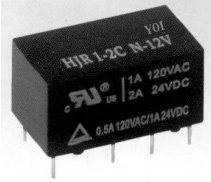
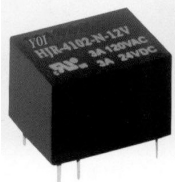
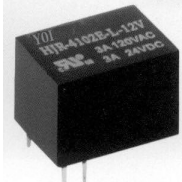
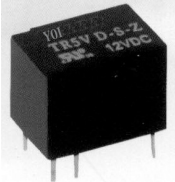
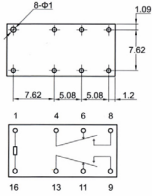
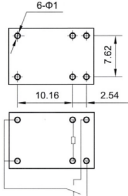
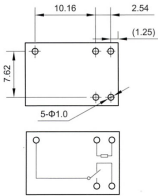
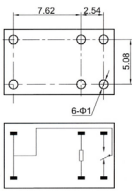


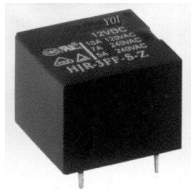
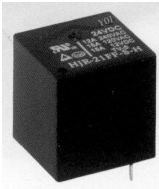
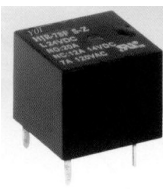
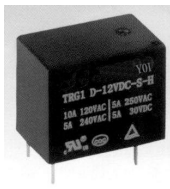
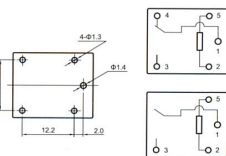
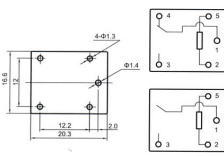
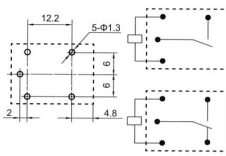
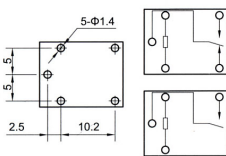
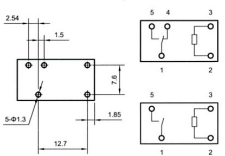
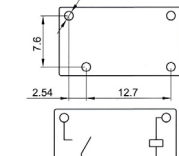
World Class Relays



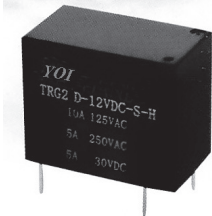
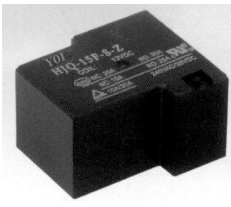
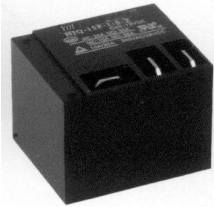
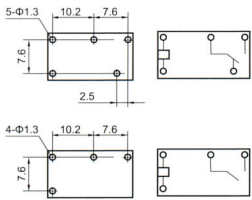
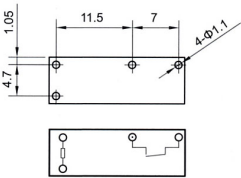
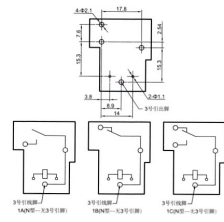
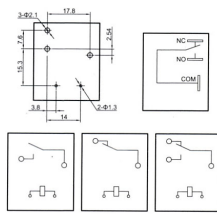
ITP-YOI Relays

Classification	Telecom Relay			
Type	HJR1-2C	HJR4102	HJR4102E	TR5V
Appearance				
Outline L*W*H (mm)	20.5x10.0x11.8	15.8x10.8x11.8	15.8x10.8x11.8	12.4x7.4x10.0
Features	• DPDT configuration • High sensitivity • DIP standard terminals • Sealed version • Surge strength 1500V FCC68	• Small size and low cost • DIP standard terminals • Surge Strength 1500V FCC68 • Sealed type available	• Small size and low cost • DIP standard terminals • Surge Strength 1500V FCC68 • Sealed type available	• Designed for thermostat modems, computer peripherals, video recording and security applications • Surge Strength 1500V FCC68 • Low coil power requirement for IC compatibility • Terminals arranged on grid pattern • Designed for compact, high density mounting
Contact Rating				
Contact Form	2Z	1Z	1Z	1Z
Contact Material	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
Max. Operating Current	2A	5A	5A	2A
Minimum Load	1mA 5VDC	1mA 5VDC	1mA 5VDC	1mA 5VDC
Max. Operating Voltage	240VAC/60VDC	240VAC/60VDC	240VAC/60VDC	120VAC/60VDC
Max. Operating Power	120VA/60W	360VA/90W	360VA/90W	240VA/48W
Rated Load (Resistive Load)	1A 120AC 2A 24VDC	3A 120VAC 3A 24VDC 1A 250VAC	3A 120VAC 3A 24VDC 1A 250VAC	1A/2A 120VAC 1A/2A 24VDC
Contact Resistance(mΩ) (at 6VDC 1A)	100	100	100	100
Coil Ratings				
Rated Voltage	3-48VDC	3-48VDC	3-48VDC	3-24VDC
Nominal Operating Power	150/200/360/450mW	200/360/450mW	200/360/450mW	150/200/360mW
General Data				
Insulation Resistance(MΩ) (at 500 VDC)	100	100	100	1000
Dielectric Strength	500VAC	500VAC	500VAC	400VAC
	1000VAC	1000VAC	1000VAC	1000VAC
Ambient Temperature (°C)	-30 to +85°C	-30 to +85°C	-30 to +85°C	-30 to +85°C
Operate/Release Time	8ms/4ms	5ms/5ms	5ms/5ms	4ms/3ms
Mechanical Life(Min)	10,000,000	10,000,000	10,000,000	10,000,000
Electrical Life(Min)	100,000	100,000	100,000	100,000
Layout (Bottom View)				
Terminal Type	PCB	PCB	PCB	PCB
Approved Standards	UL,cUL,TÜV	UL,cUL,CQC,TÜV	UL,cUL,CQC,TÜV	UL,cUL
Cross-Reference	OMRON:G5V-2 NAIS:DS2Y TYCO:V23102 OEG:OVR/ORZ OEN-46	OMRON:G2E FUJITSU:FB211SC/MZ OEG:OUA/OUAZ TYCO:A/B201/V23101 P&B:T81 OEN-42 Series	OMRON:G2E FUJITSU:FBR211SC/MZ OEG:OUA/OUAZ TYCO:A/B201/V23101 P&B:T81	OMRON:G5V-1 NAIS:HY FUJITSU:SY

