 10 ⁷ , DC : 10 ⁸ (Switching frequency : 18,000 time per hour)	
	Electrical(Min)	5 × 10 ⁶	2 × 10 ⁶
Dielectric Strength	Coil - Contacts	2,000 VAC, for 1 minute between coil and contacts	
	Contact - Contact	1,000 VAC, for 1 minute between contacts	
Ambient temperature		-55 ~ +60°C	
Classification of type	Lamp operating display	○	○
	Interior diodes	○	○
	Lamp & Interior diodes	○	○
	Lamp & interior C, R	○	○
	Lamp & interior varistors		
Terminal arrangement	Plug - in	○	○
	PCB board	○	○

TYPE OF RELAY		YL 2	YL 4
		SPECIFICATIONS	
SIZE		21.5 × 28 × 36	41.5 × 28 × 36
Contact ratings	Contact material	AgCdO	AgCdO
	Contact form	2C	4C
	Max. contact current(A)	10A	10A
	Min. permissible load (mA)	5VDC 100mA	5VDC 100mA
	Resistive load (cos φ =1)	10A 110VAC 10A 24VDC	10A 110VAC 10A 24VDC
Coil rating	Rated voltage	AC 6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240 DC 6, 12, 24, 48, 100/110, 125	
	Nominal power consumption	DC 0.9W AC 0.9 ~ 1.2VA(60Hz)	DC 1.5W AC 1.95 ~ 2.5VA(60Hz)
Expected Life (mine operations)	Mechanical(Min)	AC : 5 × 10 ⁷ , DC : 10 ⁸ (Switching frequency : 18,000 time per hour)	
	Electrical(Min)	5 × 10 ⁶	2 × 10 ⁶
Dielectric strength	Coil - Contacts	2,000 VAC, for 1 minute between coil and contacts	
	Contact - Contact	1,000 VAC, for 1 minute between contacts	
Ambient temperature		-25 ~ +40°C	
Classification of type	Lamp operating display	○	○
	Interior diodes	○	○
	Lamp & Interior diodes	○	○
	Lamp & interior C, R	○	○
	Lamp & interior varistors		○
Terminal arrangement	Plug - in	○	○
	PCB board	○	○

YM형 미니파워릴레이 YM Type Mini Power Relay

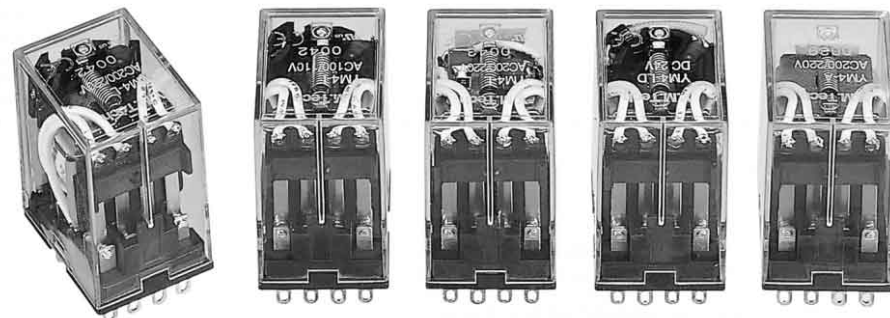
시퀀스에서 파워까지 가장 널리 쓰이는 범용릴레이로 안정된 긴수명, 접촉신뢰성 향상 실현

- 동작표시등 내장형, 다이오드내장형(DC 써지방지회로), C-R회로내장형(AC 써지방지회로)등 풍부한 시리즈의 제품구비.
- 코일조작은 AC4정격(AC 100/110, AC 110/120, AC200/220, AC 220/240), DC2정격(DC 100/110)
- 4극은 아크를 차단하는 아크베리어 부착
- 내전압 AC2,000V(1분간)견딤.
- 접점 금도금(4극)으로 미소부하 및 접촉신뢰성 향상.

Mediocre Relays from sequences to power with very long life and high contact reliability

- Our products are equipped with a various series of types with LED operating display lamps, ones with interior diodes, C-R(AC surge suppressos)
- Our products' coils are Ac4 rated(AC 100/110, 110/120, 200/220, 220/240), and DC2 rated(DC100/110)
- Our products with four poles are equipped with Arc Barrier
- Our products can endure the voltage of AC 2,000V(for 1 minute)
- Our products's contacts are gold plated to increase even small amount of load and contact reliability

YM TYPE SERIES



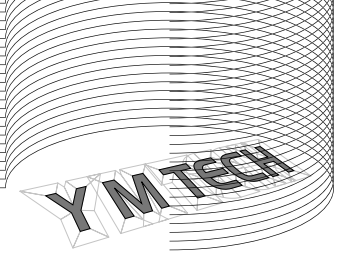
■ 종류 Kinds

Classification	Poles	2 Poles		4 Poles	
		Rated voltage	Mode	Rated voltage	Mode
Basic type (YM2-A, YM4-A)		AC6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240	YM2-A	AC6, 12, 24, 50, 100/110, 110/120, 200/220, 220, 240	YM4-A
		DC6, 12, 24, 48, 100/110, 125		DC6, 12, 24, 48, 100/110, 125	
LED operating display lamps (YM2-L, YM4-L)		AC6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240	YM2-L	AC6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240	YM4-L
		DC6, 12, 24, 48, 100/110, 125		DC6, 12, 24, 48, 100/110, 125	
Interior diodes (YM2-D, YM4-D)		DC6, 12, 24, 48, 100/110	YM2-D	DC6, 12, 24, 48, 100/110	YM4-D
LED operating display lamps and interior diodes (YM2-LD, YM4-LD)		DC6, 12, 24, 48, 100/110, 125	YM2-LD	DC6, 12, 24, 48, 100/110, 125	YM4-LD
LED operating display lamps and interior C-R (YM2-LCD, YM4-LCR)		AC6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240	YM2-LCR	AC6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240	YM4-LCR

■ 명명 분류 Ordering Information

YM	4	-	A
Mini Power Relay	Poles		Classification by type
YM Type	2 Double poles		A Basic type
	4 4 poles		L LED operating display lamps
			D Interior diodes
			LD LED display & interior diodes
			LCR LED display & interior C-R





■ 정격 Rating

기본형, 동작표시등 내장형 Basic types and interior types with operat

조작코일 Coil Ratings

Nominal Voltage(V)	Item	Nominal current (mA)		Coil	Inductance coil(H)		Pick-up voltage(V)	Drop-out voltage(V)	Max. voltage(V)	Coil Power(VA,W) dissipation
		50Hz	60Hz	resistance (Ω)	no operation	operation				
AC	6	214.1	183	12.2	0.04	0.08	80 max	30 min	110 max	Approx 1.0~1.2(VA) (60Hz)
	12	106.5	91	46	0.17	0.33				
	24	53.8	46	180	0.69	1.30				
	50	25.7	22	788	3.22	5.66				
	100/110	11.7/12.9	10/11	3,750	14.54	24.60				Approx 0.9~1.1(VA) (60Hz)
	110/120	9.9/10.8	8.4/9.2	4,430	19.20	32.10				
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
	220/240	4.8/5.3	4.2/4.6	18,790	83.50	136.40				
DC	6	150		40	0.17	0.33	10 min			Approx 0.9W
	12	75		160	0.73	1.37				
	24	36.9		650	3.20	5.72				
	48	18.5		2,600	10.60	21.00				
	100/110	9.1/10		11,000	45.60	86.20				

- 주) 1. 정격전류, 코일저항은 코일온도가 +20°C에서의 수치로 공차는 AC 정격전류+15%, -20%, DC 코일저항은±15% 입니다.
 2. AC코일저항, 인덕턴스는 참고치입니다.(60Hz)
 3. 동작특성 코일온도는 20°C에서의 수치입니다.

Notes : 1. Rates current, and coil resistance are measured at +20°C.
 Differences of AC rated current are +15%, and -20%, and DC coil resistance ±15%.
 2. AC coil resistance and Inductance coil are reference data (60Hz).
 3. Performance characteristic coil temperature is measured at 20°C.

