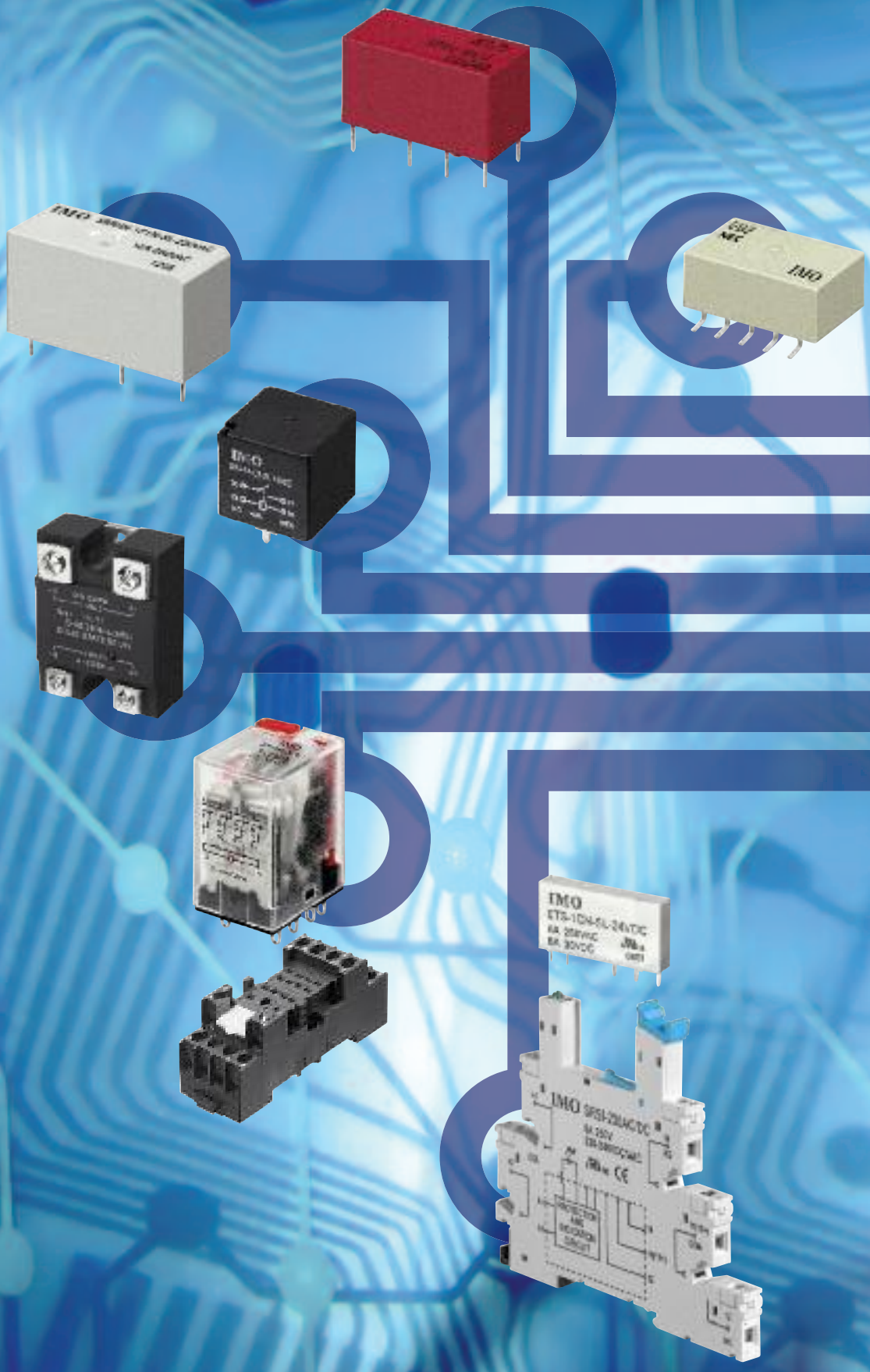
Relay Catalogue
Catalogue de Relais
Catalogo de Relè



PCB EMECH

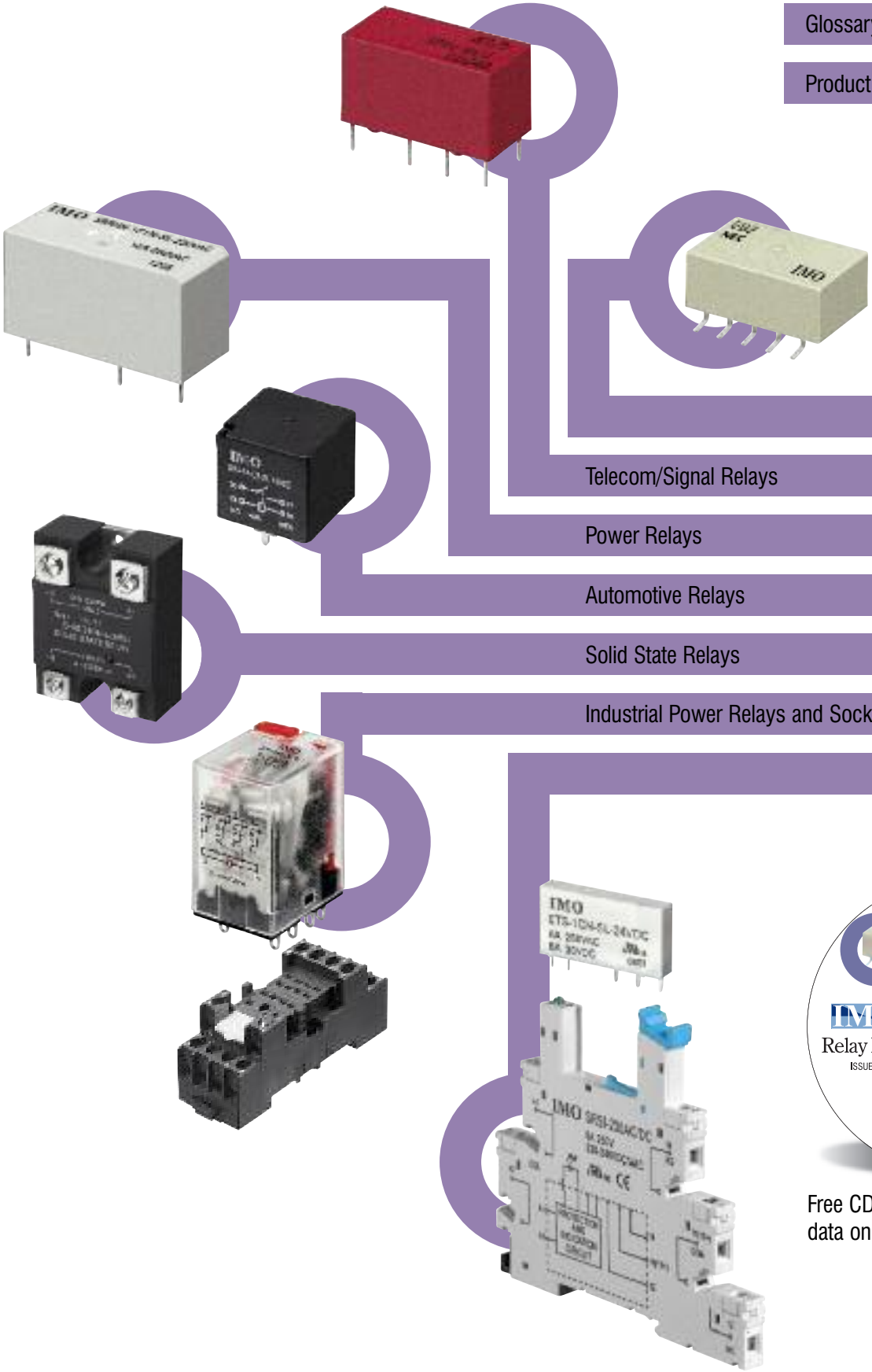
PANEL

IMO has been manufacturing innovative control components since 1970. The continuous expansion of the company's manufacturing resources and the development of strategic alliances with manufacturing centres of excellence have produced one of the finest ranges of automation and controls products available today. The first company in Europe to do so, IMO gives a no-quibble Three Year Warranty on the majority of its electronics based contol components and a Five Year Warranty on the full range of Jaguar Drives.

Depuis 1970, IMO a développé des solutions innovantes pour le contrôle de process et de production.
L'accroissement continu de ses ressources de fabrication, allié à un développement d'alliances stratégiques avec des centres de fabrication de haute qualité a permis à la société IMO de disposer de produits d'automatisme et de contrôle parmi les meilleurs actuellement. Première société en Europe à le proposer, IMO offre une garantie sans discuter de Trois ans sur la majorité de ses produits d'automatisme et de contrôle équipés d'électronique et de Cinq ans sur l'ensemble de sa gamme de variateurs de vitesse Jaguar.

IMO produce dispositivi di controllo innovativi sin dal 1970. La continua espansione produttiva della società e delle sue risorse e lo sviluppo d'alleanze strategiche con centri di produzione d'eccellenza, hanno creato une delle migliori gamme di prodotti per l'automazione e controllo oggi disponibile.
La prima azienda in Europa a farlo, IMO offre una garanzia di tre anni senza condizioni sulla maggior parte dei suoi componenti di controllo elettronico ed una garanzia di cinque anni su tutta la gamma d'Inverter IMO Jaguar.

Contents



Free CD containing full technical data on inside back cover!

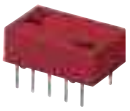
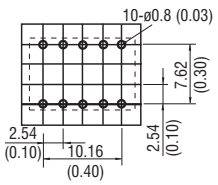
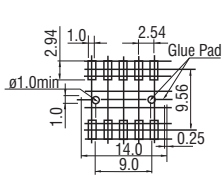
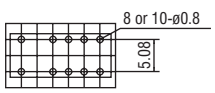
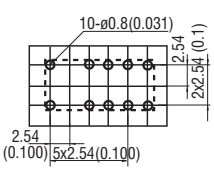
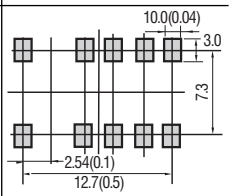
Glossary of technical terms

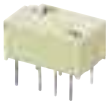
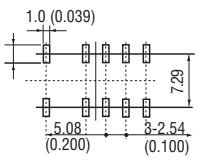
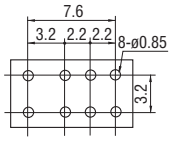
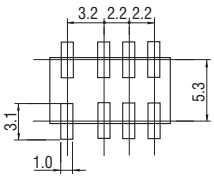
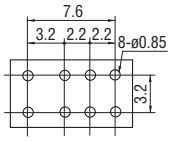
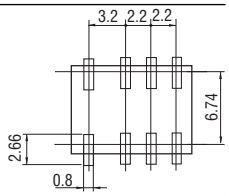