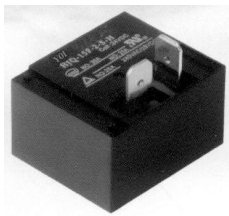
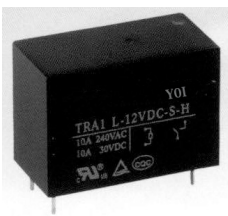
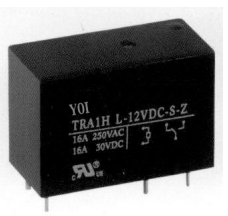
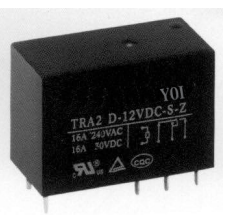
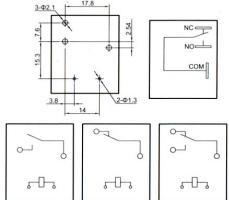
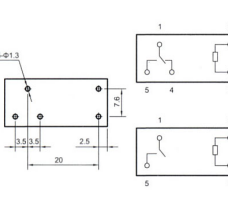
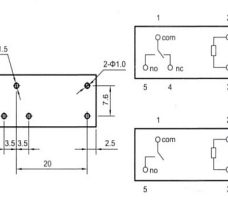
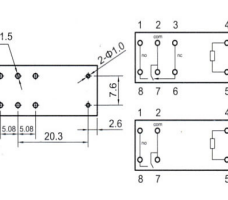
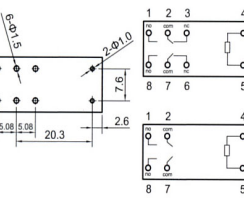
Power Relay

HJR-3FF	HJR-21FF	HJR-21FD	HJR-78F	TRG1	TRG1H
					
19.2x15.5x15.5	20.3x16.8x20.3	21.0x16.0x20.6	15.7x12.3x14.0	18.2x10.2x15.5	18.2x10.2x15.5
• 10A switching capability • Small footprint • Sealed type available • Class B/F available	• 12A switching capability • SPST-NO configuration • Small footprint • Sealed version available • Class B/F available	• 20A switching capability • TV-8 120VAC • Surge voltage up to 6KV • Ambient temperature meets 105°C • Product in accordance to IEC60335-1 • RoHS compliant	• 20A switching capability • Small size auto relay	• 10A switching capability • SPST-NO & SPDT configuration • Standard PC layout • Sealed type available	• 10A switching capability • SPST-NO configuration • Standard PC layout • Sealed type available • Surge resistance of 5000V
1H, 1Z	1H, 1Z	1H/1Z	1H, 1Z	1H, 1Z	1H
Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
15A	15A	20A	25A	10A	10A
100mA 5VDC	10mA 5VDC	100mA 5VDC	10mA 5VDC	10mA 5VDC	10mA 5VDC
250VAC/30VDC	250VAC/30VDC	400VAC	250VAC/16VDC	277VAC/30VDC	277VAC/30VDC
2,770VA/240W	2,770VA/240W	4700VA	840VA/400W	1H-D:1200VA/150W 1H-L/1Z:600VA/90W	2500VA/300W
1H:10A 240VAC 12A 120VAC 1Z:7A 240VAC 10A 120VAC 1/8HP(FLA 3.8A) 125VAC 1/8HP(FLA 1.6A) 277VAC	1H:12A 240VAC 15A 120VAC TV-5 (5A@120VAC) 1Z:10A 240VAC 12A 120VAC/24VDC TV-5 (5A@120VAC)	1H:20A 125VAC 17A 277VAC 7A 400VAC 1Z:16A 250VAC NO:7A 400VAC	NC/NO:12/20A 14VDC 7A 120VAC	1H-D:10A 120VAC 5A 240VAC/30VDC 1H-L/1Z:3A 240VAC/30VDC	10A 250VAC 8A 240VAC (UL)
100	100	100	100	100	100
3-48VDC	3-48VDC	3-48VDC	6-24VDC	3-48VDC	3-24VDC
360/450mW	360/450MmW	360mW	600/800mW	200/450mW	450mW
100	100	100	100	100	100
750VAC	750VAC	1000VAC	500VAC	H:1000VAC, Z:750VAC	1000VAC
1500VAC	1500VAC	2500VAC	500VAC	H:4000VAC, Z:2500VAC	4000VAC
-40 to +85°C(105°C)	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
10ms/5ms	10ms/5ms	10ms/5ms	10ms/5ms	10ms/4ms	10ms/4ms
10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
100,000	100,000	100,000	100,000	100,000	100,000
					
PCB	PCB	PCB	PCB	PCB	PCB
UL,cUL,TÜV,CQC,VDE	UL,cUL,TÜV,CQC		UL,cUL	UL,cUL,CQC,TÜV	UL,cUL,CQC,TÜV
OMRON:G5LC FUJITSU:FBR160 NAIS:JS ZETTLER:AZ943 P&B:T72 OEN61/65	OMRON:G5L OEG:SRUDH/SRUH SONG CHUANZ:801H	SONGCHUAN:875B MAIS:JSM	OMRON:G8QN FUJITSU:FBR51	OEG:OJE/OJ SONG CHUAN:835 ZETTLER:AZ765/767	OEG:OJE/OJ SONGCHUAN:835NL