■ 개폐부(접점부) Contact Ratings

Item	Type	2 Pole		4 Pole	
		Resistive load (cos ϕ =1)	Inductive load (cos ϕ =0.4, L/R = 7ms)	Resistive load (cos ϕ =1)	Inductive load (cos ϕ =0.4, L/R = 7ms)
Rated load		AC 220V 5A DC 24V 5A	AC 220V 2A DC 24V 2A	AC 220V 3A DC 24V 3A	AC 220V 0.8A DC 24V 1.5A
Carry current		5A		3A	
Max. Contact voltage		AC 250V DC 125V		AC 250V DC 125V	
Max. Switching current		5A		3A	
Max. Switching capacity		1,100VA 120W	440VA 48W	660VA 72W	176VA 36W
Min. Permissible load (p level reference)		DC 5V 1mA		DC 1V 1mA	
Operatating ambient temperature		- 55 ~ +60°C (In case, it should not be frozen)			
Humidity		35% ~ 85% RH			

■ 성능 Characteristics

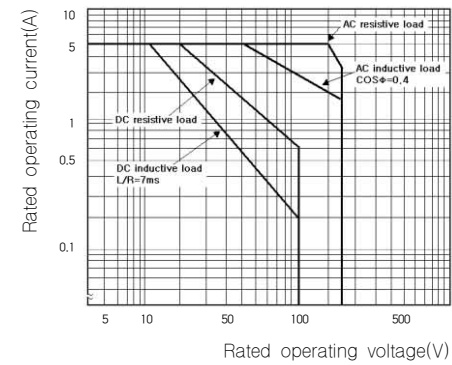
Items	Kinds	Basic pattern	LED operating display lamps and interior diodes
Contact resistance		Max. 50m Ω (by voltage drop DC 6V 1A)	
Operating time(at nominal voltage)		Max. 20ms	
Release time(at nominal voltage)		Max. 20ms	
Max. switching frequency	Mechanical	18,000/per hour	
	Electical	1,800/per hour (rated current)	
Insulation resistance		Min. 100M Ω (DC 500V Megger)	
Dielectric strength		AC 2000V (50/60Hz) for 1 minute (1000V between same pole contacts)	
Vibration resistance	Functional	10 to 50Hz at double amplitude of 1.0mm	
	Destructive	10 to 50Hz at double amplitude of 1.0mm	
Shock resistance	Functional	1,000m/s ² (about 100G)	
	Destructive	200m/s ² (about 20G)	
Life expctancy	Mechanical	Min. AC : 50,000,000 operations, DC : 100,000,000 operations (switching frequency : 18,000 times per hour)	
	Electical	Min. 2 poles : 500,000 operations, 4 poles : 200,000 operations (switching frequency : 1,800 times rated load)	

■ 실무하 수명시험 Actual loadind life test

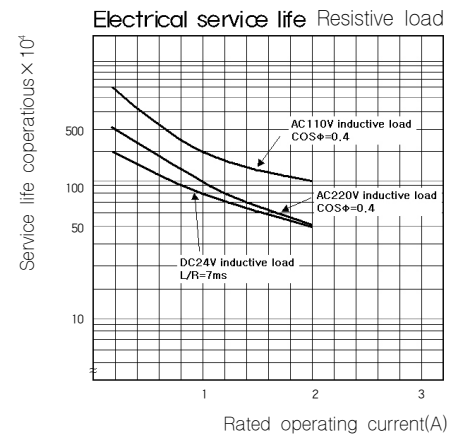
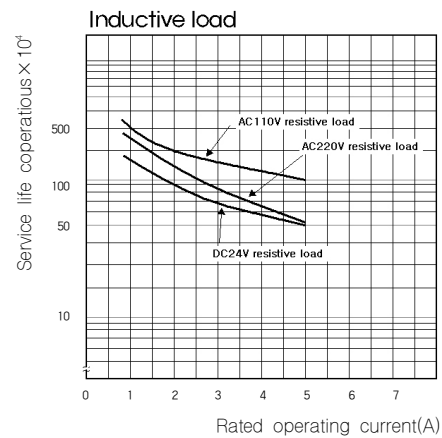
Type	Nominal voltage(V)	Kinds of loads	Conditions	Frequency	Electral life (Min. 10,000 times)
YM2	AC110V	AC motor	1 ϕ 50W input 2.8A, normal 0.4A	ON : 2 sec OFF : 30 sec	10
			1 ϕ 50W input 1.6A, normal 1A	ON : 1 sec OFF : 30 sec	30
		DC Solenoid	24W, normal 1A	ON : 1.5 sec OFF : 1.5 sec	40
	DC24V	AC lamp	300W input 50A, normal 3A	ON : 5 sec OFF : 55 sec	5.5
YM4	AC110V	AC Solenoid	50VA input 2, normal 0.7A	ON : 1 sec OFF : 3 sec	25
		DC Mag. Contactor	25W L/R = 40ms normal 0.2A		
		AC Mag. Contactor	35VA input 1.5A, normal 0.35A		50
	DC24V	DC Solenoid	40W L/R = 10ms normal 1.6A	ON : 0.5 sec OFF : 1.5 sec	50
30W L/R = 10ms normal 0.34A			ON : 0.5 sec OFF : 1.5 sec	60	

Characteristic Data (YM2 Type)

■ 개폐용량의 최대치 Max. switching capacity

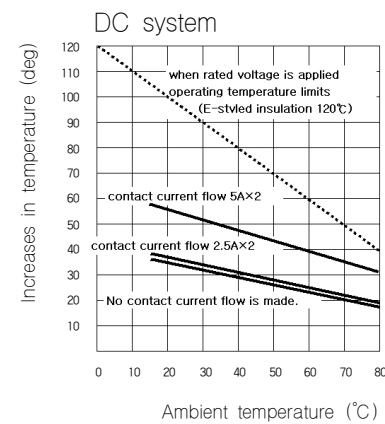
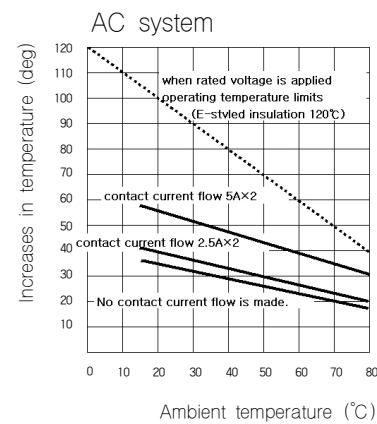


■ 수명곡선 Life curve



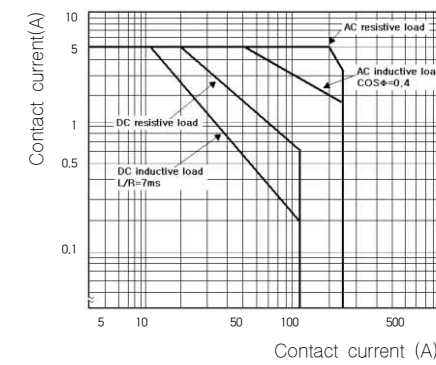
■ 사용주위온도와 코일온도상승

Increases in operating ambient temperature & coil temperature

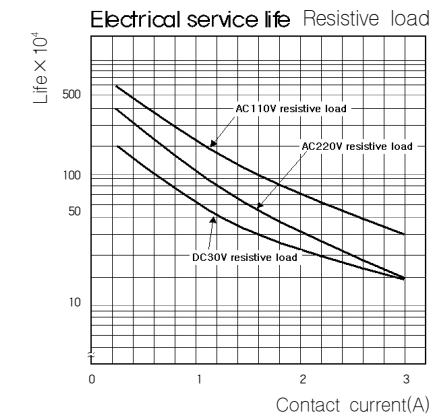
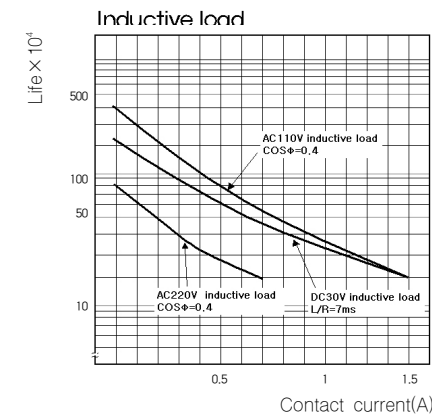


Performance Characteristic curve (YM4 Type)

■ 개폐용량의 최대치 Max. switching capacity

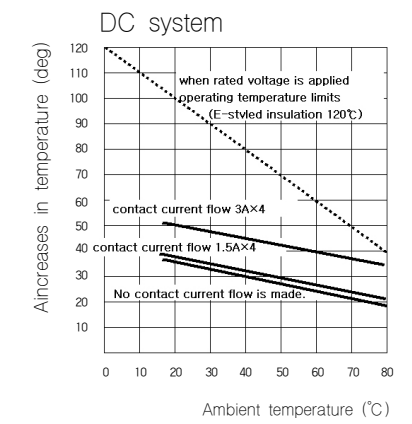
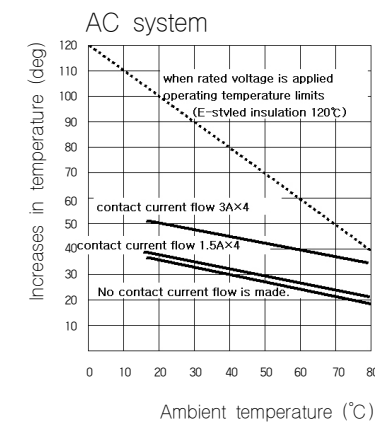