Ambient Temperature	Température ambiante	Temperature ambiente
Between Coil Coil and Contacts	Entre bobines et contacts	Rigidit dielettrica tra bobina-bobina e contatti
Between Contact Sets	Entre les contacts	Rigidità dielettrica tra I contatti chiusi
Between Open Contacts	Entre contact ouvert	Rigidità dielettrica tra I contatti aperti
Bounce Time	Durée des rebonds	Tempo di rimbalzo
Capacitance	Capacité	Induttanza
Coil Current	Courant bobine	Amperaggio di bobina
Coil Power	Puissance bobine	Assorbimento bobina
Coil Resistance	Résistance bobine	Resistenza della bobina
Coil Temperature Rise	Température bobine	Rampa di incremento temperature di bobina
Construction	Fabrication	Tecnologia di assemblaggio
Contact Arrangement	Position des contacts	Configurazione contatti / Posizione contatti
Contact Material	Matériaux des contacts	Materiale dei contatti
Contact Rating (Resistive Load)	Estimation de contact (charge résistive)	Resistività di contatto
Contacts Spring Material	Matériaux des ressorts	Materiale della molla
Control Voltage Range	Plage de tension de contrôle	Controllo campo di variazione della tensione
Destructive	Destructif	Resistenza meccanica agli urti
Dielectric Strength	Rigidité diélectrique	Rigidità dielettrica
Dielectric Strength (Input to Output)	Rigidité diélectrique (entrée/sortie)	Rigidità dielettrica (Ingresso-Uscita)
Dielectric Strength (Input/Output/Base)	Rigidité diélectrique (entrée/sortie/châssis)	Rigidità dielettrica (Ingresso-Uscita-Base)
Dimensions	Tailles	Dimensioni
Double Coil	Bobine double	Doppia bobina
Drop-Out Voltage	Tension de renvoi	Caduta di Tensione
Electrical Life	Durée de vie électrique	Durata elettrica
Functional	Fonctionnel	Funzionalita
High-Sensitive	Haute sensibilité	Alta sensibilita
Hold Down Spring	Maintient du ressort	Blocco molla
Humidity	Humidité	Umidita
Initial Contact Resistance (Max)	Résistance maximum des contacts	Resistenza iniziale di contatto (massima)
Initial Insulation Resistance	Résistance d'isolation initiale	Resistenza iniziale di isolamento resistivo
Insulation Resistance	Résistance d'isolation	Resistenza d'isolamento
Insulation Voltage	Tension d'isolation	Tensione d'isolamento
Latching	Verrouillage	Aggancio Meccanico
Load Current Range	Plage de courant	Corrente di carico
Load Voltage Range	Plage de tension	Tensione applicabile al carico
Maximum Allowable Voltage	Tension maximum autorisée	Massimo voltaggio consentito
Maximum capacitance	Capacité maximum	Massima impedenza
Maximum Input Current	Courant d'entrée maximum	Massima Corrente di ingresso
Maximum Leakage Current	Courant de fuite maximum	Massima corrente di fuga
Maximum Off-State Leakage Current	Courant de fuite état bas	Massima corrente di fuga del collettore
Maximum On-State resistance	Résistance maximum en fonctionnement	Resistenza massima sui contatti di uscita
Maximum On-State voltage drop	Chute de tension a l'état haut	Massima caduta di tensione sui poli di uscita
Maximum Operate Time	Vitesse maximum de commutation	Massima velocita di commutazione
Maximum Output Current	Courant de sortie maximum	Massima corrente di uscita
Maximum Release Time	Temps de relâchement maximum	Massimo tempo di rilascio
Maximum Reverse protection voltage	Tension maximum inverse de protection	Protezione massima da tensione inversa
Maximum Reverse Voltage	Tension inverse maximum	Massima tensione inversa
Maximum Surge Current	Courant de montée instantané maximum	Massima corrente di ingresso
Maximum Switching Current	Courant de commutation maximum	Massima corrente di commutazione
Maximum Switching Power	Puissance de commutation maximum	Massima potenza di commutazione
Maximum Switching Voltage	Tension de commutation maximum	Massimo voltaggio di commutazione
Maximum Transient over voltage	Tension de coupure maximum	Massima extra tensione transitoria
Maximum Turn-off time	Temps de descente maximum	Massimo tempo di spegnimento
Maximum Turn-on time	Temps de montée maximum	Massimo tempo d'accensione
Mechanical Life	Durée de vie mécanique	Durata meccanica
Minimum Applicable Load	Charge applicable minimum	Minimo Carico applicabile
Minimum Off-state	État bas minimum	Intervallo minimo di stato off
Minimum Power Factor	Rapport de puissance minimum	Minimo rapporto di potenza applicabile
Must Operate Current	Doit actionner le courant	Corrente di funzionamento
Must Operate Voltage	Doit actionner la tension	Voltaggio di funzionamento
Must Release Current	Doit libérer le courant	Corrente di rilascio
Must Release Voltage	Doit libérer la tension	Voltaggio di rilascio
Nominal Voltage	Tension nominale	Voltaggio nominale
Operate Time	Vitesse de commutation	Velocita operativa / Velocita di commutazione
Operations	Opérations	Operazioni
Output Logic	Sortie logique	Uscita logica
Pick-Up Voltage	Pic de tension	Voltaggio di attivazione bobina
Pin Out	Borne de sortie	Polarità di collegamento
Power Frequency Range	Plage de fréquence puissance	Frequenze di utilizzo
Protection Degree	Degré de protection	Livelli di protezione
Rated Current	Courant évalué	Corrente nominale
Rated Voltage	Tension évalué	Tensione nominale
Release time	Temps de relâchement	Tempo di Rilascio
Reset Voltage	Tension de remise a zéro	Voltaggio di reset
Safety Approval Ratings	Estimations d'approbation de sûreté	Omologazioni di sicurezza
Screw Torque	Pression de serrage	Massima coppia di avvitamento (serraggio vite)
Sensitive	Sensibilité	Sensibilità
Set Voltage	Tension de collage	Tensioni applicabili
Shock Resistance	Résistance de choc	Resistenza agli urti
Single Coil	Bobine simple	Bobina singola
Socket material	Matériel de l'enveloppe	Materiale dello zoccolo
Standard	Standard	Standard
Temperature Rise	Élévation de la température	Riscaldamento
Termination	Arrêt	Connessioni
Transient Overvoltage	Surtension passagère	Sovratensione transitoria
Typical Input Current	Courant d'entrée typique	Corrente di ingresso tipica
Unit Weight	Poids	Peso unitario
Vibration Resistance	Vibration de la résistance	Resistenza alle vibrazioni
Wire Strip Length	Longueur de bobinage	Profondita di morsettatura
Zero Cross over voltage	Commutation lors du passage à zéro	Valori di tensione picco-picco massimo ammissibile

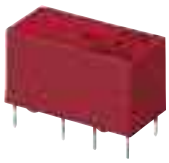
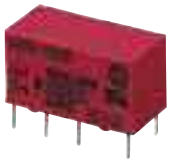
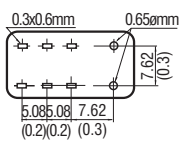
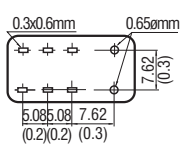
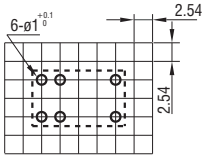
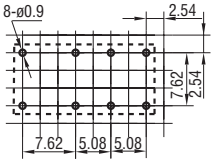
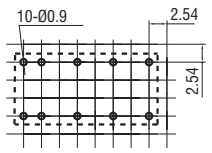
TELECOM

Telecom Relays

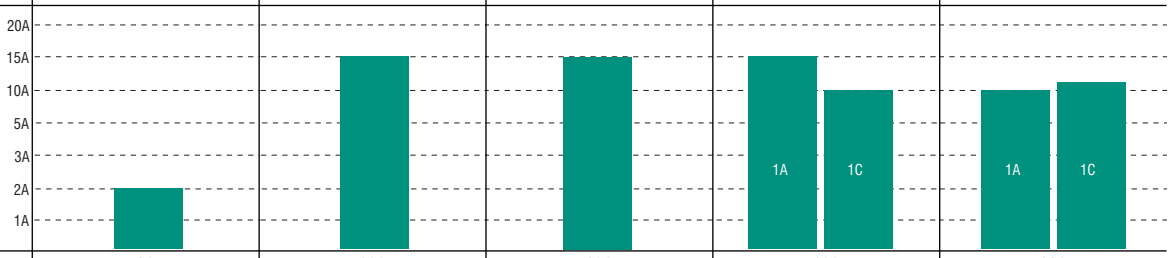
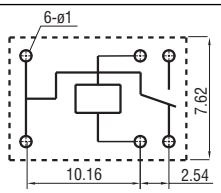
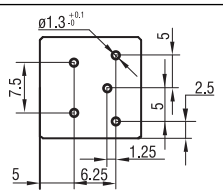
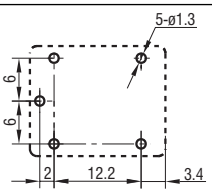
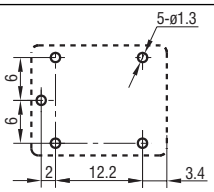
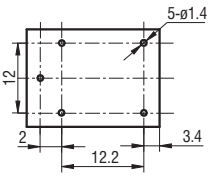
Model					
	NEC EA2	**NEC EB2**	**NEC EC2**	**NEC ED2**	**NEC EE2**
Features	• High sensitivity coil • Low profile • Fully sealed • FCC Pt 68 Compliant • Latching versions	• High sensitivity coil • Low profile • Fully sealed • FCC Pt 68 Compliant • Latching versions	• High sensitivity coil • Low profile • Fully sealed • FCC Pt 68 Compliant • Meets Bell Core standard 2500V surge • Latching versions	• Low power consumption • High breakdown voltage • Tube packaging • Latching versions	• Low power consumption • High breakdown voltage • Tape packaging • Latching versions • High power switching capability • 2.5kV Impulse withstand
Contact Ratings					
Contact Form	2C	2C	2C	2C	2C
Contact Material	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	2A	2A	2A	2A	2A
Max. Switching Voltage	220VDC/250VAC	220VDC/250VAC	220VDC/250VAC	220VDC/250VAC	220VDC/250VAC
Max. Switching Power	30W/62.5VA	30W/62.5VA	60W/125VA	30W/62.5VA	60W/125VA
Rated Load (Resistive)					
Coil Ratings					
Rated Voltage	3 to 24VDC	3 to 24VDC	3 to 24VDC	3 to 24VDC	3 to 24VDC
Nominal Operating Power	100 to 200mW	100 to 200mW	100 to 140mW	50 to 80mW	100 to 200mW
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	1000VAC	1000VAC	1500VAC	1500VAC	1500VAC
Dielectric Strength (1min) Between Adjacent Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Surge Withstand	1500V FCC	1500V FCC	2500V	2500V	2500V
Ambient Temperature	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +70˚C	-40˚C to +85˚C
Operate / Release Time	2ms/1ms	2ms/1ms	2ms/1ms	3ms/2ms	2ms/1ms
Mechanical Life (min)	10 x 10^6 OPS	10 x 10^6 OPS	10 x 10^6 OPS	10 x 10^6 OPS	10 x 10^6 OPS
Electrical Life (min)	Refer to data	Refer to data	Refer to data	Refer to data	Refer to data
Layout (Bottom View)					
Dimensions (mm)	14.2 x 9.2 x 5.4	14.3 x 9.3 x 7.5	15.0x 7.5 x 9.4	15.0 x 7.5 x 9.4	15.0 x 7.5 x 10
Terminal Type	PCB	SMT	PCB	PCB	SMT
Approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA

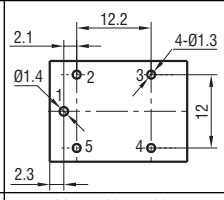
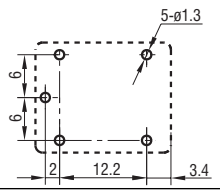
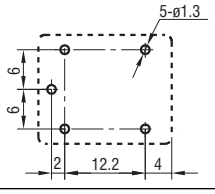
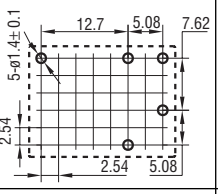
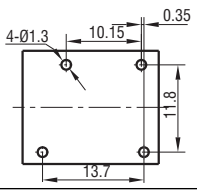
Model	 **NEC EF2**	 **NEC UA2**	 **NEC UB2**	 **NEC UC2**	 **NEC UD2**
Features	• Low power consumption • High breakdown voltage • Small Footprint • Latching versions	• Low power consumption • Meets Bell Core standard 2500V surge • Latching versions	• Low power consumption • Meets Bell Core standard 2500V surge • Latching versions • Surface mount	• Ultra low profile • Low power consumption • Meets Bell Core standard 2500V surge • Latching versions	• Ultra low profile • Low power consumption • Meets Bell Core standard 2500V surge • Latching versions • Surface mount
Contact Ratings					
Contact Form	2C	2C	2C	2C	2C
Contact Material	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay
Max. Rated Switching Current (Resistive load)	20A 15A 10A 5A 3A 2A 1A				
Max. Rated Carrying Current	2A	1A	1A	1A	1A
Max. Switching Voltage	220VDC/250VAC	220VDC/250VAC	220VDC/250VAC	220VDC/250VAC	220VDC/250VAC
Max. Switching Power	30W/62.5VA	30W/37.5VA	30W/37.5VA	30W/37.5VA	30W/37.5VA
Rated Load (Resistive)					
Coil Ratings					
Rated Voltage	3 to 24VDC	1.5 to 24VDC	1.5 to 24VDC	1.5 to 24VDC	1.5 to 24VDC
Nominal Operating Power	50 to 80mW	100 to 230mW	100 to 230mW	100 to 230mW	100 to 230mW
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	1500VAC	1500VAC	1500VAC	1500VAC	1500VAC
Dielectric Strength (1min) Between Adjacent Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Surge Withstand	2500V	2500V	2500V	2500V	2500V
Ambient Temperature	-40˚C to +70˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C
Operate / Release Time	3ms/2ms	2ms/1ms	2ms/1ms	2ms/1ms	2ms/1ms
Mechanical Life (min)	10 x 10^6 OPS	10 x 10^6 OPS	10 x 10^6 OPS	10 x 10^6 OPS	10 x 10^6 OPS
Electrical Life (min)	Refer to data	Refer to data	Refer to data	Refer to data	Refer to data
Layout (Bottom View)					
Dimensions (mm)	15.0 x 7.5 x 10	10.6 x 5.7 x 8.5	10.6x 7.5 x 9.4	10.6 x 6.5 x 5.3	10.6 x 6.5 x 5.45
Terminal Type	SMT	PCB	SMT	PCB	SMT
Approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA

Telecom Relays

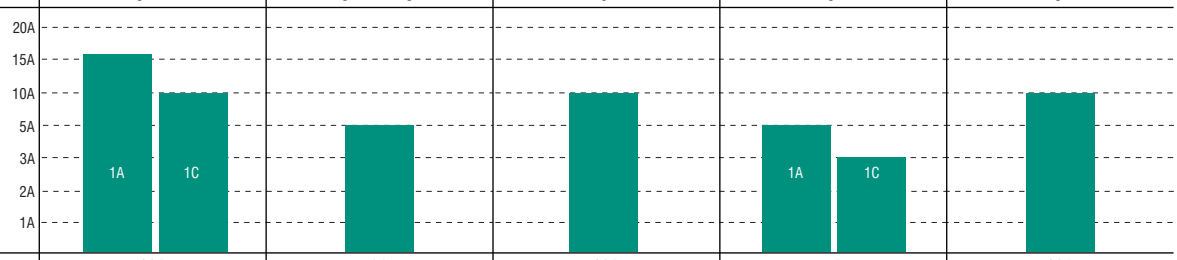
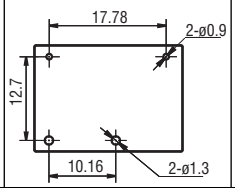
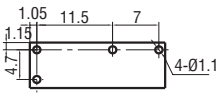
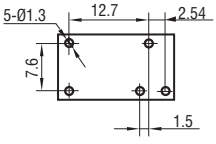
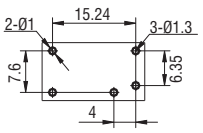
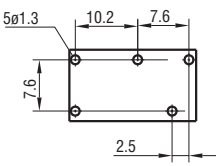
Model	 **NEC MR62**	 **NEC MR82**	 **EV1N**	 **EM2**	 **EN2**
Features	• BT Type 47 approved • 1500V FCC surge withstand between coil and contacts • Bifurcated crossbar contacts	• 1500V FCC surge withstand between coil and contacts • Bifurcated crossbar contacts • High sensitive coil	• Max 2A switching capability • High sensitive: 150mW • 1 Form C configuration • Sealed IP67 type available	• High switching capacity 125VA/60W • Epoxy sealed IP67 for automatic wave soldering & cleaning • 2 Form C configurations	• High sensitive: 150mW • High switching capacity: 60W • Epoxy sealed IP67 for automatic wave soldering & cleaning • Single side stable & latching types available
Contact Ratings					
Contact Form	2C	2C	1C	2C	2C
Contact Material	Silver Alloy with Gold overlay	Silver Alloy with Gold overlay	AgNi +Au plated	AgNi +Au plated	Ag-Au-Ag8 AgPd60
Max. Rated Switching Current (Resistive load)	20A / 15A / 10A / 5A / 3A / 2A / 1A				
Max. Rated Carrying Current	3A	2A	1A	2A	2A
Max. Switching Voltage	220VDC/250VAC	220VDC/250VAC	125VAC/60VDC	240VAC/120VDC	250VAC/220VDC
Max. Switching Power	60W/125VA	60W/125VA	62.5VA/30W	125VA/60W	125VA/60W
Rated Load (Resistive)			0.5A 125VAC 1A 30VDC 0.3A 60VDC	1A 125VAC 2A 30VDC	1A 125VAC 2A 30VDC
Coil Ratings					
Rated Voltage	4.5 to 48VDC	4 to 24VDC	1.5 to 24VDC	3 to 48VDC	3 to 48VDC
Nominal Operating Power	550mW	200mW	0.15W, 0.2W	0.15 to 0.58W	75 to 200mW
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	1000VAC	1000VAC	1000VAC	1500VAC	1500VAC
Dielectric Strength (1min) Between Adjacent Contacts	1000VAC	1000VAC			
Dielectric Strength (1min) Between Open Contacts	500VAC	500VAC	400VAC	1000VAC	1000VAC
Surge Withstand	1500V FCC	1500V FCC			
Ambient Temperature	-40˚C to +85˚C	-40˚C to +85˚C	-30˚C to +70˚C	-40˚C to +85˚C	-40˚C to +85˚C
Operate / Release Time	2.5ms/2ms	5.5ms/2ms	5ms/5ms	6ms/4ms	4ms/3ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^8 OPS	1 x 10^8 OPS
Electrical Life (min)	Refer to data	Refer to data	1 x 10^5 OPS	3 x 10^5 OPS (at 1A 30VDC)	5 x 10^5 OPS (at 1A 30VDC)
Layout (Bottom View)					
Dimensions (mm)	20.2 x 9.8 x 11.4	20.2 x 9.8 x 11.4	12.5 x 7.5 x 10.0	20.2 x 10.0 x 11.5	20.2 x 10.2 x 10.6
Terminal Type	PCB	PCB	PCB	PCB	PCB
Approvals	UL, CSA	UL, CSA	UL & CUR, CQC	UL, CSA	UL & CUR

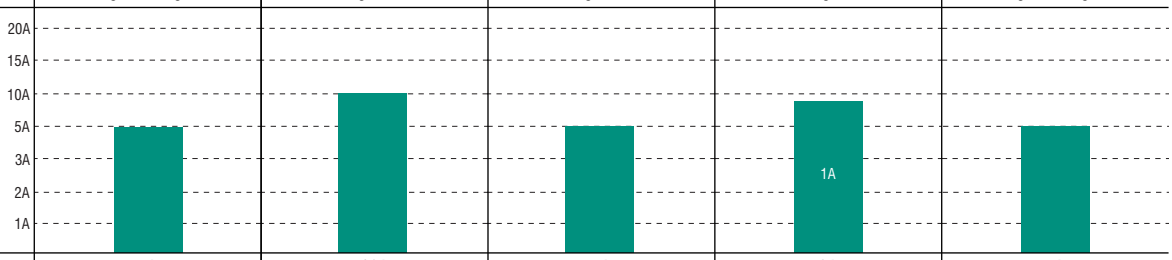
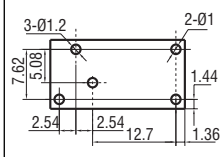
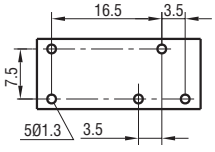
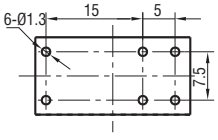
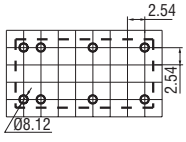
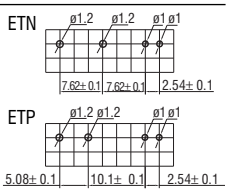
POWER

Model					
	SRF	**ERL**	**ERM**	**SRM**	**ERN**
Features	• 2A switching capability • 1 Form C configuration • Standard PCB layout • Sealed IP67 & flux proof types available	• 10A 250VAC (at 85˚C) switching capability • Clearance/creepage distance meeting VDE0435/0700 • CTI 250/CTI 300 available • UL94, V-0 flammability class • 3.8KV dielectric strength (between coils & contacts)	• 15A switching capability • Subminiature, standard PCB layout • 1 Form A & 1 Form C configurations • Sealed IP67 & flux proof types available	• 15A switching capability • Subminiature, standard PCB layout • 1 Form A & 1 Form C configurations • Sealed IP67 & flux proof types available	• 12A switching capability • High performance, low profile • 2KV dielectric strength (between coil & contacts) • VDE 0631/0700 • UL94, V0, CT1250 flammability class
Contact Ratings					
Contact Form	1C	1A, 1C	1A, 1C	1A, 1C	1A, 1C
Contact Material	AgNi	AgNi	$AgSnO_2$	$AgSnO_2$ $AgCdO$	$AgSnO_2$
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	2A	10A	10A	10A	12A
Max. Switching Voltage	300VAC/150VDC	250VAC	250VAC/24VDC	277VAC/30VDC	250VAC/30VDC
Max. Switching Power	240VA/30W	2500VA	2500VA/240W	2770VA/210W	2500VA/300W
Rated Load (Resistive)	2A 120VAC 1A 240VAC/30VDC	1A: 10A 250VAC	10A 250VAC	10A 277VAC/28VDC	1A: 10A 250VAC 1C: 12A 125VAC NO/NC: 10A/7A 250VAC
Coil Ratings					
Rated Voltage	3 to 24VDC	5 to 36VDC	5 to 48VDC	5 to 48VDC	3 to 48VDC
Nominal Operating Power	0.2W, 0.36W, 0.45W	0.36W	0.36W (48 VDC: 0.51W)	0.36W (48VDC: 0.51W)	0.36W
Characteristics					
Insulation Resistance at 500VDC	100MΩ	100MΩ	100MΩ	1000MΩ	100MΩ
Dielectric Strength (1min) Between Coil & Contacts	1000VAC	3800VAC	1500VAC	1500VAC	2000VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts	500VAC	1000VAC	750VAC	750VAC	750VAC
Surge Withstand		4000V			
Ambient Temperature	-25˚C to +70˚C	-40˚C to +85˚C	-40˚C to +70˚C	-40˚C to +85˚C	-40˚C to +85˚C
Operate / Release Time	10ms/5ms	15ms/15ms	10ms/5ms	10ms/5ms	10ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	5 x 10^6 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	5 x 10^4 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	15.7 x 11.0 x 12.0	15.0 x 15.0 x 20.0	19.2 x 15.4 x 14.8	19.0 x 15.5 x 15.5	22.5 x 16.5 x 16.5
Terminal Type	PCB	PCB	PCB	PCB	PCB
Approvals	UL & CUR, VDE	UL & CUR, VDE	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC	UL & CUR, VDE