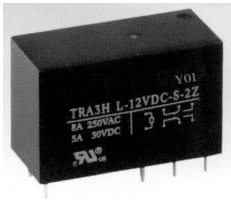
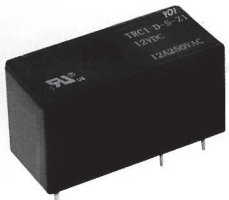
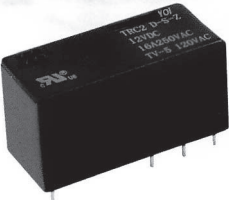
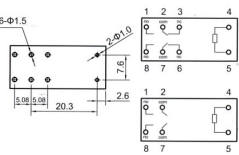
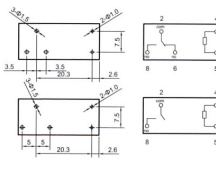
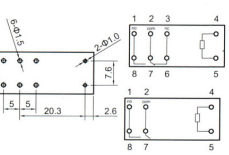
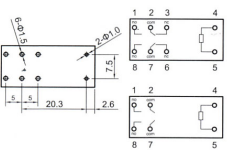
ITP-YOI Relays

Classification		Power Relay			
Type		TRG2	TRGB	HJQ-15F	HJQ-15F-1
Appearance					
Outline L*W*H (mm)		20.5x10.2x15.0	20.5x7.2x15.6	32x27.4x19.3	32x27.4x27.8
Features		• 10A switching capability • Creepage distance: 8mm (both for 1 CO and NO) • Clearance distance: No type 4.5mm, Nc type 4mm • Subminiature standard PCB layout • RoHS compliant	• Max. switching current 5A • Surge strength 7KV	• High power&low cost • 30A switching capability • Less than 1W coil power • Open type available • Class B/F available	• QC&PC terminals • High dielectric strength 3,000VAC • Optional flanged case for panel mounting • Class B/F available
Contact Rating					
Contact Form		1H,1Z	1H	1H,1D,1Z	1H,1D,1Z
Contact Material		Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
Max. Operating Current		10A	5A	30A	30A
Minimum Load		10mA 5VDC	10mA 5VDC	500mA 5VDC	500mA 5VDC
Max. Operating Voltage		277VAC/30VDC	277VAC/30VDC	250VAC/30VDC	250VAC/30VDC
Max. Operating Power		1250VA/150W	831VA/90W	7200VA/560W	7200VA/560W
Rated Load (Resistive Load)		1H:5A 250VAC 5A30VDC 10A 125VAC 1Z:3A 250VAC 3A 30VDC	5A 250VAC 5A 28VDC	1H:25A(30A)240VAC/20A 28VDC 1D:15A 240VAC/10A 28VDC 1Z:20A/10A 240VAC/28VDC	1H:25A(30A)240VAC/20A 28VDC 1D:15A 240VAC/10A 28VDC 1Z:20A/10A 240VAC/28VDC
Contact Resistance(mΩ) (at 6VDC 1A)		100	100	100	100
Coil Ratings					
Rated Voltage		3-48VDC	5-24VDC	5-110VDC	5-110VDC
Nominal Operating Power		200/450mW	200mW	930mW	930mW
General Data					
Insulation Resistance(MΩ) (at 500 VDC)		1000	1000	100	100
Dielectric Strength	Between Contacts	1000VAC	750VAC	1500VAC	1500VAC
	Between Coil and Contacts	4000VAC	4000VAC	1500VAC	1500VAC
Ambient Temperature (°C)		-40 to +70°C	-40 to +70°C	-40 to +85°C	-40 to +85°C
Operate/Release Time		8ms/5ms	10ms/10ms	15ms/10ms	15ms/10ms
Mechanical Life(Min)		10,000,000	10,000,000	10,000,000	10,000,000
Electrical Life(Min)		100,000	100,000	100,000	100,000
Layout (Bottom View)					
Terminal Type		PCB		PCB	PCB & Quick Connects
Approved Standards		UL,cUL,CQC, TüV	UL,cUL,CQC,TÜV	UL,cUL,TÜV,CQC	UL,cUL,TÜV,CQC
Cross-Reference		OMRON:G5Q NAIS:JQ/PQ SCHRACK:RE/REL FUJITSU:JY	OMRON-G5NB/G5T NAIS:LD FUJITSU:FTR-F3	OMRON:G8P NAIS:JT OEG:ORU P&B:T90/T9A OEN-62	OMRON:G7G/G8P NAIS:JT OEG:ORU P&B:T90/T9A OEN-63

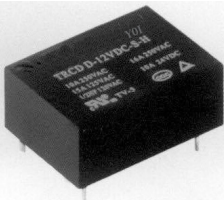
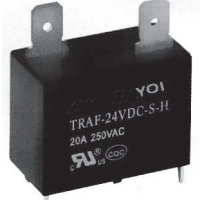
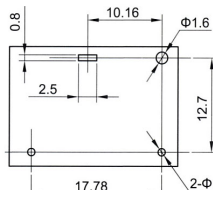
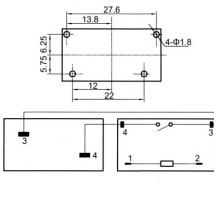
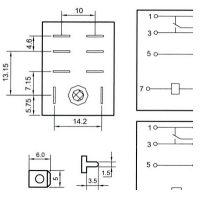
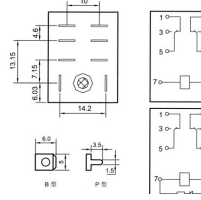
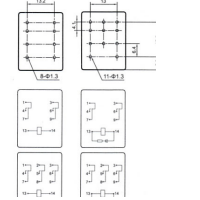
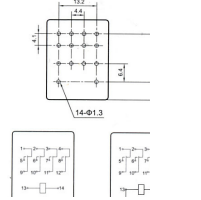
Power Relay