■ 수명곡선 Life curve

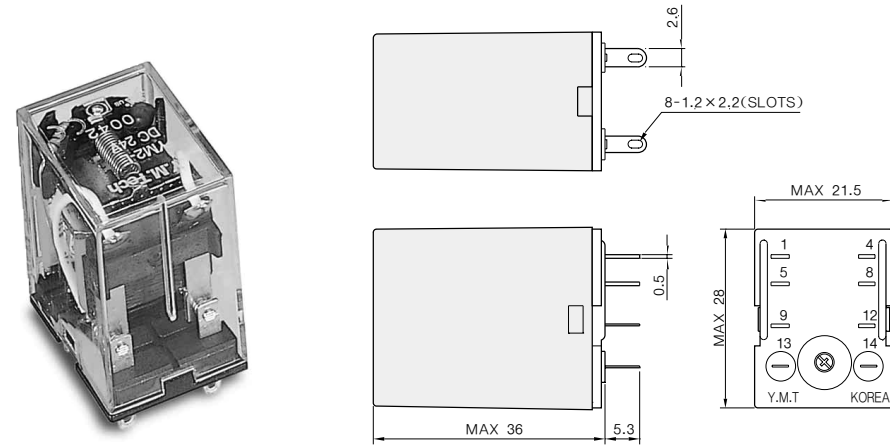


■ 사용주위온도와 코일온도상승

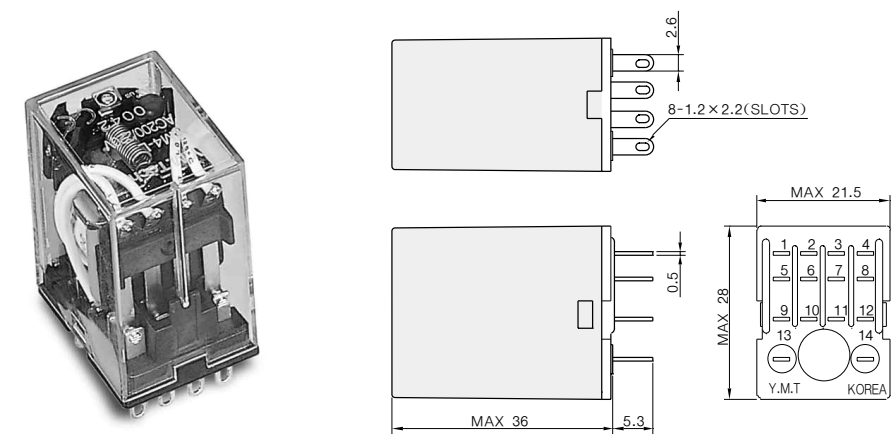
Increases in operating ambient temperature & coil temperature



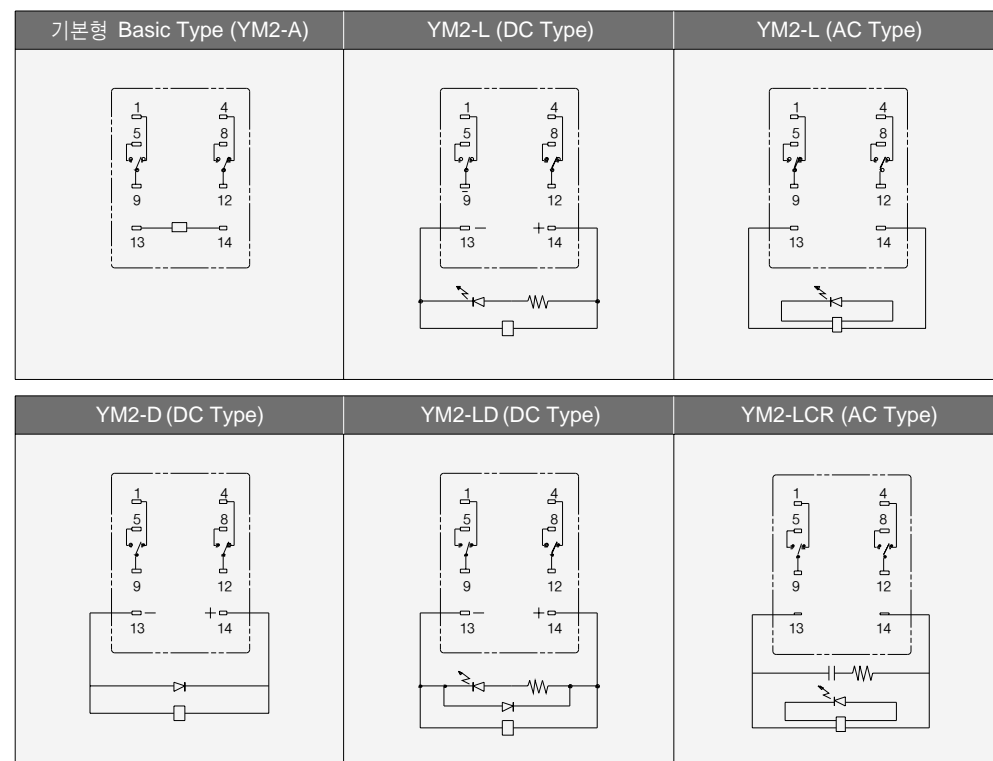
■ 외형치수 External sizes (YM2 TYPE)



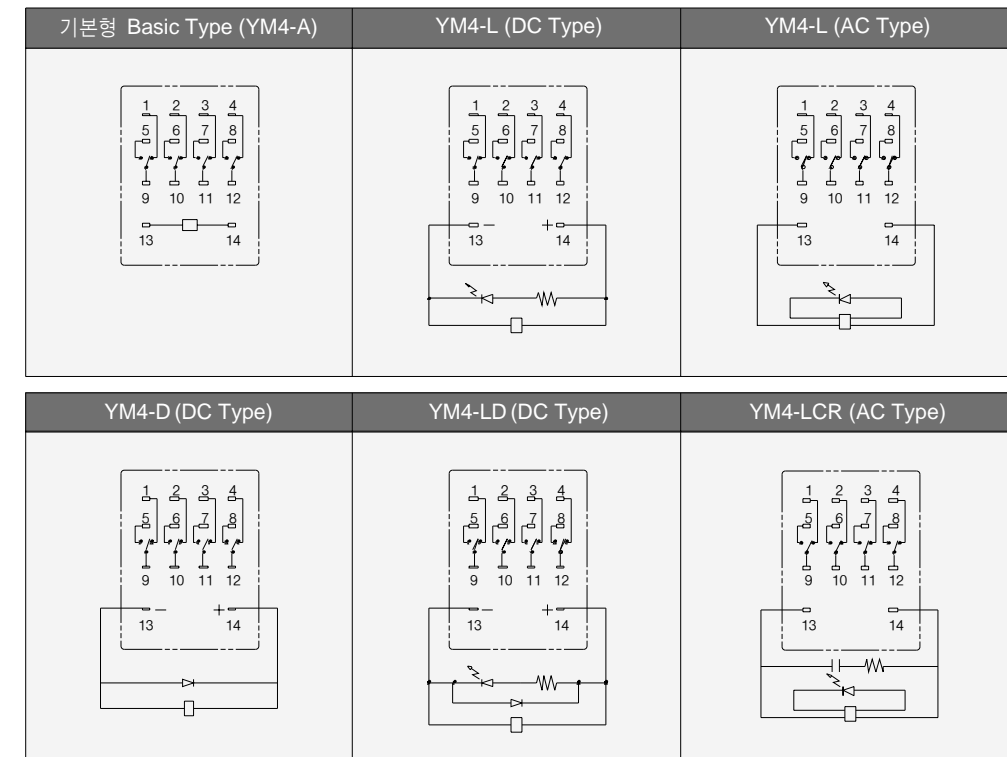
■ 외형치수 External sizes (YM4 TYPE)