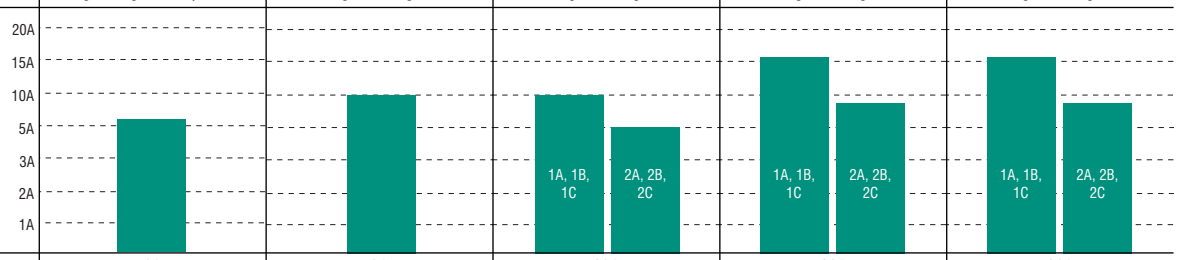
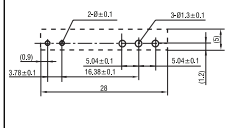
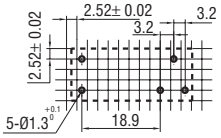
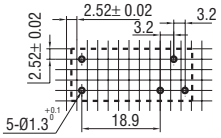
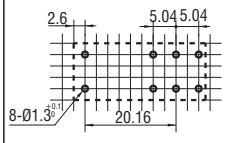
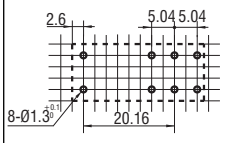
Model					
	ERQ	**SRQ**	**SRHH**	**SRT**	**SRC**
Features	• 10A switching capability • Small package • 1 Form A & 1 Form C configurations • Sealed IP67 & flux proof types available	• 15A switching capability • 2.5KV dielectric strength (between coil & contacts) • CTI 250, VDE 0631/0700 • Sealed IP67 & flux proof types available	• 15A switching capability • 1 Form A & 1 Form C configurations • Standard PCB layout • Sealed IP67 & flux proof types available	• 10A switching capability • Subminiature, high sensitive standard PCB layout • 1 Form a & 1 Form C configurations • Sealed IP67 type for wave automatic soldering	• 12A switching capability • 1 Form A configuration • Subminiature, standard PCB layout • Sealed IP67 & unsealed types available
Contact Ratings					
Contact Form	1A, 1C	1A, 1C	1A, 1C	1A, 1C	1A
Contact Material	$AgSnO_2$	$AgSnO_2$ AgNi	$AgSnO_2$	AgNi	$AgSnO_2$
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	10A	10A	15A	6A	12A
Max. Switching Voltage	250VAC/30VDC	277VAC/30VDC	250VAC/30VDC	300VAC/28VDC	277VAC
Max. Switching Power	2400VA/280W	2770VA/210W	1800VA/240W	1800VA/240W	2770VA/300W
Rated Load (Resistive)	10A 250VAC/28VDC 5A 240VAC/30VDC	1A: 10A 250VAC/28VDC 1C: NO: 10A 250VAC/28VDC NO/NC: 7A/3A 250VAC NO/NC: 5A/5A 250VAC	1A: 15A 120VAC TV-5 120VAC 1C: 10A 120VAC/24VDC	6A 300VAC/28VDC	12A 125VAC 10A 277VAC/30VDC
Coil Ratings					
Rated Voltage	3 to 48VDC	3 to 48VDC	5 to 48VDC	1.5 to 48VDC	3 to 24VDC
Nominal Operating Power	0.36W (48VDC:0.51W)	0.36W	0.36W (48VDC: 0.51W)	0.33W, 0.45W	0.45W
Characteristics					
Insulation Resistance at 500VDC	100MΩ	100MΩ	100MΩ	100MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	1500VAC	2000VAC	1500VAC	2000VAC	2500VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts	750VAC	750VAC	750VAC	750VAC	1000VAC
Surge Withstand					
Ambient Temperature	-40˚C to +70˚C	-40˚C to +105˚C	-40˚C to +70˚C	-55˚C to +115˚C	-40˚C to +85˚C
Operate / Release Time	10ms/5ms	10ms/5ms	10ms/5ms	6ms/3ms	8ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	22.5 x 16.5 x 16.5	19.0 x 15.2 x 15.5	20.2 x 16.5 x 20.2	21.3 x 16.2 x 14.4	18.4 x 15.2 x 10.2
Terminal Type	PCB	PCB	PCB	PCB	PCB
Approvals	UL, & CUR CQC	VDE	UL & CUR, TÜV CQC	UL & CUR, VDE CQC	UL & CUR, CQC

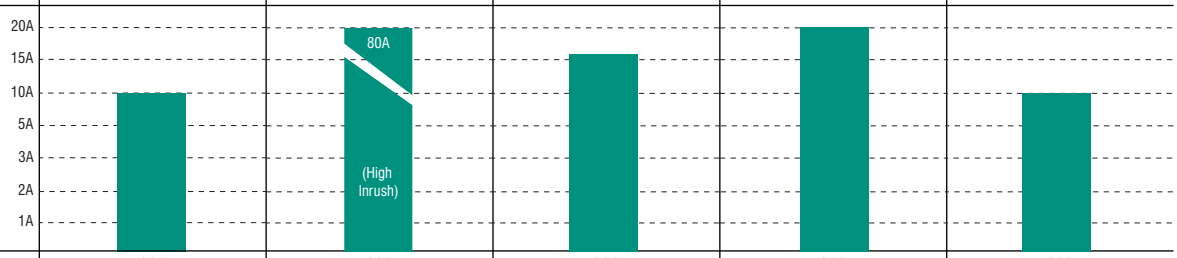
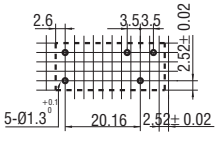
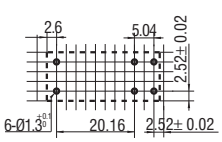
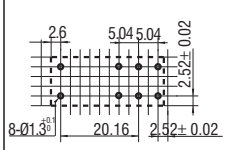
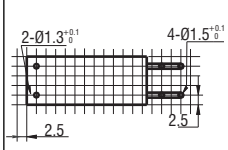
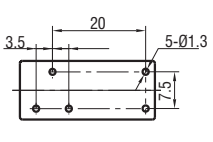
Power Relays

Model					
	SRCA	**STN**	**SRD**	**SRDA**	**SRU**
Features	• Low height, flat construction •16A switching capability • HIgh sensitive 200mW • PCB & QC terminals available • Sealed IP67 & flux proof types available	• 10KV impulse withstand voltage (between coil & contacts) • Highly efficient magnetic circuit for high sensitivity (200mW) • Class F insulation available • Extremely small footprint	• 10A switching capability • Subminiature, standard PCB layout • Sealed IP67 & flux proof types available	• 5A switching capability • Creepage/clearance distance>8mm • 5KV dielectric strength (between coils & contacts) • 1 Form A meets VDE 0700, 0631 • 1Form C meets VDE 0631	• 10A switching capability • Creepage distance: 8mm (both for 1CO & NO) • Clearance distance: NO type 4.5mm NC type 4mm • Sealed IP67 & flux proof types available
Contact Ratings					
Contact Form	1A / 1C	1A	1A, 1C	1A, 1C	1A, 1C
Contact Material	$AgSnO_2$	$AgSnO_2$ AgNi	AgNi	AgNi	AgNi
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	16A	3A	10A	5A	10A
Max. Switching Voltage	250VAC/30VDC	277VA/30VDC	250VAC/30VDC	250VAC/30VDC	277VAC/30VDC
Max. Switching Power	4000VA/300W / 2500VA/1500VA	821VA/90W	1250VA/150W	1250VA/150W	1250VA/150W
Rated Load (Resistive)	1A: 16A 250VAC 10A 250VA/30VDC 1C: NO/NC: 10A/6A 125/250VAC	3A 250VAC/30VDC	1A: 10A 125VAC 5A 250VAC/30VDC 1C: 3A 250VA/30VDC	1A: 5A 250VAC/30VDC 1C: 3A 250VAC/30VDC	1A: 10A 125VAC 5A 250VAC/30VDC 1C: NC: 3A 250VAC/30VDC NO: 5A 250VAC/30VDC 10A 125VAC
Coil Ratings					
Rated Voltage	5 to 48VDC	4.5 to 24VDC	3 to 48VDC	3 to 48VDC	3 to 48VDC
Nominal Operating Power	0.2W, 0.4W	0.2W	0.2W, 0.45W	0.2W, 0.45W	0.2W, 0.45W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	100MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	2500VAC	4000VAC	2500VAC	5000VAC	4000VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts	1000VAC	750VAC	1000VAC	1000VAC	1000VAC
Surge Withstand					
Ambient Temperature	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +70˚C	-40˚C to +85˚C	-40˚C to +70˚C
Operate / Release Time	10ms/5ms	10ms/10ms	8ms/5ms	8ms/4ms	8ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^6 OPS	1 x 10^7 OPS
Electrical Life (min)	10 x 10^5 OPS	Refer to data	1x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	20.0 x 16.5 x 10.5	20.4 x 7.0 x 15.0	18.4 x 10.2 x 15.3	17.6 x 10.1 x 12.3	20.5 x 10.6 x 15.3
Terminal Type	PCB & QC	PCB	PCB	PCB	PCB
Approvals	UL & CUR, TÜV CQC	UL & CUR, VDE CQC	UL & CUR, VDE CQC	UL & CUR, VDE CQC	UL & CUR, TÜV CQC