HJQ-15F-2	TRA1	TRA1H	TRA2	TRA3
				
32x27.4x19.3	29.4x13x20.6	29.4x13x20.6	29.4x13x20.6	29.4x13x20.6
- QC&PC terminals - High dielectric strength 3,000VAC - Optional flanged case for panel mounting - Class B/F available	10A switching capability - SPST-NO & SPDT configuration - Small footprint - Sealed type available - Transparent sealed available - Class B/F available	16A switching capability - SPST-NO&SPDT configuration - Small footprint - Sealed version available - Transparent sealed available - Class B/F available	16A switching capability - SPST-NO & SPDT configuration 5kv dielectric between coil and contacts - Transparent sealed available - Class B/F available	- Creepage distance 8.0mm Min - Au-clad contact available - Transparent sealed available - Class B/F available
1H,1D,1Z	1H, 1Z	1H/1Z	1H, 1Z	2H, 2Z
Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
30A	12A	16A	20A	8A
500mA 5VDC	100mA 5VDC	100mA 5VDC	100mA 5VDC	100mA 5VDC
250VAC/30VDC	250VAC/30VDC	250VAC/30VDC	250VAC/30VDC	250VAC/30VDC
6000VA/560W	2500VA/300W	4000VA/480W	4800VA/480W	1250VA/240W
1H:25A(30A)240VAC/20A 28VDC 1D:15A 240VAC/10A 28VDC 1Z:20A/10A 240VAC/28VDC	10A 240VAC 10A 30VDC	16A 250VAC 16A 30VDC	NC/NO 12A/16A 240VAC 16A 30VDC	5A 240VAC 5A 30VDC
100	100	100	100	100
5-48VDC	3-48VDC	3-48VDC	3-48VDC	3-48VDC
930mW	240/540/720mW	540/720mW	240/540/720mW	240/540/720mW
100	100	100	100	100
1500VAC	1000VAC	1000VAC	1000VAC	1000VAC
1500VAC	5000VAC	5000VAC	5000VAC	5000VAC
-40 to +85°C	-40 to +85°C	-40 to +70°C	-40 to +85°C	-40 to +85°C
15ms/10ms	20ms/10ms	20ms/10ms	20ms/10ms	20ms/10ms
10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
100,000	100,000	100,000	100,000	100,000
				
PCB & Quick Connects	PCB	PCB	PCB	PCB
UL,cUL,TÜV,CQC	UL,cUL,CQC,TÜV	UL,cUL	UL,cUL,CQC,TÜV	UL,cUL,CQC,TÜV
OMRON:G7G/G8P NAIS:JT OEG:ORU P&B:T90/T9A OEN-63	SCHRACK:RT FUJITSU:FTR-F1/VSB ZETTLER:A742/763/764 FEME-M25 OEN-58 IA&IC	OEN-58 1AK	SCHRACK:RT FUJITSU:FTR-F1/VSB ZETTLER:AZ742/763/764 FEME-M25 OEN59, 1A, 1Z	SCHRACK:RT FUJITSU:FTR-F1/VSB ZETTLER:AZ742/763/764 FEME-M25 OEN58 2 C/O

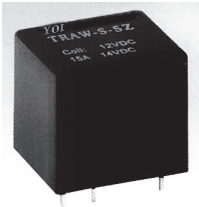
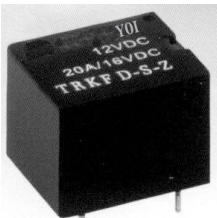
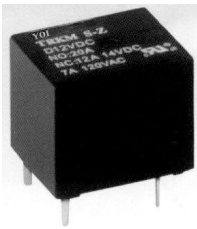
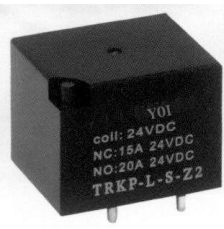
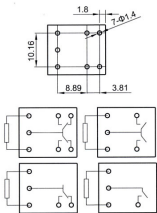
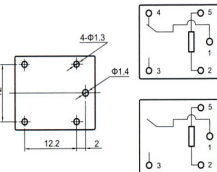
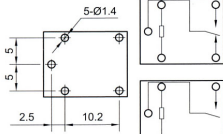
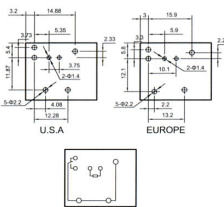
ITP-YOI Relays

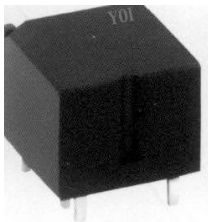
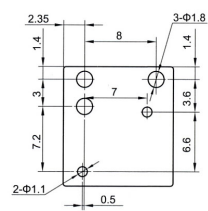
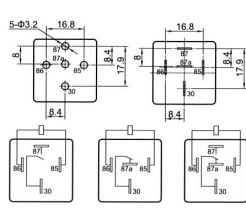
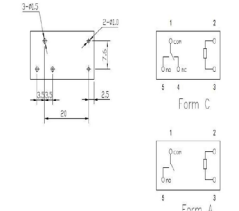
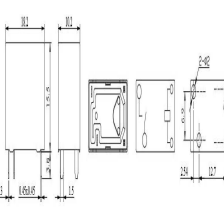
Classification	Power Relay			
Type	TRA3H	TRC1	TRC2	TRC3
Appearance				
Outline L*W*H (mm)	29.4x13x20.6	29x12.7x15.7	29x12.7x15.7	29x12.7x15.7
Features	• Creepage distance: 8.0mm Min • Au-clad contact available • Transparent sealed available • Class B/F available	• Creepage distance: 10mm • Au-clad contact available • Transparent sealed available • Class B/F available	• Creepage distance: 10mm • Au-clad contact available • Transparent sealed available • Class B/F available	• Creepage distance: 10mm • Au-clad contact available • Transparent sealed available • Class B/F available
Contact Rating				
Contact Form	2H/2Z	1H/1Z	1H/1Z	2H/2Z
Contact Material	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
Max. Operating Current	8A	12A	16A	8A
Minimum Load	100mA 5VDC	100mA 5VDC	100mA 5VDC	100mA 5VDC
Max. Operating Voltage	250VAC/30VDC	440VAC/125VDC	440VAC/125VDC	440VAC/125VDC
Max. Operating Power	2000VA/240W	3000VA	4000VA	2000VA
Rated Load (Resistive Load)	8A 250VAC 5A 30VDC	12A 250VAC	16A 250VAC TV-5A@ 125VAC	8A 250VAC
Contact Resistance(mΩ) (at 6VDC 1A)	100	100	100	100
Coil Ratings				
Rated Voltage	3-48VDC	5-60VDC/24-230VAC	5-60VDC/24-230VAC	5-60VDC/24-230VAC
Nominal Operating Power	540/720mW	400mW/0.75VA	400mW/0.75VA/Bistable	400mW/0.75VA
General Data				
Insulation Resistance(MΩ) (at 500 VDC)	100	100	100	100
Dielectric Strength Between Contacts Between Coil and Contacts	1000VAC 5000VAC	1000VAC 5000VAC	1000VAC 5000VAC	1000VAC 5000VAC
Ambient Temperature (°C)	-40 to +70°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Operate/Release Time	20ms/10ms	15ms/8ms	15ms/8ms	15ms/8ms
Mechanical Life(Min)	10,000,000	10,000,000	10,000,000	10,000,000
Electrical Life(Min)	100,000	100,000	100,000	100,000
Layout (Bottom View)				
Terminal Type	PCB	PCB	PCB	PCB
Approved Standards	UL,cUL	UL,cUL	UL,cUL	UL,cUL
Cross-Reference		SONGCHUAN:881/888 TYCO:RT114	SONGCHUAN:881/888 TYCO:RT424	SONGCHUAN:881/888 TYCO:RT314