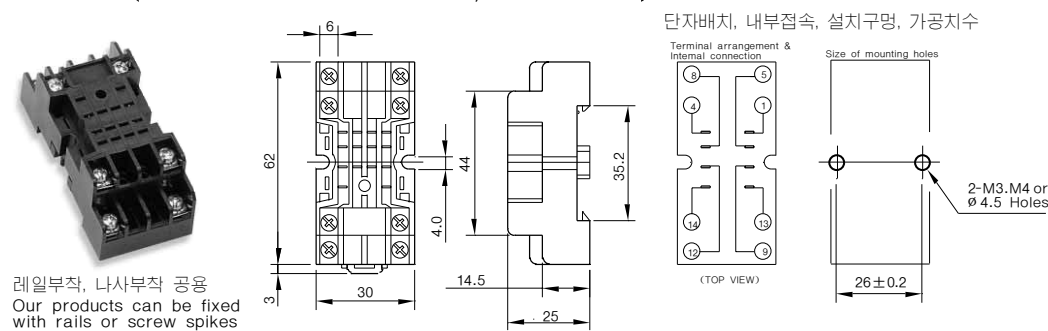
■ 단자배치 및 내부접속도 Terminal arrangement plan & internal connection diagram



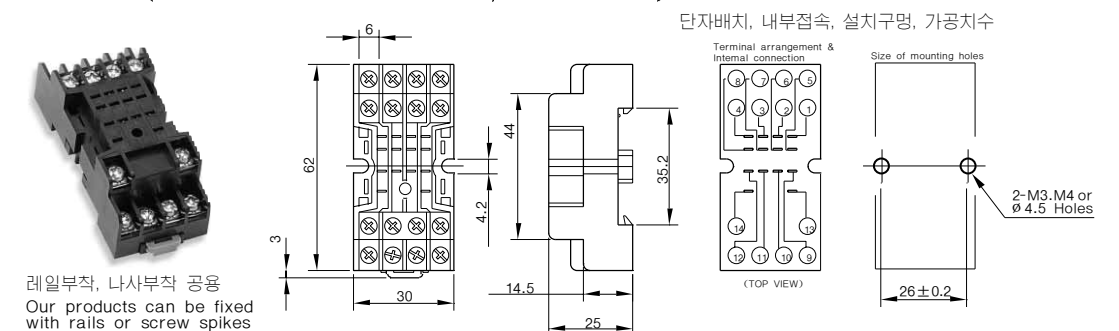
■ 단자배치 및 내부접속도 Terminal arrangement plan & internal connection diagram

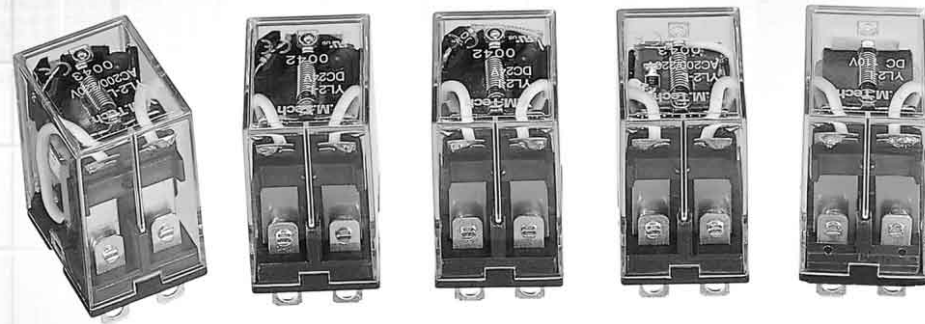
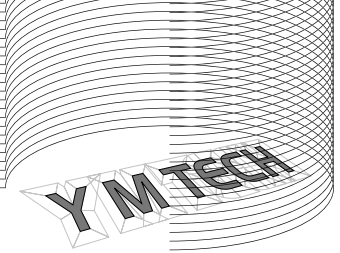


■ 소켓 Socket (표면접속 Front connection, YMT-08MF)



■ 소켓 Socket (표면접속 Front connection, YMT-14MF)





YL2 TYPE SERIES

YL2형 바이파워릴레이 YL2 Type By Power Relay

시퀀스에서 파워까지(10A) 개폐가능한 소형범용 릴레이

- LED동작표시등 내장형, 다이오드내장형, C-R회로등 풍부한 시리즈의 제품구비.
- 코일조작은 AC4정격(AC 100/110, AC 110/120, AC200/220, AC 220/240), DC2정격(DC 100/110)
- 내용착성이 우수한 특수합금 접점(AgCdO)을 사용하고 있습니다.
- 내전압AC2,000V(1분간)견딤.
- 아크를 차단하는 차단판이 부착되어 있습니다.

Mediocre relays from sequences to powers (10A), which can be switched.

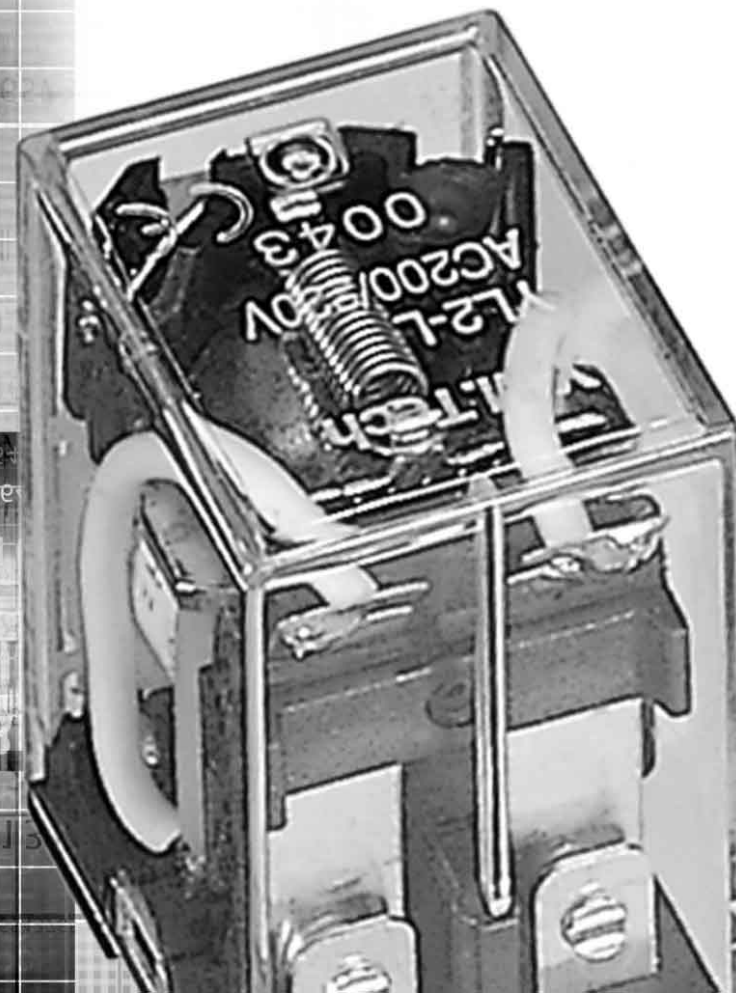
- Our products are equipped with a various series of types such as LED operating display lamps, C-R and interior diodes.
- Our products'coils are AC4 rated (AC100/110,AC110/120, AC200/220,AC220/240),and DC2 rated(DC100/110).
- Our products'contacts are made with alloy(AgCdO), which excels at anti-fusion
- Our products can endure the withstand voltage of AC 2,000V(for 1 minute).
- Our products are equipped with arc-barriers.

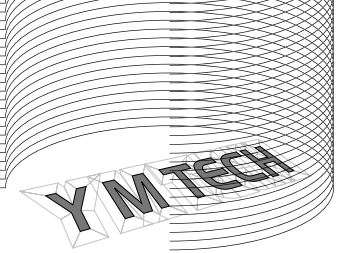
■ 종류 Kinds

Classification	Poles	2 Poles	Model
		Rated voltage	
Basic type (YL2-A)		AC 6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240 DC6, 12, 24, 48, 100/110, 125	YL2-A
LED operating display lamps (YL2-L)		AC 6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240 DC6, 12, 24, 48, 100/110, 125	YL2-L
Interior diodes (Y2-D)		DC 6, 12, 24, 48, 100/110, 125	YL2-D
LED operating display lamps and interior diodes (YL2-LD)		DC 6, 12, 24, 48, 100/110, 125	YL2-LD
LED operating display lamps and interior C-R (YL2-LCR)		AC 6, 12, 24, 50, 100/110, 110/120, 200/220, 220/240	YL2-LCR

■ 명명 분류 Ordering Information

YL	2	-	L
⋮	⋮		⋮
Mini Power Relay	Poles		Classification by type
YL Type	2 Double poles		A Basic type
			L LED operating display lamps
			D Interior diodes
			LD LED operating display lamps & interior diodes
			LCR LED operating display lamps & interior C-R