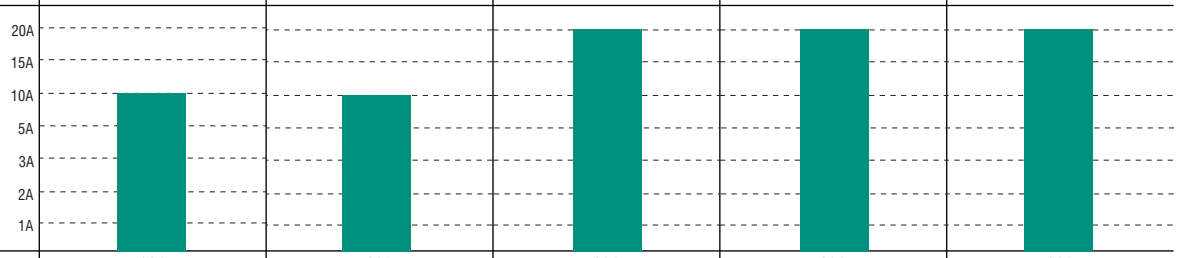
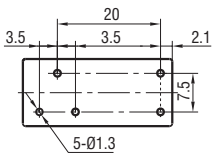
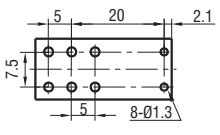
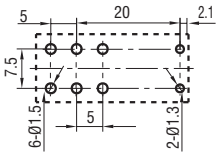
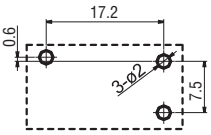
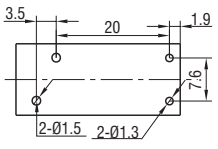
Model					
	SRB	**ERT**	**ERB**	**ERE**	**ETN/ETP**
Features	• 5A switching capability • Standard & sensitive coils • 1 Form A & 1 Form C configurations • Sealed IP67 & flux proof types available	• 10A switching capability • 1 Form A & 1 Form C configurations • Sealed IP67 & unsealed types available	• 5A switching capability • 2 Form A configuration • Sealed IP67 & flux proof types available	• High sensitivity coil • High switching capacity 8A • Latching types available • 1A, 2A 1X Contact Forms	• 5A switching capability • 2KV dielectric strength (between coil & contacts) • 4KV impulsive withstand voltage (between coil & contacts) • Slim size (w)5 (h)12.5mm • High sensitive :0.12W
Contact Ratings					
Contact Form	1A, 1C	1A, 1C	2A	1A, 1X, 2A	1A
Contact Material	$AgSnO_2$ AgNi	$AgSnO_2$	$AgSnO_2$	AgNi	$AgSnO_2$ AgNi
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	5A	10A	5A	8A	5A
Max. Switching Voltage	250VAC/30VDC	250VAC/30VDC	250VAC/30VDC	380VAC/125VDC	250VAC/110VDC
Max. Switching Power	1250VA/150W	2500VA/300W	1250VA/150W	2000VA/150W(1A) 1250VA/150W(1X,2A)	1250VA/150W
Rated Load (Resistive)	NO: 5A 250VAC/30VDC NC: 3A 250VAC/30VDC	10A 250VAC/30VDC TV-5 125VAC	5A 250VAC/30VDC	1A 8A 250VAC, 5A 30VDC 2A, 1X, 5A 250VAC/30VDC	5A 250VAC/30VDC
Coil Ratings					
Rated Voltage	3 to 48VDC	5 to 48VDC	5 to 48VDC	3 to 24VDC	5 to 24VDC
Nominal Operating Power	0.25W, 0.36W	0.25W, 0.53W	0.53W	Single side stable 300mW Single coil latching 150mW 2 Coil latching 300mW	0.12 to 0.18W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	2000VAC	4000VAC	4000VAC	3000VAC	2000VAC
Dielectric Strength (1min) Between Adjacent Contacts			2000VAC	2000VAC	
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Surge Withstand					4000VAC
Ambient Temperature	-40˚C to +85˚C	-40˚C to +70˚C	-40˚C to +70˚C	-40˚C to +70˚C	-40˚C to +85˚C
Operate / Release Time	10ms/5ms	15ms/5ms	15ms/10ms	10ms/5ms	10ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^6 OPS	1 x 10^7 OPS	2 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	20.5 x 10.5 x 20.5	23.8 x 9.5 x 24.5	24.0 x 12.0 x 24.8	20.2 x 11 x 10	20.0 x 5.0 x 12.5
Terminal Type	PCB	PCB	PCB	PCB	PCB
Approvals	UL & CUR, VDE CQC	UL, & CUR TÜV CQC	UL, & CUR TÜV CQC	Pending	UL & CUR, TÜV CQC

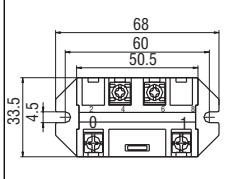
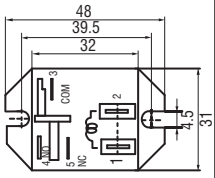
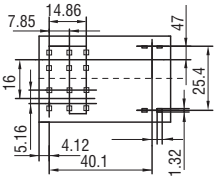
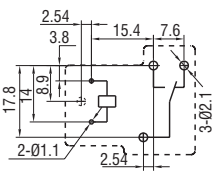
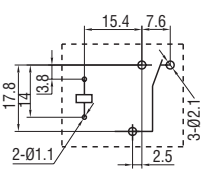
Power Relays

Model	 **ETS**	 **EJH**	 **EJHP**	 **SRRHN/SRP**	 **SRRHN/SRP-AC**
Features	• 6A switching capability • 1 Form A & 1 Form C configurations • 6KV impulsive withstand voltage (between coil & contacts) • Slim 5mm size	• Low height: 12.3mm • 8A switching capability • 5KV dielectric strength (between coil & contacts) • Creepage distance>8mm • Sealed IP67 & flux proof types available	• 10A switching capability • Low height: 12.5mm • 5KV dielectric strength (between coil & contacts) • Creepage distance>8mm (VDE0435,0631,0700, CTI 250) • Sealed IP67 & flux proof types available	• 16A switching capability • Low height: 15.7mm • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • Sealed IP67 & flux proof types available	• AC coil voltage type • 16A switching capability • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • VDE: 0435/0110 VDE: 0631/0700
Contact Ratings					
Contact Form	1A, 1C	1A, 1C	1A, 1B, 1C / 2A, 2B, 2C	1A, 1B, 1C / 2A, 2B, 2C	1A, 1B, 1C / 2A, 2B, 2C
Contact Material	AgNi AgNi+Au plated	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	6A	8A	10A	16A	16A
Max. Switching Voltage	400VAC/125VDC	440VAC/125VDC	440VAC/125VDC	440VAC/125VDC	440VAC
Max. Switching Power	1500VA/180W	2000VA/240W	2500VA/300W / 1250VA/150W	4000VA/3000VA / 2000VA	3000VA/4000VA / 2000VA
Rated Load (Resistive)	6A 250VAC/30VDC	8A 250VAC/30VDC 8A 30VDC	10A 250VAC/ 30VDC / 5A 250VAC/ 30VDC	16A 250VAC 12A 250VAC / 8A 250VAC	16A 250VAC 12A 250VAC / 8A 250VAC
Coil Ratings					
Rated Voltage	5 to 60VDC	5 to 60VDC	5 to 60VDC	5 to 110VDC	24, 115, 230 VAC
Nominal Operating Power	170mW to 210mW (48 to 60VDC)	0.22 to 0.29W	0.22 to 0.36W	0.4W	0.75VA
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	4000VAC	5000VAC	5000VAC	5000VAC	5000VAC
Dielectric Strength (1min) Between Adjacent Contacts			2500VAC	2500VAC	2500VAC
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Surge Withstand	6000VAC	10000VAC	10000VAC	10000VAC	
Ambient Temperature	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +70˚C
Operate / Release Time	8ms/4ms	15ms/8ms	10ms/5ms	15ms/8ms	15ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^6 OPS
Electrical Life (min)	1 x 10^4 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	5 x 10^4 OPS
Layout (Bottom View)					
Dimensions (mm)	28.0 x 16.0 x 5.0	28.5 x 10.1 x 12.3	28.5 x 10.1 x 12.5	29.0 x 12.7 x 15.7	29.0 x 12.7 x 15.7
Terminal Type	PCB	PCB	PCB	PCB	PCB
Approvals	UL & CUR	UL & CUR, TÜV CQC FIMKO	UL & CUR, VDE CQC	UL & CUR, VDE CQC FIMKO	Pending
Socket	SRSI	-	-	SRN3-S, SRN5-S	SRN3-S, SRN5-S

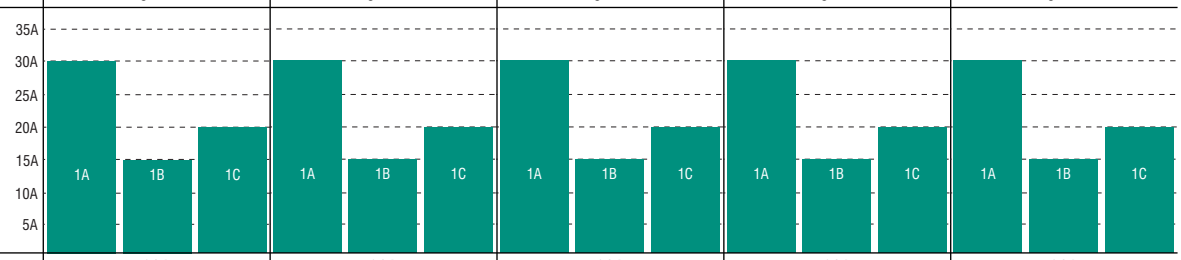
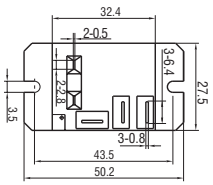
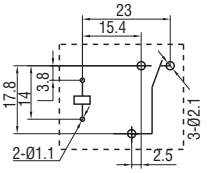
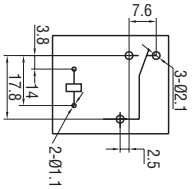
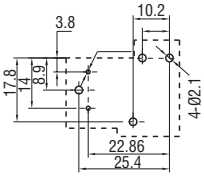
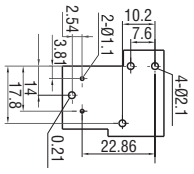
Model					
	SRRNS	**SRPT**	**SRRT/SRRTTS**	**SRPF**	**ERRL**
Features	• High sensitive: 0.25W • Low height: 15.7mm • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • Sealed IP67 & flux proof types available	• High inrush: TV-5 80A/ 125VAC • Low height: 15.7mm • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • Sealed IP67 & flux proof types available	• High temperature: 105˚C • Low height: 15.7mm • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • Sealed IP67 & flux proof types available	• 5KV dielectric strength (between coil & contacts) • Low height: 15.7mm • Meets VDE 0435/0110/ 0631/0700 • Creepage distance:> 8mm • UL94, V-0 flammability class • Ambient temp up to 125˚C	• 10A switching capability • 5KV dielectric strength (between coil & contacts) • Sealed IP67 & flux proof types available
Contact Ratings					
Contact Form	1A, 1B, 1C	1A	1A, 1C	1A, 1B	1A, 1B, 1C
Contact Material	$AgSnO_2$ AgNi	$AgSnO_2$	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	10A	16A	16A	20A	10A
Max. Switching Voltage	440VAC/125VDC	440VAC	440VAC/125VDC	440VAC/125VDC	250VAC/30VDC
Max. Switching Power	2500VA	4000VA	2500VA	5000VA	2500VA/300W
Rated Load (Resistive)	10A 250VAC	16A 250VAC TV-5 Inrush 80A	16A 250VAC 10A 250VAC	20A 250VAC	10A 250VAC/30VDC
Coil Ratings					
Rated Voltage	5 to 60VDC	5 to 110VDC	5 to 60VDC	5 to 110VDC	5 to 48VDC
Nominal Operating Power	0.25W	0.4W	0.25W, 0.4W	0.4W	0.55W, 0.72W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	5000VAC	5000VAC	5000VAC	5000VAC	5000VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Surge Withstand	10000VAC	10000VAC	10000VAC	10000VAC	
Ambient Temperature	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +105˚C	-40˚C to +125˚C	-40˚C to +70˚C
Operate / Release Time	15ms/8ms	15ms/8ms	15ms/8ms	15ms/8ms	15ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS (at 250VAC)	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	29.0 x 12.7 x 15.7	29.0 x 12.7 x 15.7	29.0 x 12.7 x 15.7	45 x 12.7 x 15.7	29.0 x 12.6 x 20.6
Terminal Type	PCB	PCB	PCB	PCB & QC	PCB
Approvals	UL & CUR, VDE CQC	VDE CQC	UL & CUR, VDE CQC	UL & CUR, VDE	UL & CUR, TÜV CQC