Power Relay

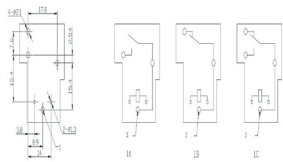
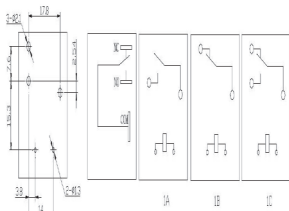
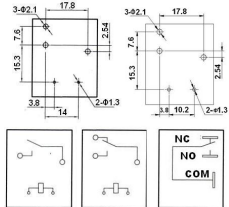
TRCD	TRAF	HJQ-13F-1C	HJQ-13F-2C	HJQ-22F (18F)	HJQ-22F-4
					
23x16.1x10.2	30.5x16.0x23.5	28x21.5x35	28x21.5x35	28x21.5x35	28x21.5x35
• Low profile(10mm), 15Amp switching capacity. • 1 Form A contact arrangement. • Sensitive 200mW coil (250mW on 48VDC coil). • Immersion cleanable, sealed version available.	• Ideal for motor switching in appliances and HVAC • 20A switching capability • Designed for high inrush compressor loads • Semi-sealed construction • Sealed version available	• 16A transfer contacts • Different dust-proof cover, different layout	• 10A transfer contacts • Different dust-proof cover, different layout	• 1.2 to 3 pole configuration	• 4 pole configurations • Au-clad contact available
1H	1H	1Z	2Z	2Z, 3Z	4Z
Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
16A	20A	20A	10A	7A	5A
100mA 5VDC	100mA 5VDC	100mA 5VDC	100mA 5VDC	100mA 5VDC	100mA 5VDC
250VAC/125VDC	250VAC	250VAC/30VDC	250VAC/30VDC	240VAC/30VDC	240VAC/28VDC
4000VA/480W	5000VA	4000VA/480W	2500VA/300W	1680VA/210W	1200VA/140W
16A 250VAC 10A 250VAC/24VDC 1/2HP 125VAC 1HP 277VAC TV-5A@125VAC	20A 277VAC	16A 240VAC 16A 30VDC	10A 240VAC 10A 30VDC 15A 125VAC	7A 240VAC 7A 30VDC 5A 240VAC	5A 240VAC 5A 28VDC
100	50	100	100	100	100
3-48VDC	5-48VDC	5-110VDC, 6-240VAC	5-110VDC, 6-240VAC	5-110VDC, 6-240VAC	5-110VDC, 6-240VAC
200/360/450mW	900mW	900mW/1.2VA	900mW/1.2VA	900mW/1.2VA	900mW/1.2VA
100	100	100	100	100	100
750VAC	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
2500VAC	4500VAC	1500VAC	1500VAC	1500VAC	1500VAC
-40 to +85°C	-40 to +85°C	-40 to +70°C	-40 to +70°C	-40 to +70°C	-40 to +70°C
15ms/8ms	10ms/5ms	25ms/25ms	25ms/25ms	25ms/25ms	25ms/25ms
10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
100,000	100,000	100,000	100,000	100,000	100,000
					
	PCB & Quick Connects	PCB & Quick Connects	PCB & Quick Connects	PCB & Quick Connects	PCB & Quick Connects
UL,cUL,CQC,TÜV		UL,cUL,CQC,TÜV	UL,cUL,CQC,TÜV	UL,cUL,CQC	UL,cUL,CQC
OEG:PCD		OMRON-LY1 NAIS:HL OEG:SRET SCHRACK:TM/K10	OMRON-LY2 NAIS:HL OEG:SRET SCHRACK:TM/K10 OEN-38 SERIES	OMRON:MY2/3 NAIS:HC OEG:SRE SCHRACK:ZT	OMRON:MY4 NAIS:HC OEG:SRE SCHRACK:ZT OEN-37

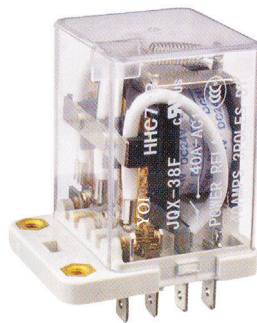
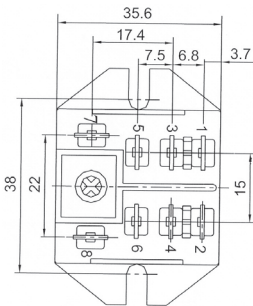
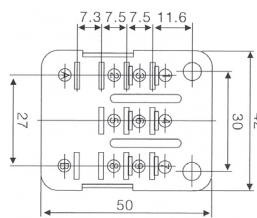
ITP-YOI Relays