■ 정격 Rating

기본형, 동작표시등내장형 Basic types and interior types with operating display lamps

조작코일 Coil Ratings

Nominal voltage(V)	Items	Nominal current (mA)		Coil resistance (Ω)	Inductance coil(H)		Pick-up voltage (V)	Drop-out voltage (V)	Max. voltage (V)	Coil Power(VA,W) dissipation
		50Hz	60Hz		no operation	operation				
AC	6	214.1	183	12.2	0.04	0.08	80% max	30% min	110% max	Approx 1.0~1.2(VA) (60Hz)
	12	106.5	91	46	0.17	0.33				
	24	53.8	46	180	0.69	1.30				
	50	25.7	22	788	3.22	5.66				
	100/110	11.7/12.9	10/11	3,750	14.54	24.60				Approx 0.9~1.1(VA) (60Hz)
	110/120	9.9/10.8	8.4/9.2	4,430	19.20	32.10				
	200/220	6.2/6.8	5.3/5.8	12,950	54.75	94.07				
	220/240	4.8/5.3	4.2/4.6	18,790	83.50	136.40				
DC	6	150		40	0.16	0.33	10% min			Approx 0.9W
	12	75		160	0.73	1.37				
	24	36.9		650	3.20	5.72				
	48	18.5		2,600	10.60	21.00				
	100/110	9.1/10		11,000	45.60	86.20				

- 주) 1. 정격전류, 코일저항은 코일온도가 +20°C에서의 수치로 공차는 AC 정격전류 +15%, -20%, DC 코일저항은 ±15% 입니다.
 2. AC코일저항, 인덕턴스는 참고치입니다.(60Hz)
 3. 동작특성 코일온도는 20°C에서의 수치입니다.

- Notes : 1. Rates current, and coil resistance are measured at +20°C.
 Differences of AC rated current are +15%, and -20%, and DC coil resistance ±15%.
 2. AC coil resistance and Inductance coil are reference data (60Hz).
 3. Performance characteristic coil temperature is measured at 20°C.

■ 개폐부(접점부) Contact Ratings

Items	Type	2 Pole	
		Resistive load (cos φ = 1)	Inductive load (cos φ = 0.4, L/R = 7ms)
Rated load		AC 110V 10A DC 24V 10A	AC 110V 7.5A DC 24V 5A
Carry current		10A	
Max. contact voltage		AC 250V, DC 125V	
Max. switching current		10A	
Max. switching capacity		1,100VA 240W	825VA 120W
Min. permissible load (p-level reference)		DC 5V 100mA	
Operating ambient temperature		Basic types at -25 ~ +55°C (In case, it should not be frozen)	
Operating ambient Humidity		35 ~ 85% RH	

- Ⓢ LED동작표시등내장형, 다이오드내장형, 동작표시등 및 다이오드내장형.C-R회로내장형의사용온도-25~+40°C
 Ⓢ Operating temperature of interior types with LED operating display lamps, the ones with interior diodes, C-R, and the ones with LED operating display lamps and interior diodes is (-25 ~ +40)

■ 성능 Characteristics

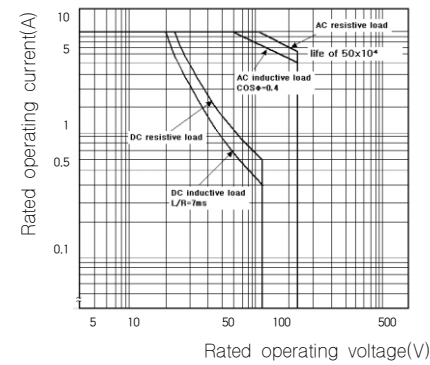
Items	Kinds	Basic types & types LED working display lamps, C-R and interior diodes
Contact Resistance		Max. 50 mΩ (by voltage drop DC 6V 1A)
Operating time (at nominal voltage)		Max. 25ms (20°C)
Release time (at nominal voltage)		Max. 25ms (20°C)
Max. switching frequency	Mechanical	18,000/per hour
	Electical	1,800/per hour (rated current)
Insulation resistance		Min. 100MΩ (DC 500V Megger)
Dielectric strength		AC 2000V (50/60Hz) for 1 minute (1000V between same pole contacts)
Vibration resistance	Functional	10 to 50Hz at double amplitude of 1.0mm
	Destructive	10 to 50Hz at double amplitude of 1.0mm
Shock resistance	Functional	1,000m/s² (about 100G)
	Destructive	200m/s² (about 20G)
Life expectancy	Mechanical	Min. AC : 50,000,000 operations, DC : 100,000,000 operations (switching frequency : 18,000 times per hour)
	Electical	Min. : 500,000 operations (switching frequency : 1,800 times rated load)

■ 실무하수명시험 Actual loadind life test

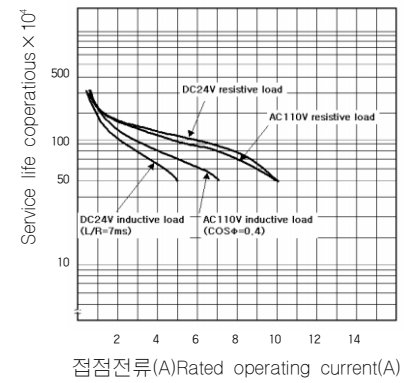
Items	Kinds	YL2-A AC100 / 110V		
		Conditions	Switching frequencies	Electrical life (over 10,000 times)
AC Motors		AC 110V, 1 φ 200W input : 25A, normal 5A	ON : 10 seconds OFF : 50 seconds	20
AC Lamps		AC 110V, 1 φ 300W input : 51A, normal 3A	ON : 5 seconds OFF : 55 seconds	8
Condensors (2,000μF)		DC 24V input : 50A, normal 1A DC 24V input : 20A, normal 1A	ON : 1 seconds	1
			OFF : 15 seconds	15
AC Solenoid		50VA input : 2.5A, normal 0.25A	ON : 1 seconds	100
			100VA input : 5A, normal 0.5A	OFF : 2 seconds

Characteristic Data (YL2 Type)

■ 개폐 용량의 최대치 Max. switching capacity

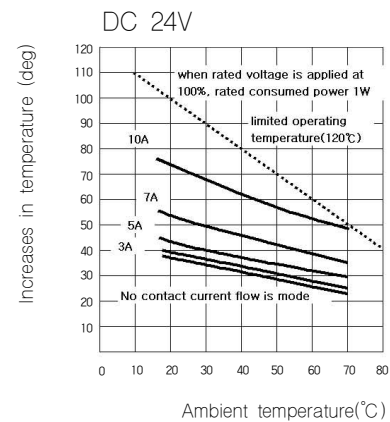
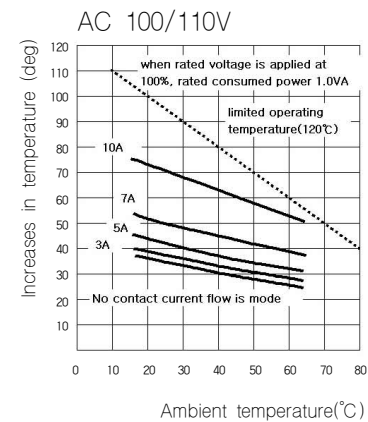