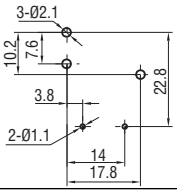
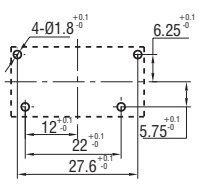
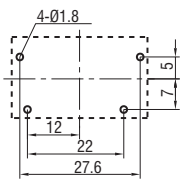
Power Relays

Model					
	ERR-1Pole	**ERR-2Pole**	**ERP**	**ERK**	**ERS**
Features	• 10A switching capability • 5KV dielectric strength (between coil & contacts) • 1 Form A & 1 Form C configurations • Sealed IP67 & flux proof types available	• 10A switching capability • 5KV dielectric strength (between coil & contacts) • 1.5mm contact cap available • Sealed IP67 & flux proof types available	• 20A switching capability • 4KV dielectric strength (between coil & contacts) • Sealed IP67 & flux proof types available	• 20A switching capability • 5KV impulsive withstand voltage (between coil & contacts) • PCB & QC contacts • Sealed IP67 & flux proof types available	• 5KV dielectric strength (between coil & contacts) • 10KV impulse withstand voltage (between coil & contacts) • Creepage distance: 8mm
Contact Ratings					
Contact Form	1A, 1C	2A, 2C	2A, 2C	1A	1A
Contact Material	$AgSnO_2$	$AgSnO_2$ AgNi	$AgSnO_2$ AgCdO	$AgSnO_2$	$AgSnO_2$
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	10A	10A	16A	20A	16A
Max. Switching Voltage	277VAC/30VDC	250VAC/30VDC	277VAC/30VDC	250VAC/30VDC	277VAC/30VDC
Max. Switching Power	2770VA/300W	2500VA/240W	5540VA/480W	5000VA/480W	4000VA/480W
Rated Load (Resistive)	10A 277VAC/30VDC TV-5 120VAC	10A 250VAC 8A 30VDC 5A 250VAC	TV-8 125VAC 20A 277VAC/24VDC 1HP 240VAC	1.5HP 250VAC 20A 250VAC	16A 250VA/30VDC
Coil Ratings					
Rated Voltage	3 to 60VDC	3 to 60VDC	5 to 60VDC	5 to 24VDC	5 to 48VDC
Nominal Operating Power	0.55W	0.55W, 0.8W	0.55W, 0.72W	0.5W	0.54W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	5000VAC	5000VAC	4000VAC	5000VAC	5000VAC
Dielectric Strength (1min) Between Adjacent Contacts		3000VAC			
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	1000VAC	1000VAC
Surge Withstand		10000VAC			10000VAC
Ambient Temperature	-40˚C to +70˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +85˚C
Operate / Release Time	15ms/5ms	15ms/5ms	15ms/5ms	15ms/5ms	20ms/10ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	2 x 10^6 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	29.0 x 13.0 x 25.5	29.0 x 13.0 x 25.5	29.0 x 13.0 x 26.3	22.8 x 12.3 x 24.4	29.0 x 12.6 x 24.2
Terminal Type	PCB	PCB	PCB	PCB & QC	PCB & QC
Approvals	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC

Model	 **EY**	 **JY**	 **FY**	 **SRG**	 **ERD**
Features	• 4KV dielectric strength (between coil & contacts) • Heavy load up to 7500VA • Class F insulation	• 25A switching capability • 1 Form A & 1 Form C configurations • Withstand inrush current 60A • Suitable to switch motor load	• 30A switching capability • Creepage distance: 8mm • 4KV dielectric strength (between coil & contacts) • Dust cover & sealed IP67 types • PCB & QC layouts	• 30A switching capability • PCB coil terminals, ideal for heavy duty load • 4KV dielectric strength (between coil & contacts) • Heavy load up to 7200VA • Open, sealed & dust cover types available	• 30A switching capability • PCB coil terminals, ideal for heavy duty loads • Heavy load up to 7200VA • Sealed & dust covers types available
Contact Ratings					
Contact Form	1A, 2A	1A, 1C	2A, 2C	1A, 1B, 1C	1A, 1B, 1C
Contact Material	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current		20A	30A	30A	30A
Max. Switching Voltage	277VAC/28VDC	250VAC	277VAC/30VDC	277VAC/28VDC	277VAC/28VDC
Max. Switching Power	7500VA/840W	6250VA/600W	7500VA/560W	7200VA/560W	7200VA/560W
Rated Load (Resistive)	1A: 30A 250VAC/28VDC 3HP 240VAC/1.5HP 120VAC 2A: 25A 250VAC/28VDC	Motor : 1.5HP 250VAC 1A: 20A 250VAC/24VDC 1C: NO/NC: 15/10A 250VAC/24VDC	NO: 30A 277VAC/20A 28VDC NC: 3A 277VDC/28VDC Motor: 2.5HP 240VAC	1A: 30A 240VAC/20A 28VDC 1B: 15A 240VAC/10A 28VDC 1C: 20A/10A 240VAC/28VDC	1A: 30A 240VAC/20A 28VDC 1B: 15A 240VAC/10A 28VDC 1C: 20A/10A 240VAC/28VDC
Coil Ratings					
Rated Voltage	6 to 220VAC/3 to 200VDC	5 to 48VDC	24 to 277VAC/5 to 110VDC	12 to 277VAC/5 to 110VDC	12 to 277VAC/5 to 110VDC
Nominal Operating Power	2.7VA, 1.9W	0.9W	4.0VA, 1.7W	2.0VA, 0.9W	2.0VA, 0.9W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	4000VAC	3000VAC	4000VAC	4000VAC	2500VAC
Dielectric Strength (1min) Between Adjacent Contacts			2000VAC		
Dielectric Strength (1min) Between Open Contacts	2000VAC	1000VAC	1500VAC	1500VAC	1500VAC
Surge Withstand			10000VAC		
Ambient Temperature	-55˚C to +70˚C	-40˚C to +70˚C	AC: -40 to +65 DC: -40 to +85˚C	AC: -40 to +60 (DC) +85˚C	AC:-40 to +60 (DC) +85˚C
Operate / Release Time	30ms/30ms	15ms/10ms	25ms/25ms	15ms/10ms	15ms/10ms
Mechanical Life (min)	1 x 10^7 OPS	5 x 10^6 OPS	5 x 10^6 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	2 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	50.5 x 33.5 x 36.0	32.0 x 31.0 x 19.0	52.1 x 33.7 x 26.7	32.2 x 27.0 x 20.4	32.4 x 27.5 x 27.8
Terminal Type	PCB, QC, Screw	Panel Mount, QC	Panel Mount, PCB, QC	PCB	PCB & QC
Approvals	UL & CUR, TÜV CQC	UL & CUR, VDE CQC	UL & CUR, CQC	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC

Power Relays

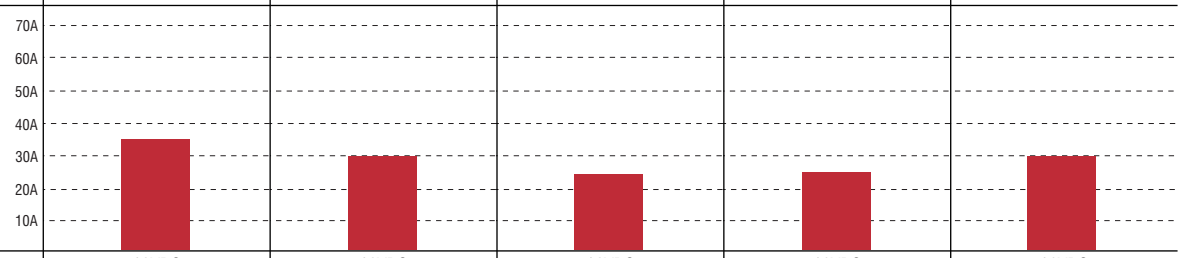
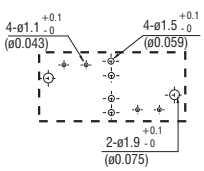
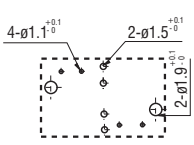
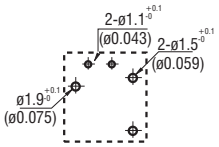
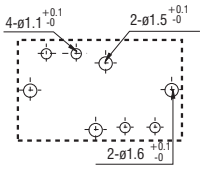
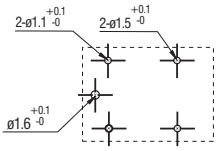
Model	 **ERG**	 **ERH**	 **ERJ**	 **ERV**	 **ERU**
Features	• 30A switching capability • 2.5KV dielectric strength (between coil & contacts) • Heavy load up to 7200VA • Sealed IP67 & dust cover types available	• 30A switching capability • PCB coil terminals, ideal for heavy load • 4KV dielectric strength (between coil & contacts) • Heavy load up to 7200VA • Sealed IP67 & dust cover types available	• 30A switching capability • PCB coil terminals, ideal for heavy duty load • 2.5KV dielectric strength (between coil & contacts) • Sealed IP67 & flux proof types available	• 30A switching capability • PCB coil terminals, ideal for heavy duty load • 2.5KV dielectric strength (between coil & contacts) • Sealed IP67 & open types available	• 30A switching capability • PCB coil terminals, ideal for heavy duty load • Heavy load up to 7200VA • Sealed IP67 & open types available
Contact Ratings					
Contact Form	1A, 1B, 1C	1A, 1B, 1C	1A, 1B, 1C	1A, 1B, 1C	1A, 1B, 1C
Contact Material	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	30A	30A	30A	30A	30A
Max. Switching Voltage	277VAC/28VDC	277VAC/28VDC	277VAC/30VDC	277VAC/30VDC	277VAC/30VDC
Max. Switching Power	7200VA/560W	7200VA/560W	7200VA/560W	7200VA/600W	7200VA/600W
Rated Load (Resistive)	1A: 30A 240VAC/20A 28VDC 1B: 15A 240VAC/10A 28VDC 1C: 20A/10A 240VAC/28VDC	1A: 30A 240VAC/20A 28VDC 1B: 15A 240VAC/10A 28VDC 1C: 20A/10A 240VAC/28VDC	1A: 30A 240VAC/20A 28VDC 1B: 15A 240VAC/10A 28VDC 1C: 20A/10A 240VAC/28VDC	1A: 30A 240VAC/20A 30VDC 1B: 15A 240VAC/30VDC 1C: 20A/10A 240VAC/30VDC	1A: 30A 240VAC/20A 30VDC 1B: 15A 240VAC/10A 30VDC 1C: 20A/10A 240VAC/30VDC
Coil Ratings					
Rated Voltage	12 to 277VAC/5 to 110VDC	12 to 277VAC/5 to 110VDC	5 to 110VDC	5 to 110VDC	5 to 110VDC
Nominal Operating Power	2.0VA, 0.9W	2.0VA, 0.9W	0.9W	0.9W	0.9W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	2500VAC	4000VAC	2500VAC	2500VAC	2500VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts	1500VAC	1500VAC	1500VAC	1500VAC	1500VAC
Surge Withstand					
Ambient Temperature	AC:-40 to +60 (DC) +85˚C	AC:-40 to +60 (DC) +85˚C	Class F:-55 to +125˚C	Class F:-55 to +125˚C	Class F:-55 to +125˚C
Operate / Release Time	15ms/10ms	15ms/10ms	15ms/10ms	15ms/10ms	15ms/10ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	50.2 x 27.5 x 27.8	32.4 x 27.5 x 27.8	32.2 x 27.5 x 28.0	30.5 x 24.6 x 15.7	31.8 x 26.9 x 19.1
Terminal Type	QC	PCB, QC	PCB, QC	PCB, QC	PCB
Approvals	UL & CUR, CQC	UL & CUR, TÜV CQC	UL & CUR, TÜV IMQ CQC	UL & CUR, CQC	UL & CUR, CQC