Classification	Automotive Relay			
Type	TRAW	TRKF	TRKM	TRKP
Appearance				
Outline L*W*H (mm)	18x15.5x20	19.2x15.5x15.5	15.7x12.3x14.0	26.2x21.0x21.0
Features	• Max. switching current 20A • 10A continuous rating 85°C • Different contact form available • Open or sealed cover available	• 15A switching capability • Small footprint • Sealed type available	• 20A switching capability • Small size auto relay	• 40A continuous rating 85°C • PC board terminals • Inrush current 100A • Open & sealed version available
Contact Rating				
Contact Form	1H,1Z,SH,SZ	1H,1Z	1H,1D,1Z	1H, 1Z
Contact Material	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
Max. Operating Current	20A	20A	25A	40A
Minimum Load				
Max. Operating Voltage	75VDC	16VDC	16VDC	60VDC
Max. Operating Power	200W	280W	840VA/280W	560W
Rated Load (Resistive Load)	1H,1Z:10A14VDC SH,SZ:15A14VDC	1Z:15A 14VDC 1H:20A 14VDC	NO:20A 14VDC NC:12A 14VDC 1Z:7A 120VAC	NO:40A 14VDC NC:30A 14VDC
Contact Resistance(mΩ) (at 6VDC 1A)	100	100	100	100
Coil Ratings				
Rated Voltage	6-24VDC	9-24VDC	6-24VDC	3-24 VDC
Nominal Operating Power	1100mW	640/800mW	600/800mW	1200/1600/1900mW
General Data				
Insulation Resistance(MΩ) (at 500 VDC)	100	100	100	100
Dielectric Strength Between Contacts	550VAC	500VAC	500VAC	500VAC
Between Coil and Contacts	500VAC	1500VAC	500VAC	500VAC
Ambient Temperature (°C)	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Operate/Release Time	5ms/3ms	15ms/10ms	10ms/5ms	5ms/4ms
Mechanical Life(Min)	10,000,000	10,000,000	10,000,000	10,000,000
Electrical Life(Min)	100,000	100,000	100,000	100,000
Layout (Bottom View)				
Terminal Type	PCB	PCB	PCB	PCB
Approved Standards			UL,cUL	
Cross-Reference	OEG:OARW P&B:VKM TYCO:V23072/-C1 ZETTLER:AZ975/976	OMRON:G5LC FUJITSU:FBR161-H NAIS:JS ZETTLER:AZ943 P&B:T7N	OMRON:R-501 FUJITSU:FBR51	P&B:VKP TYCO:V23076 ZETTLER:AZ970/971

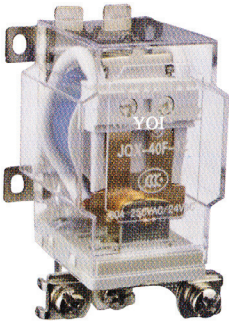
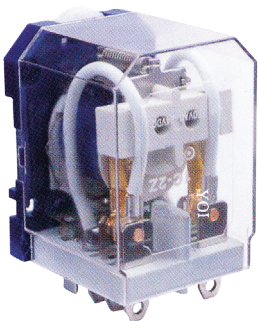
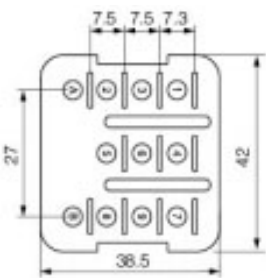
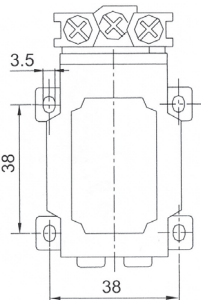
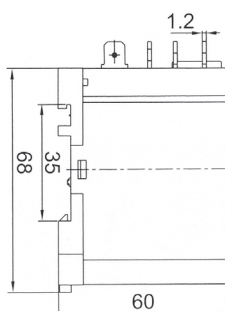
Classification	Automotive Relay		High Current Relay	
Type	TRS	TRV4	TRA6H	TRGIN
Appearance				
Outline L*W*H (mm)	13.2x12.3x9.8	28x28x25 28x31.8x41		
Features	• 30A 16VDC switching rating • 40A inrush at 16VDC • Smallest power relay • 1 Form A and 1 Form C arrangements in single and dual relay packages • For Automotive Applications	• 40A continuous rating 85°C • 1A&1C arrangements • Plug-in or PC board terminals • Optional mounting bracket	• 16A switching capability • Sealed version available • Transparent sealed available • Class B/F available • Conform to RoHS,ELV directive	• 16A switching capability • SPST-NO configuration/Standard PC layout • Dielectric strength 4kV(between coil and contacts) • Products which coincident with TV-8 products are available • Conform to RoHS,ELV directive
Contact Rating				
Contact Form	1H,1Z	1H, 1Z, 1D	1H, 1Z	1H
Contact Material	Silver Alloy	Silver Alloy	Silver Alloy	Silver Alloy
Max. Operating Current	40A	40A	16A	16A
Minimum Load	0.5A 12VDC		100mA 5VDC	100mA 5VDC
Max. Operating Voltage		30VDC	250VAC/30VDC	250VAC
Max. Operating Power	420W	560W	4000VA/480W	4000VA
Rated Load (Resistive Load)	Res: NC/NO 20A/30A 14VDC	NO:40A 14VDC NC:30A 14VDC	NO:16A 250VAC/30VDC NC:10A 250VAC/30VDC	16A 250 VAC/277VAC TV-8 250 VAC
Contact Resistance(mΩ) (at 6VDC 1A)	100	100	100	100
Coil Ratings				
Rated Voltage	12VDC	3-24 VDC		
Nominal Operating Power	570/800mW	1600/1900mW	0.54W	0.45W
General Data				
Insulation Resistance(MΩ) (at 500 VDC)	100	100	100	1000
Dielectric Strength Between Contacts	500VAC	500VAC	1000VAC	1000VAC
Between Coil and Contacts	500VAC	750VAC	5000VAC	4000VAC
Ambient Temperature (°C)	-40 to +105°C	-40 to +85°C	-40 to +105°C	-40 to +105°C
Operate/Release Time	4ms/2ms	10ms/10ms	15ms/5ms	10ms/5ms
Mechanical Life(Min)	10,000,000	10,000,000	10,000,000	5,000,000
Electrical Life(Min)	100,000@20A/14VDC on NO	100,000	100,000	100,000
Layout (Bottom View)				
Terminal Type	PCB	PCB & Quick Connects		
Approved Standards			UL, TUV, CQC	UL, TUV, CQC
Cross-Reference	TYCO:V23086 SONGCHUAN:102	P&B:VF4 NAIS:CB OEG:VF4 ZETTLER:AZ972/973 OEN-531		