■ 수명곡선 Life curve

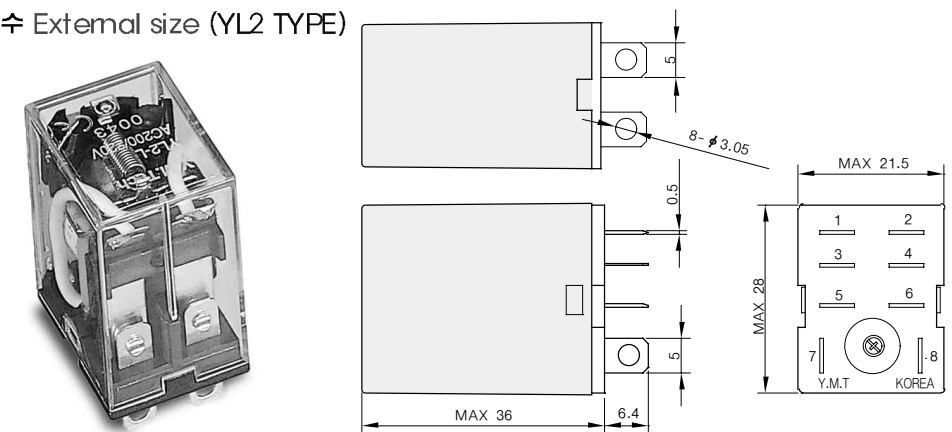


■ 사용주위온도와 코일온도 상승

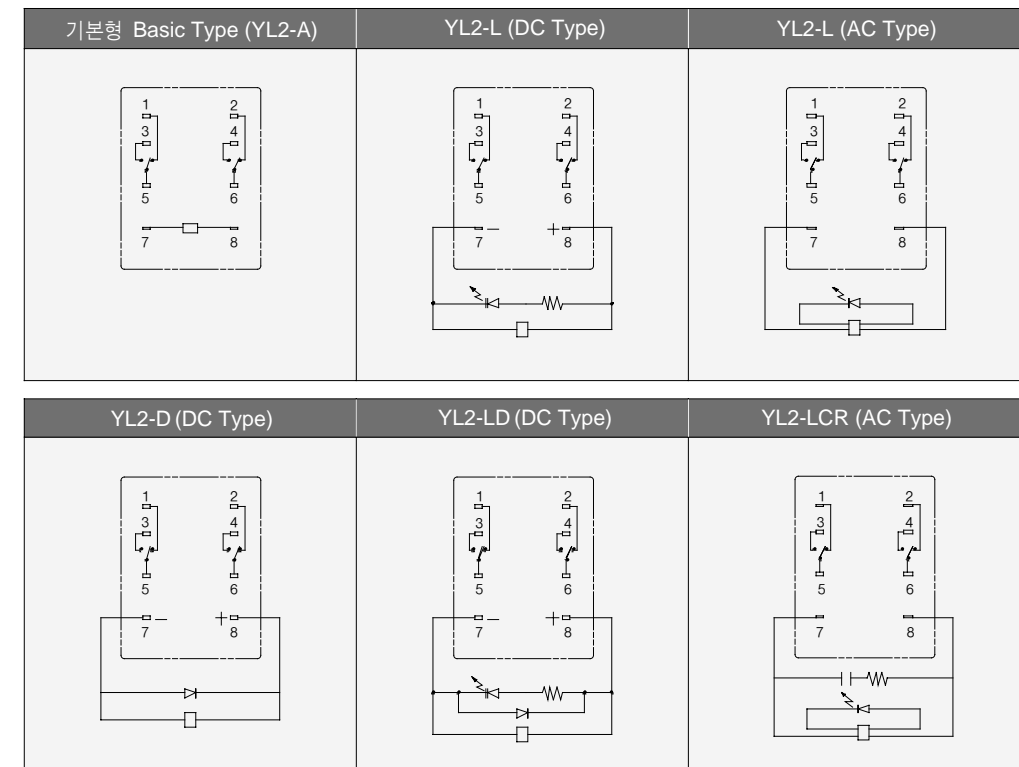
Increases in operating ambient temperature & coil temperatur



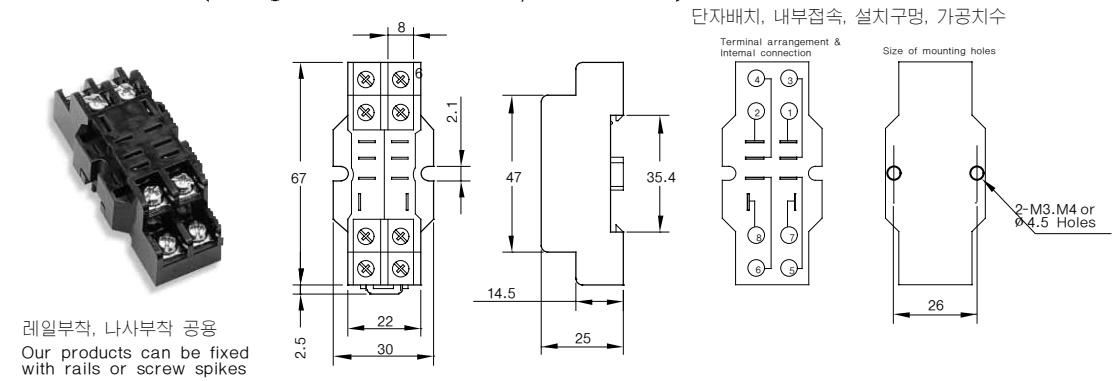
■ 외형치수 External size (YL2 TYPE)



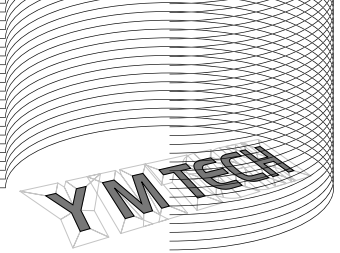
■ 단자배치 및 내부접속도 Terminal arrangement plan & internal connection diagram



■ 소켓 Socket (표면형 Front connection, YMT-08LF)



레일부착, 나사부착 공용
Our products can be fixed with rails or screw spikes



YL4 TYPE SERIES

YL4형 바이파워릴레이 YL4 Type By Power Relay

시퀀스에서 파워까지 4극 10(A)개폐가능한 소형범용 릴레이

- LED동작표시등 내장형, 다이오드내장형, 바리스터, C-R회로내장형등(써지방지회로 내장)풍부한 시리즈 제품구비.
- 코일조작은 AC4정격(AC 100/110, AC200/220V), DC 2정격(DC100/110V)
- 내용착성이 우수한 특수합금 접점(AgCdO)을 사용하고 있습니다.
- 내전압AC2,000V(1분간)
- 4극 아크 차단용 아크베리어 부착.

Mediocre relays from sequences to powers, which can switch 10(A) with 4 poles.

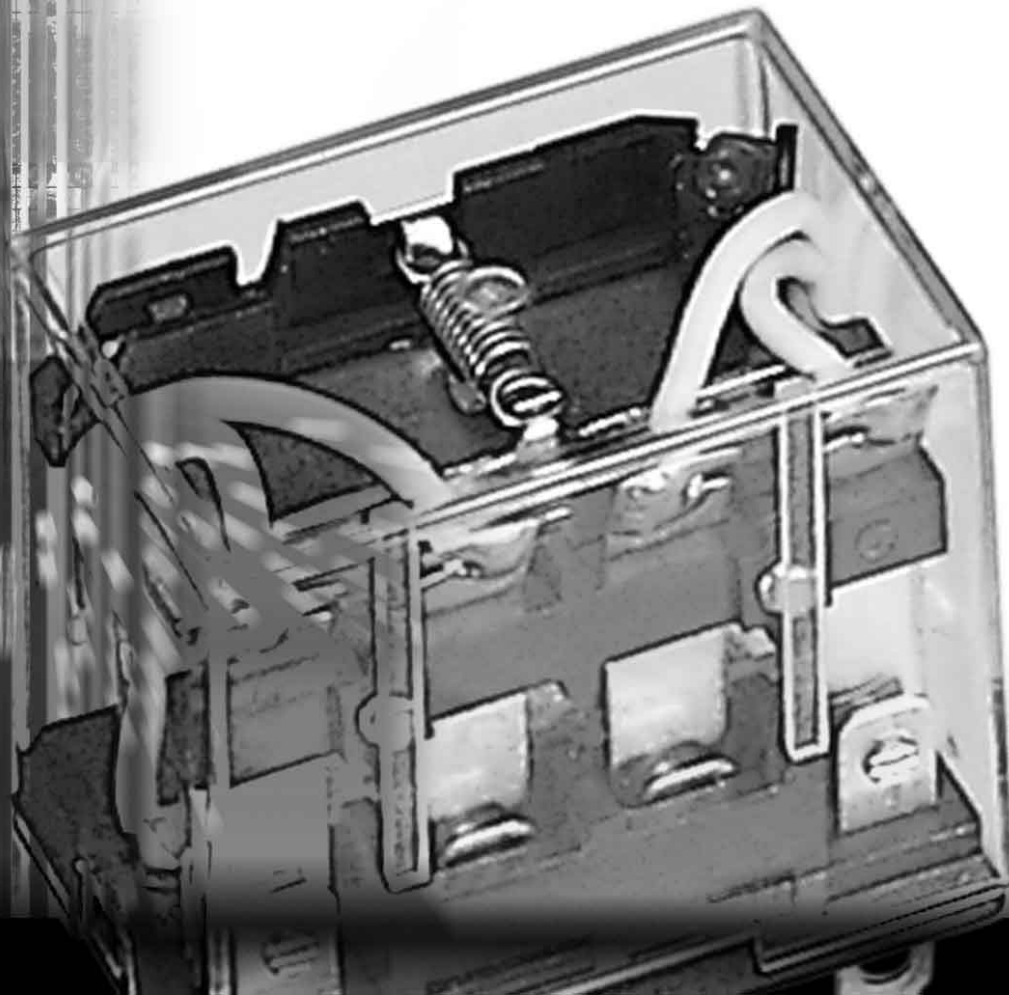
- Our products are equipped with a various series of types such as LED operating display lamps, and interior diodes, varistors, C-R(surge suppressors)
- Our products'coils are AC4 rated (AC100/110, AC110/120, AC200/220, AC220/240),and DC2 rated(DC100/110).
- Our products'contacts are made with alloy(AgCdO), which excels at anti-fusion
- Our products can endure the Dielectric strength of AC 2,000V(for 1 minute).
- Our products are equipped with arc-barriers.