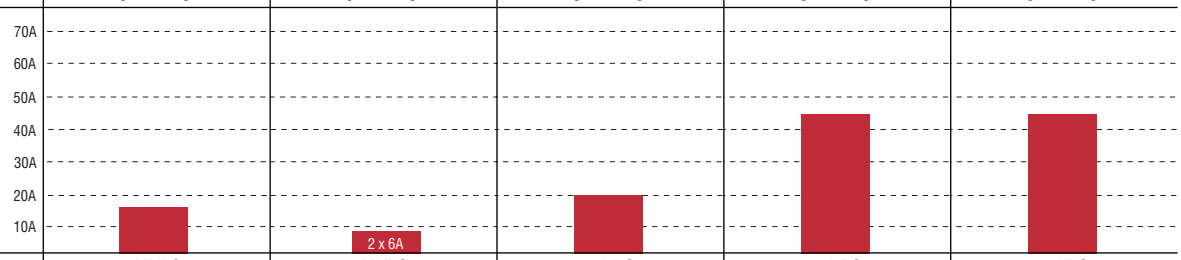
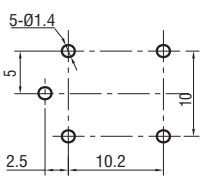
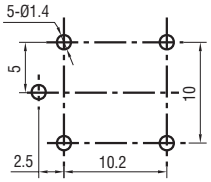
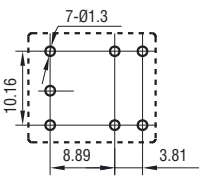
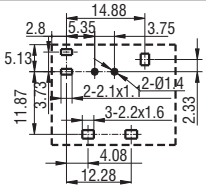
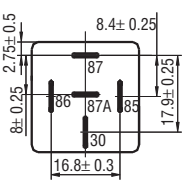
Model	 **ERW**	 **SRW**	 **ERY**
Features	• 30A switching capability • PCB coil terminals, ideal for heavy load • 2.5KV dielectric strength (between coil & contacts) • Sealed IP67 & flux proof types available	• 4.5KV dielectric strength (between coil & contact) • Heavy load up to 5000VA • Ideal for motor switching • Withstand inrush current of 80A • PCB & QC layout available	• 25A switching capability • Withstand inrush current of 60A • 1 Form A configuration • PCB & QC layouts • Suitable to switch motor load
Contact Ratings			
Contact Form	1A, 1B, 1C	1A	1A
Contact Material	$AgSnO_2$	$AgSnO_2$	$AgSnO_2$
Max. Rated Switching Current (Resistive load)			
Max. Rated Carrying Current	30A	20A	25A
Max. Switching Voltage	277VAC/30VDC	250VAC	250VAC
Max. Switching Power	7200VA/600W	5000VA	6250VA/450W
Rated Load (Resistive)	1A: 30A 240VAC/20A 30VDC 1B: 15A 240VAC/10A 30VDC 1C: 20A/10A 240VAC/30VDC	Resistive: 20A 250VAC Motor: 1HP 120VAC 2HP 240VAC	Resistive: 20A 250VAC Motor: 1HP 250VAC
Coil Ratings			
Rated Voltage	5 to 110VDC	5 to 48VDC	5 to 48VDC
Nominal Operating Power	0.9W	0.9W	0.9W
Characteristics			
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	2500VAC	4500VAC	2000VAC
Dielectric Strength (1min) Between Adjacent Contacts			
Dielectric Strength (1min) Between Open Contacts	1500VAC	1000VAC	1000VAC
Surge Withstand			
Ambient Temperature	Class F:-55 to +125˚C	-25 to +70˚C	-40 to +55˚C
Operate / Release Time	15ms/10ms	20ms/10ms	15ms/10ms
Mechanical Life (min)	1 x 10^7 OPS	2 x 10^6 OPS	5 x 10^6 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)			
Dimensions (mm)	32.2 x 27.5 x 19.8	30.5 x 16.0 x 23.5	31.0 x 18.5 x 29.0
Terminal Type	PCB, QC	PCB, QC	PCB, QC
Approvals	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC	UL & CUR, CQC

Notes

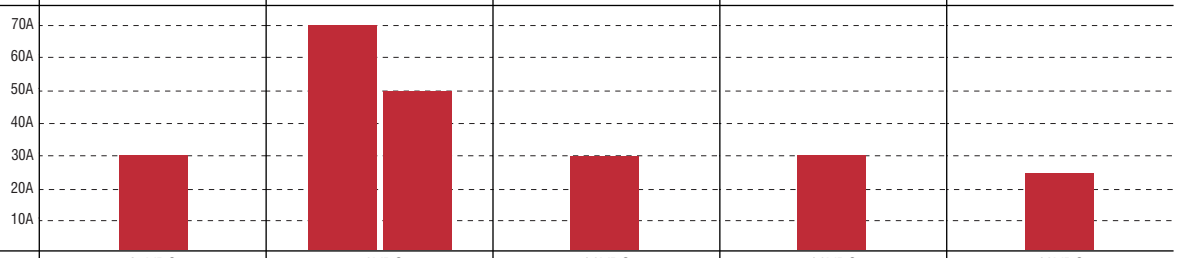
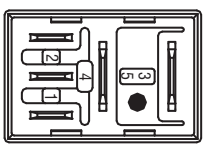
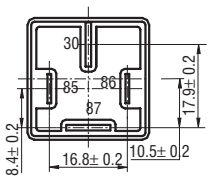
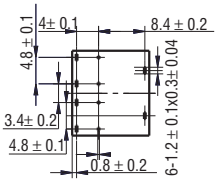
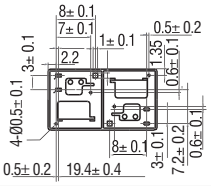
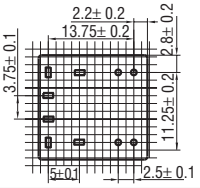
AUTOMOTIVE

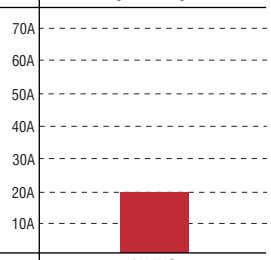
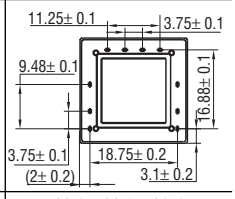
Automotive Relays

Model					
	NEC EN2	**NEC EP2**	**NEC EP1**	**NEC ET2**	**NEC EQ1**
Features	• Twin relay for motor & solenoid reversible control • 30% Space saving over 2 conventional relays • Flux tight housing • Washable type available	• Twin relay for motor & solenoid reversible control • 50% Space saving over 2 conventional relays • Flux tight housing • Washable type available	• High performance & reliability • 33% Space saving over conventional relay • Washable type available	• 75% Space saving over conventional relay (EP2/EP1) • High performance & productivity by unique symmetrical structure • Fully sealed	• 75% Space saving over conventional relay (MR301) • High performance & productivity by unique symmetrical structure • Fully sealed
Contact Ratings					
Contact Form	1C x 2 (H Bridge or separate)	1C x 2 (H Bridge or separate)	1C	1C	1A, 1C
Contact Material	Silver Oxide Alloy	Silver Oxide Alloy	Silver Oxide Alloy	Silver Oxide Alloy	Silver Oxide Alloy
Max. Rated Switching Current (Resistive load)					
Max. Switching Voltage	16VDC	16VDC	16VDC	16VDC	16VDC
Max. Switching Power					
Rated Load (Resistive)	Standard H Bridge 25A/20A Standard Separate 30A/25A High Curr. H Bridge 35A/30A High Curr. Separate 40A/35A	Standard 25A/20A High Current 30A/25A	Standard 30A High Current 35A	35A	35A/40A
Coil Ratings					
Rated Voltage	12VDC	12VDC	12VDC	12VDC	12VDC
Nominal Operating Power	Refer to data	Refer to data	Refer to data	640mW	Refer to data
Characteristics					
Insulation Resistance at 500VDC	100MΩ	100MΩ	100MΩ	100MΩ	100MΩ
Dielectric Strength Between Coil & Contacts	500VAC	500VAC	500VAC	500VAC	500VAC
Dielectric Strength (1min) Between Adjacent Contacts	500VAC	500VAC	500VAC	500VAC	500VAC
Dielectric Strength (1min) Between Open Contacts	500VAC	500VAC	500VAC	500VAC	500VAC
Surge Withstand					
Ambient Temperature	-40 to +85˚C	-40 to +85˚C	-40 to +85˚C	-40 to +85˚C	-40 to +85˚C
Operate / Release Time	5ms/7ms (Approx)	5ms/7ms (Approx)	10ms/10ms (Max)	2.5ms/3ms (Typ)	3ms/4ms (Typ)
Mechanical Life (min)	1 x 10^6 OPS	1 x 10^6 OPS	1 x 10^6 OPS	1 x 10^6 OPS	1 x 10^6 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	33.5 x 16.5 x 17.0	24.3 x 16.7 x 16.5	15.1 x 16.7 x 16.5	22.5 x 13.3 x 11.0	21.8 x 15.0 x 15.4
Terminal Type	PCB	PCB	PCB	PCB	PCB
Approvals					

Model	 **SRMA**	 **SRMA**	 **SRL**	 **SRK**	 **SRJ**
Features	• Small size • Carrying current 35A/10min • Extended operation range • Sealed IP67 type available	• Small size • High current contact capacity • Extended operation range • Sealed IP67 type available • Reflow soldering versions available • Double NO contacts	• Switching capability up to 20A • Six different contact arrangements • Open & sealed types available • Two terminal sizes available	• 45A switching capability • 1 Form A & 1 Form C contact arrangements • PCB terminals available • Two pin out choices • Open & sealed IP67 types available	• 45A Switching capability • 1 Form A & 1 Form C contact arrangements • Various mounting terminations available • Sealed IP67 & dust cover types available
Contact Ratings					
Contact Form	1A, 1C	1U	1A, 1B, 1C / 1U, 1V, 1W	1A, 1C	1A, 1C
Contact Material	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi
Max. Rated Switching Current (Resistive load)					
Max. Switching Voltage	16VDC	16VDC	75VDC	75VDC	75VDC
Max. Switching Power					
Rated Load (Resistive)	15A 14VDC	2 x 6A 14VDC	1A: 15A 13VDC 1B:10A 13.5VDC 1C: NO/NC 15A/10A 13.5VDC 1U: 2x10A 13.5VDC 1V: 2x7A 13.5VDC 1W:NO/NC 2x7A 2x5A 13.5VDC	1A: 45A 14VDC 1C: NO/NC 45A/30A 14VDC	1A: 40A 14VDC 1C: NO/NC 40A/30A 14VDC 30A/20A 14VDC
Coil Ratings					
Rated Voltage	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC	6 to 24VDC
Nominal Operating Power	0.6W	1W	1.1W	1.2W, 1.6W, 1.9W	1.6W, 1.7W, 1.8W, 1.9W
Characteristics					
Insulation Resistance at 500VDC	100MΩ	100MΩ	100MΩ	500MΩ	100MΩ
Dielectric Strength Between Coil & Contacts	500VAC	500VAC	500VAC	500VAC	500VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts					
Surge Withstand					
Ambient Temperature	-40 to +85˚C	-40 to +85˚C	-40 to +85˚C	-40 to +125˚C	-40 to +85˚C
Operate / Release Time	10ms/5ms	10ms/5ms	3ms/1.5ms	10ms/10ms	7ms/5ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	2 x 10^5 (15A 12vdc) 1 x 10^5 (30A 12VDC)	2 x 10^5 OPS	2 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	15.7 x 12.5 x 14.0	15.7 x 12.5 x 14.0	17.5 x 15.0 x 19.5	24.0 x 19.0 x 18.5	26.2 x 26.2 x 23.7
Terminal Type	PCB	PCB	PCB	PCB	PCB & QC
Approvals					