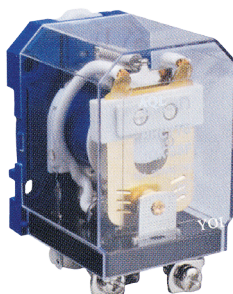
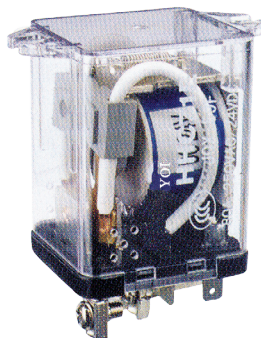
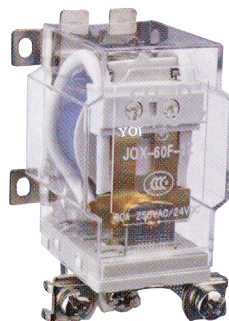
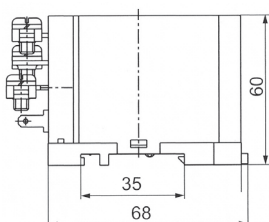
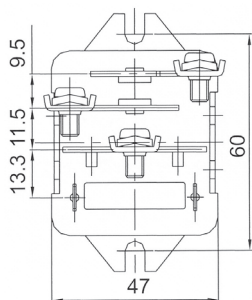
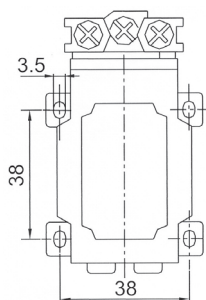
ITP-YOI Relays

Classification	High Current Relay		
Type	HJQ-15FT	HJQ-15F-1T	HJQ-15F-2T
Appearance			
Outline L*W*H (mm)			32.4x2.5x20
Features	• High power&low cost • 40A switching capability • Less than 1W coil power • Open sealed type available • Class B/F available • Conform to RoHS,ELV directive	• High power&low cost • 40A switching capability • Less than 1W coil power • Open sealed type available • Class B/F available • Conform to RoHS,ELV directive	• High power&low cost • 40A switching capability • Less than 1W coil power • Open sealed type available • Class B/F available • Conform to RoHS,ELV directive
Contact Rating			
Contact Form	1H/1D/1Z	1H/1D/1Z	1H/1D/1Z
Contact Material	Silver Alloy	Silver Alloy	Silver Alloy
Max. Operating Current	30A	30A	30A
Minimum Load	500mA 5VDC	500mA 5VDC	500mA 5VDC
Max. Operating Voltage	250VAC/30VDC	250VAC/30VDC	250VAC/30VDC
Max. Operating Power	7200VA/560W	7200VA/560W	7200VA/560W
Rated Load (Resistive Load)	NC:30A240VAC NO:40A240VAC	NC:30A240VAC NO:40A240VAC	NC:30A240VAC NO:40A240VAC
Contact Resistance(mΩ) (at 6VDC 1A)	100	100	100
Coil Ratings			
Rated Voltage			5-110VDC
Nominal Operating Power	0.93W	0.93W	0.93W
General Data			
Insulation Resistance(MΩ) (at 500 VDC)	100	100	100
Dielectric Strength Between Contacts Between Coil and Contacts	1500VAC(for one minute)	1500VAC(for one minute)	1500VAC
	1500VAC/2500VAC(for 1 minute)	1500VAC/2500VAC(for 1 minute)	1500VAC/2500VAC
Ambient Temperature (°C)	-40 to +70°C	-40 to +70°C	-40 to +70°C
Operate/Release Time	15ms / 10ms	15ms / 10ms	15ms / 10ms
Mechanical Life(Min)	10,000,000	10,000,000	10,000,000
Electrical Life(Min)	50,000	50,000	50,000
Layout (Bottom View)			
Terminal Type			PCB
Approved Standards	UL/cUL	UL/cUL	UL/cUL
Cross-Reference			

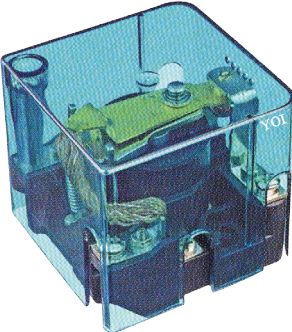
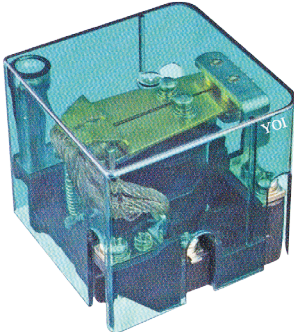
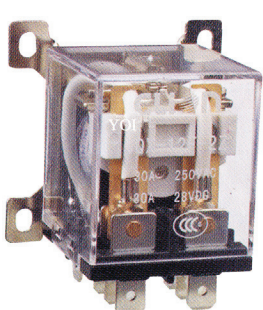
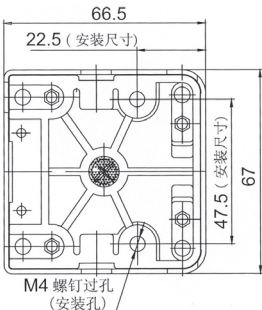
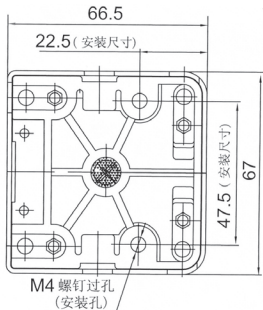
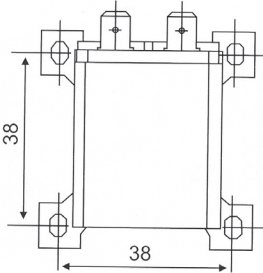
Classification		High Current Relay	
Model		JQX-30F	JQX-38F
Appearance			
Dimension(mm)		43 x 35.5 x 48	55.5 x 30 x 37.5
Contact	Contact form	1Z, 1H, 1D, 2Z, 2H, 2D	2Z, 2H, 2D, 3Z, 3H, 3D
	Rated load	30A	40A, 50A
	Max switching voltage	240VAC/28VDC	240VAC/28VDC
	Contact resistance	≤100m Ω	≤100m Ω
	Material	Silver Alloy	Silver Alloy
	Electrical life	≥10 ⁵	≥10 ⁵
	Mechanical life	≥10 ⁷	≥10 ⁷
Nominal voltage	(DC)	DC6V ~ 220V	DC6V ~ 220V
	(AC)	AC6V ~ 380V	AC6V ~ 380V
Coil power		DC:2.0W, AC:4VA	DC:2.5W, AC:6VA
Operate time		≤25ms	≤25ms
Release time		≤15ms	≤15ms
Dielectric strength	Between contacts	1000VAC/1min (1mA)	1500VAC/1min (1mA)
	Between contacts and coil	2000VAC/1min(1mA)	2500VAC/1min(1mA)
Insulation resistance		≥100M Ω (500VDC)	≥200M Ω (500VDC)
Ambient temperature		-25 ~ +55°C	-25 ~ +55°C
Terminal Type			Plug-in-Socket, Bolt
Install model			
Mounting holes(mm)			