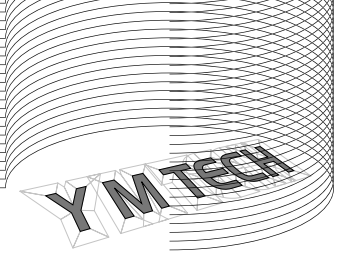
■ 종류 Kinds

Classification	Poles	4 Poles	
		Rated voltage	Mode
Basic type		AC 6, 12, 24, 50, 100/110, 200/220 DC 6, 12, 24, 48, 100/110, 125	YL4-A
LED operating display lamp interior		AC 6, 12, 24, 50, 100/110, 200/220 DC 6, 12, 24, 48, 100/110, 125	YL4-L
LED operating display lamps and interior varistor & C-R		AC 6, 12, 24, 50, 100/110, 200/220	YL4-LV, YL4-LCR
Interior diodes		DC 6, 12, 24, 48, 100/110, 125	YL4-D
LED operating display lamps and interior diodes		DC 6, 12, 24, 48, 100/110, 125	YL4-LD

■ 명명 분류 Ordering Information

YL	4	-	A
Mini Large Power Relay	Poles		Classification by type
YL Type	4 4 Poles		A Basic type
			L LED operating display lamps
			D Interior diodes
			LD LED operating display lamps & interior diodes
			LV LED operating display lamps interior varistors
			LCR LED operating display lamps interior C-R





■ 정격 Rating

기본형, 동작표시등내장형 Basic types and interior types with operating display lamps

조작코일 Coil Ratings

Nominal voltage(V)	Items	Nominal current (mA)		Coil Resistance (Ω)	Inductance coil(H)		Pick-up voltage(V)	Drop-out voltage(V)	Max. voltage(V)	Coil power(VA,W) dissipation
		50Hz	60Hz		No operation	Operation				
AC	6	386	330	5	0.02	0.04	80%max	30%min	110%max	Approx 1.95~2.5(VA) (60Hz)
	12	199	170	20	0.10	0.17				
	24	93.6	80	78	0.38	0.67				
	50	46.8	40	350	1.74	2.88				
	100/110	22.5/25.5	19/21.8	1,800	10.5	17.3				
	200/220	11.5/13.1	9.8/11.2	6,700	33.1	57.9				
DC	6	240		25	0.09	0.21	10%min			Approx 1.5(W)
	12	120		100	0.39	0.84				
	24	69		350	1.41	2.91				
	48	30		1,600	6.39	13.6				
	100/110	15/15.9		6,900	32	63.7				

- 주) 1. 정격전류, 코일저항은 코일온도가 +20°C에서의 수치로 공차는 AC 정격전류 +15%, -20%, DC 코일저항은 ±15% 입니다.
 2. AC코일저항, 인덕턴스는 참고치입니다.(60Hz)
 3. 동작특성 코일온도는 20°C에서의 수치입니다.
 4. 조작코일 특수전압은 주문에 의해 (AC 6~240V),(DC 5~125V)

- Notes : 1. Rates current, and coil resistance are measured at +20°C. Difference of AC rated current are +15%, and -20%, and DC coil resistance ±15%
 2. AC coil resistance and Inductance coil are reference data (60Hz)
 3. Performance characteristic coil temperature is measured at 20°C.
 4. Products with special voltages of controlled coils can be made by orders(AC6~240V & DC5~125V)

■ 개폐부(접점부) Contact Ratings

Items	Type	4 Poles	
		Resistive load (cos φ=1)	Inductive load (cos φ=0.4, L/R=7ms)
Rated load		AC 110V 10A DC 24V 10A	AC 110V 7.5A DC 24V 5A
Carry current		10A	
Max. contact voltage		AC 250V DC 125V	
Max. switching current		10A	10A
Max. switching capacity		1,100VA 240W	825VA 120W
Min. permissible load (p-level reference)		DC 5V 100mA	
Operating ambient temperature		-25 ~ +40°C (In case, it should not be frozen)	
Operating ambient Humidity		35 ~ 85% RH	

■ 성능 Characteristics

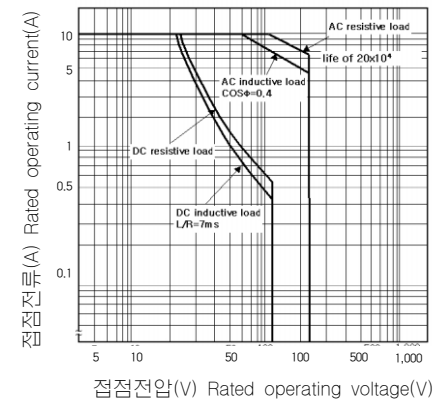
Items	Kinds	Basic types & types LED working display lamps and interior diodes
Contact resistance		Max. 50 mΩ (by voltage drop DC 6V 1A)
Operating time (at nominal voltage)		Max. 25ms
Release time (at nominal voltage)		Max. 25ms
Max. switching frequency	Mechanical	18,000/per hour
	Electical	1,800/per hour (rated current)
Insulation resistance		Min. 100MΩ (DC 500V Megger)
Dielectric strength		AC 2000V (50/60Hz) for 1 minute (1000V between same pole contacts)
Vibration resistance	Functional	10 ~ 50Hz at double amplitude of 1.0mm
	Destructive	10 ~ 50Hz at double amplitude of 1.0mm
Shock resistance	Functional	1,000m/s ² (about 100G)
	Destructive	200m/s ² (about 20G)
Life expectancy	Mechanical	Min. AC : 50,000,000 operations, DC : 100,000,000 operations (switching frequency : 18,000 times per hour)
	Electical	Min. AC : 200,000 operations (switching frequency : 1,800 times rated load)
Weight (about. gr)		70g

■ 실부하 수명시험 Actual loading life test

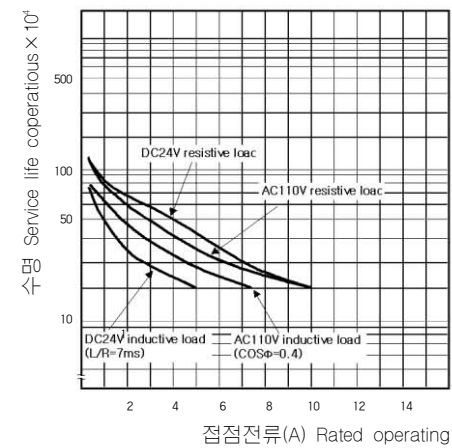
Items	Kinds	YL4-A AC100 / 110V		
		Conditions	Switching frequency	Electrical life (over 10,000 times)
AC Motors		AC 220V, 3 φ 200W input : 5A, normal 1A	ON : 10 seconds OFF : 50 seconds	50
		AC 220V, 3 φ 750W input : 18A, normal 3.5A		7
AC Lamps		AC 110V, 300W input : 51A, normal 3A	ON : 5 seconds OFF : 55 seconds	5
Condensers (2,000μF)		DC 24V input : 50A, normal 1A	ON : 1 seconds OFF : 15 seconds	0.5
		DC 24V input : 20A, normal 1A	ON : 1 seconds OFF : 2 seconds	20
AC Solenoid		50VA input : 2.5A, normal 0.25A	ON : 1 seconds OFF : 2 seconds	100
		100VA input : 5A, normal 0.5A		50

Characteristic Data (YL4 Type)

■ 개폐 용량의 최대치 Max. switching capacity

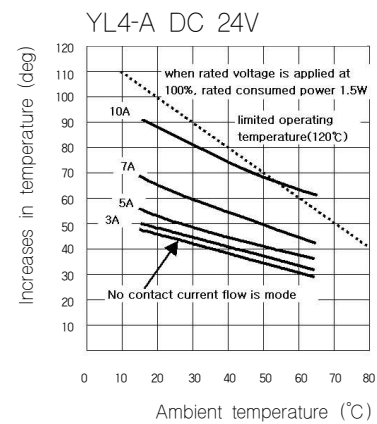
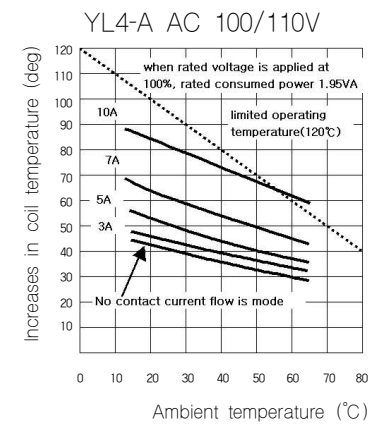