ITP-YOI Relays

Classification		High Current Relay		
Model		JQX-38F (Mini)	JQX-40F-1Z	JQX-40F-2Z
Appearance				
Dimension(mm)		57.3 x 37.2 x 40.9	60 x 46 x 46	68 x 47 x 60
Contact	Contact form	2Z, 2H, 2D, 3Z, 3H, 3D	1Z, 1H, 1D	2Z, 2H, 2D
	Rated load	40A, 50A	50A	40A
	Max switching voltage	240VAC/28VDC	240VAC/28VDC	240VAC/28VDC
	Contact resistance	≤100m Ω	≤100m Ω	≤100m Ω
	Material	Silver Alloy	Silver Alloy	Silver Alloy
	Electrical life	≥10 ⁵	≥10 ⁵	≥10 ⁵
	Mechanical life	≥10 ⁷	≥10 ⁷	≥10 ⁷
Nominal voltage		(DC)	DC6V ~ 220V	DC6V ~ 220V
		(AC)	AC6V ~ 380V	AC6V ~ 380V
Coil power		DC:2.5W, AC:6VA	DC:2.0W, AC:8.6VA	DC:2.0W, AC:8.6VA
Operate time		≤25ms	≤25ms	≤25ms
Release time		≤15ms	≤15ms	≤15ms
Dielectric strength	Between contacts	1500VAC/1min (1mA)	1500VAC/1min (1mA)	1500VAC/1min (1mA)
	Between contacts and coil	2500VAC/1min(1mA)	2500VAC/1min(1mA)	2500VAC/1min(1mA)
Insulation resistance		≥500M Ω (500VDC)	≥500M Ω (500VDC)	≥500M Ω (500VDC)
Ambient temperature		-25 ~ +55°C	-25 ~ +55°C	-25 ~ +55°C
Terminal Type		Plug-in-Socket, P.C.B		
Install model				
Mounting holes(mm)				

Classification			High Current Relay		
Model			JQX-58F	JQX-59F-1Z	JQX-60F
Appearance					
Dimension(mm)			68 x 47 x 60	66.5 x 47 x 72	60.2 x 45 x 46
Contact	Contact form		1Z, 1H, 1D	1Z, 1H, 1D	1Z, 1H, 1D
	Rated load		60A	80A	60A
	Max switching voltage		240VAC/28VDC	240VAC/30VDC	240VAC/30VDC
	Contact resistance		≤100m Ω	≤100m Ω	≤100m Ω
	Material		Silver Alloy	Silver Alloy	Silver Alloy
	Electrical life		≥10 ⁵	≥10 ⁵	≥10 ⁵
	Mechanical life		≥10 ⁷	≥10 ⁷	≥10 ⁷
Nominal voltage		(DC)	DC6V ~ 220V	DC6V ~ 220V	DC6V ~ 220V
		(AC)	AC6V ~ 380V	AC6V ~ 380V	AC6V ~ 380V
Coil power			DC:2.0W, AC:8.6VA	DC:3.6W, AC:10.5VA	DC:2.0W, AC:8.6VA
Operate time			≤25ms	≤25ms	≤25ms
Release time			≤15ms	≤15ms	≤15ms
Dielectric strength	Between contacts		1500VAC/1min (1mA)	1500VAC/1min (1mA)	1500VAC/1min (1mA)
	Between contacts and coil		2500VAC/1min(1mA)	2500VAC/1min(1mA)	2500VAC/1min(1mA)
Insulation resistance			≥500M Ω (500VDC)	≥500M Ω (500VDC)	≥500M Ω (500VDC)
Ambient temperature			-25 ~ +55℃	-25 ~ +55℃	-25 ~ +55℃
Terminal Type					
Install model					
Mounting holes(mm)					

ITP-YOI Relays

Classification		High Current Relay		
Model		JQX-62F-1Z	JQX-62FS	JQX-12F
Appearance				
Dimension(mm)		67 x 67 x 60.5	67 x 67 x 60.5	48 x 45.8 x 38.5
Contact	Contact form	1Z, 1H, 1D	1Z, 1H, 1D	1Z, 1H, 1D, 2Z, 2H, 2D
	Rated load	100A	120A	30A
	Max switching voltage	240VAC/28VDC	240VAC/28VDC	240VAC/28VDC
	Contact resistance	≤100m Ω	≤100m Ω	≤100m Ω
	Material	Silver Alloy	Silver Alloy	Silver Alloy
	Electrical life	≥10 ⁵	≥10 ⁵	≥10 ⁵
	Mechanical life	≥10 ⁷	≥10 ⁷	≥10 ⁷
Nominal voltage		(DC)	DC6V ~ 220V	DC6V ~ 220V
		(AC)	AC6V ~ 380V	AC6V ~ 380V
Coil power		DC:2.0W, AC:10VA	DC:2.0W, AC:10VA	DC:2.0W, AC:4VA
Operate time		≤25ms	≤25ms	≤25ms
Release time		≤15ms	≤15ms	≤15ms
Dielectric strength	Between contacts	1500VAC/1min (1mA)	1500VAC/1min (1mA)	1000VAC/1min (1mA)
	Between contacts and coil	2500VAC/1min(1mA)	2500VAC/1min(1mA)	2000VAC/1min(1mA)
Insulation resistance		≥500M Ω (500VDC)	≥500M Ω (500VDC)	≥100M Ω (500VDC)
Ambient temperature		-25 ~ +55℃	-25 ~ +55℃	-25 ~ +55℃
Terminal Type				
Install model				
Mounting holes(mm)				



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CIN: U74899DL1986PTC023265