■ 수명곡선 Life curve

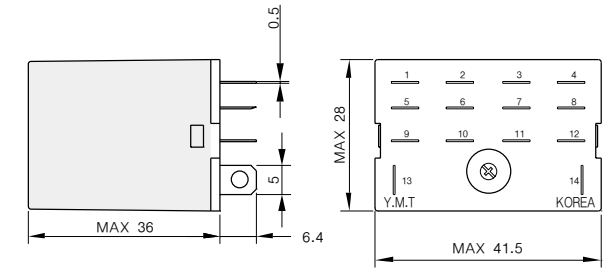
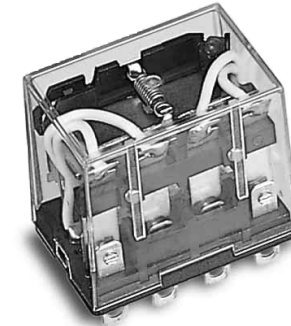


■ 사용주의 온도와 코일 온도 상승

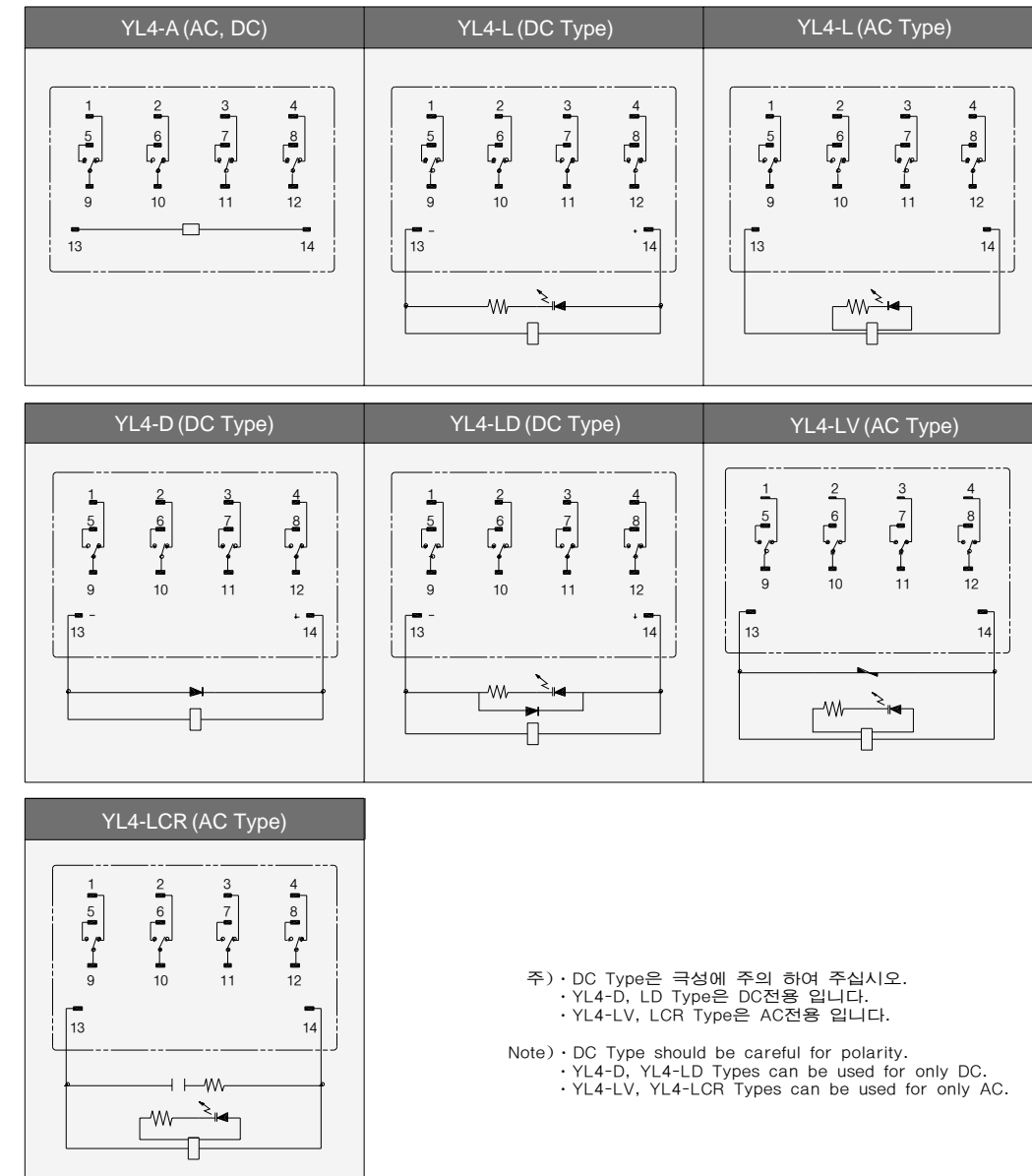
Increases in operating ambient temperature & coil temperature



■ 외형치수 External sizes (YL4 TYPE)

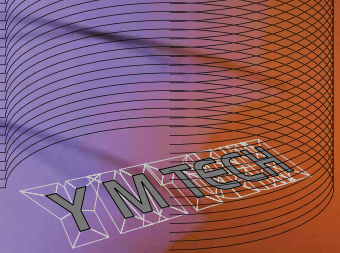


■ 단자배치 및 내부 접속도 Terminal arrangement plan & internal connection diagram



주) · DC Type은 극성에 주의 하여 주십시오.
· YL4-D, LD Type은 DC전용입니다.
· YL4-LV, LCR Type은 AC전용입니다.

Note) · DC Type should be careful for polarity.
· YL4-D, YL4-LD Types can be used for only DC.
· YL4-LV, YL4-LCR Types can be used for only AC.



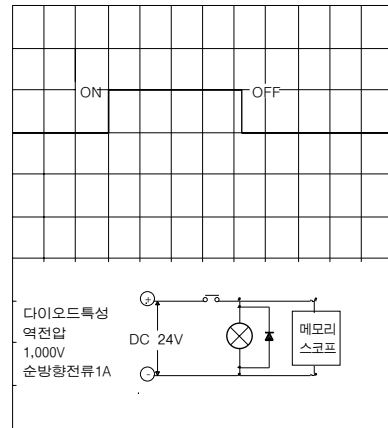
릴레이제품의 새로운 혁명을 이루겠습니다.

■ 유형별 파형곡선 Wave curve of Type

다이오드 내장형 (D, LD Type)

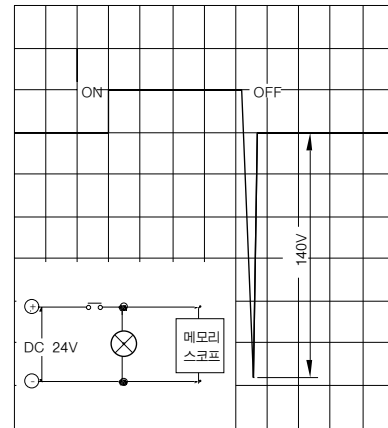
Interior diodes

코일에서 발생한 써지전압을 흡수 합니다.



기본형 (A Type)

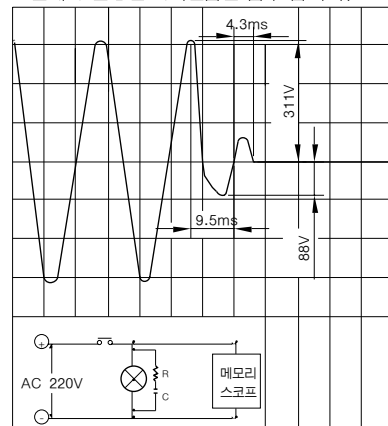
다이오드가 없을 때 코일에서 발생한 써지전압



CR 회로내장형 (CR Type)

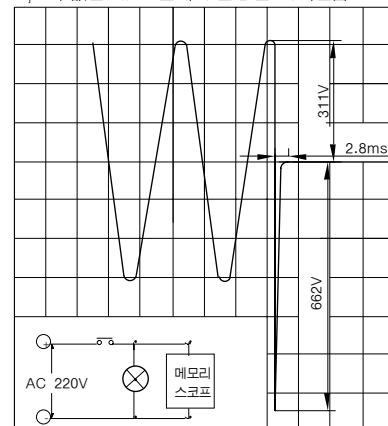
Interior C-R

코일에서 발생한 써지전압을 흡수 합니다.



기본형 (A Type)

C,R이 없을 때 코일에서 발생한 써지전압



YM 와이엠텍