Automotive Relays

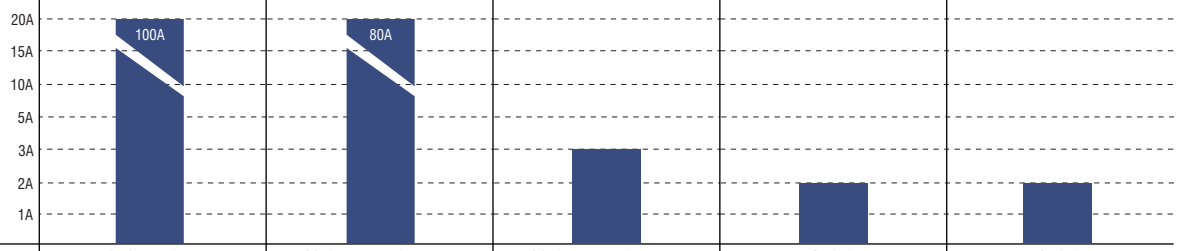
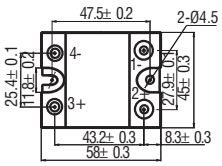
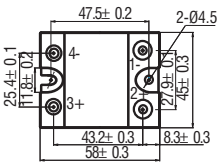
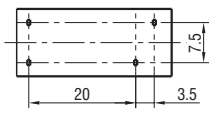
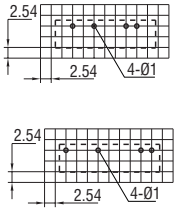
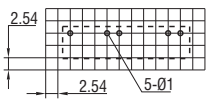
Model	 **SRZ**	 **SRN**	 **ERA**	 **ERC**	 **SRA**
Features	• 30A switching capability • 1 Form A & 1 Form C contact arrangements • Sealed IP67 & dust cover types available • Contact gap≥0.6mm	• 50A/70A switching capability • Extended temperature range up to 125˚C • 1 Form A & 1 Form C contact arrangement • Sealed IP67 & dust cover types available • With transient suppression resistor	• 25A motor lock load • Low pick-up type available • Single & twin versions available • Coil wire insulation class H • Reflow soldering version available	• Subminiature relay • Max. continuous current 30A • Twin separate systems (Twin versions) • Reflow soldering version available (open vent hole)	•1 Form C contact arrangement • Single & double relay available • Silent double relay available • Coil insulation class H (180˚C)
Contact Ratings					
Contact Form	1A, 1C	1A, 1C	1C, 2C	1A, 1C, 2A, 2C	1C, 2C
Contact Material	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi
Max. Rated Switching Current (Resistive load)					
Max. Switching Voltage	27VDC	50VDC	16VDC	16VDC	40VDC
Max. Switching Power					
Rated Load (Resistive)	1A: 30A 13VDC 20A 27VDC 1C: NO/NC 20A/10A 13VDC 20A/10A 27VDC	70 Amp type:1A: 70A 13.5VDC 40A 27VDC 50 Amp type:1A: 50A 13.5VDC 40A 27VDC 1C: NO/NC 50/30A 13.5VDC 40A/10A 27VDC	Motor lock load: 25A 14VDC NO: 30A 14VDC	20A 13.5VDC	20A 13.5VDC
Coil Ratings					
Rated Voltage	12 to 24VDC	6 to 24VDC	12VDC	6 to 24VDC	12VDC
Nominal Operating Power	1.2W, 1.3W, 1.4W, 1.6W, 1.8W	1.6W, 1.8W, 2.0W, 2.2W	0.64W, 0.8W	0.55W, 0.8W	0.56W, 0.81W
Characteristics					
Insulation Resistance at 500VDC	500MΩ	100MΩ	100MΩ	100MΩ	100MΩ
Dielectric Strength Between Coil & Contacts	500VAC		500VAC	500VAC	500VAC
Dielectric Strength (1min) Between Adjacent Contacts					
Dielectric Strength (1min) Between Open Contacts					
Surge Withstand					
Ambient Temperature	-40 to +125˚C	-40 to +125˚C	-40 to +85˚C	-40 to +105˚C	-40 to +85˚C
Operate / Release Time	10ms/10ms	5ms/7ms (Approx)	10ms/10ms	4ms/2ms	10ms/10ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^6 OPS	1 x 10^6 OPS	1 x 10^7 OPS	1 x 10^7 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	3 x 10^5 OPS (20A 13.5VDC)	2 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	23.0 x 15.5 x 25.4	26.5 x 26.5 x 25.2	14.0 x 15.4 x 13.5 (Twin)	23.5 x 12.9 x 9.9 (Twin)	17.5 x 16.9 x 13.2 (Double)
Terminal Type	PCB & QC	PCB	PCB	PCB	PCB
Approvals					

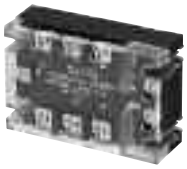
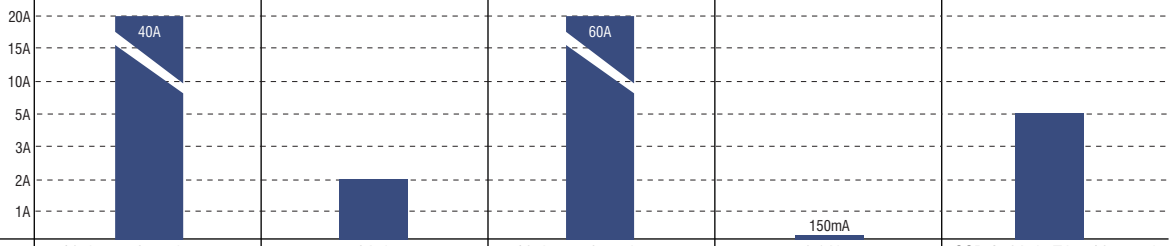
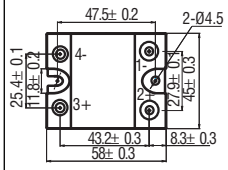
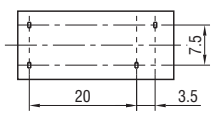
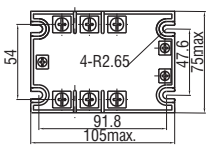
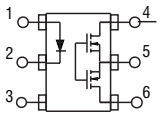
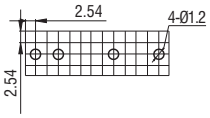
Model	 **SRE**
Features	• 20A switching capability • 2 x 1 Form C contact arrangement • Low voltage pick up versions • Micro miniature
Contact Ratings	
Contact Form	2C
Contact Material	$AgSnO_2$ AgNi
Max. Rated Switching Current (Resistive load)	
Max. Switching Voltage	40VDC
Max. Switching Power	280W
Rated Load (Resistive)	20A 13.5VDC
Coil Ratings	
Rated Voltage	12VDC
Nominal Operating Power	0.56W, 0.81W
Characteristics	
Insulation Resistance at 500VDC	100MΩ
Dielectric Strength Between Coil & Contacts	500VAC
Dielectric Strength (1min) Between Adjacent Contacts	
Dielectric Strength (1min) Between Open Contacts	500VAC
Surge Withstand	
Ambient Temperature	-40 to +85˚C
Operate / Release Time	10ms/10ms
Mechanical Life (min)	1 x 10^7 OPS
Electrical Life (min)	2 x 10^5 OPS
Layout (Bottom View)	
Dimensions (mm)	22.8 x 22.3 x 20.4
Terminal Type	PCB
Approvals	

Notes

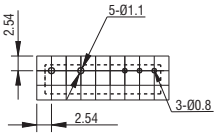
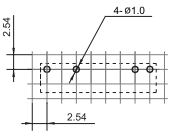
SOLID STATE

Solid State Relays

Model					
	SSR01	**SSR02**	**SSR03**	**SSR04**	**SSR05**
Features	• MOSFET output • DC control • Low on-state resistance • Photo isolation • Standard panel mount package • 2500Vrms dielectric strength	• 4000V dielectric strength • Photo isolation • Zero cross/random turn-on • Double SCR AC output • Panel mount • DC & AC control	• 2500Vrms dielectric strength • LED status indicator • 600 Volt blocking voltage • Photo isolation • Built-in snubber • Zero cross/random turn-on • Printed circuit board mount	• DC input AC output for 2A load at 25˚C • Photo isolation • Built-in snubber • Zero cross/random turn-on • Printed circuit board mount	• 2500Vrms dielectric strength • 600 Volt blocking voltage • Photo isolation • Zero cross/random turn-on • Printed circuit board mount
Input					
Input Voltage	3 to 32VDC	3 to 32VDC, 90 to 280VAC	5, 12, 24VDC	5, 12, 24VDC	5, 12, 24VDC
Input Current (Max.)	20mA (at 32VDC)	25mA (at 32VDC)	20mA	20mA	20mA
Status Indicators	YES/NO	YES/NO	YES	NO	NO
Output					
Load Voltage Range	24 to 400VDC	48 to 530VAC	75 to 400VAC	75 to 264VAC	75 to 264VAC
Max. Rated Switching Current (Resistive load)					
Max. Surge Current (10ms)	Refer to data	10 times rated current	10 times rated current	25Apk	25Apk
Max. On-State Voltage Drop	0.3V to 2.4V	1.7VAC	1.5VAC	1.5VAC	1.5VAC
Max. Off-State Leakage Current	0.1mA	5mA	1.5mA	1.5mA	1.5mA
Min. Off-State (dv/dt)		500V/μS	100V/μS	100V/μS	100V/μS
Max. Turn-on Time Zero Cross Turn-on		1/2 cycle +1ms	1/2 cycle +1ms	10ms	10ms
Max. Turn-on Time Random at 50Hz	0.5ms	1ms	1ms	1ms	1ms
Max. Turn Off Time	0.5ms	AC I/P: 40ms DC I/P: 1/2 cycle +1ms	1/2 cycle +1ms	10ms	10ms
General					
Dielectric Strength	2500VAC 1min	4000VAC	2500VAC 1min	2000VAC 1min	2500VAC 1min
Min Insulation Resistance	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Ambient Operating Temperature	-30˚C to +80˚C	-30˚C to +80˚C	-30˚C to +80˚C	-30˚C to +80˚C	-30˚C to +85˚C
Layout (Bottom View)					
Dimensions (mm)	58.0 x 45.0 x 22.9	58.0 x 45.0 x 22.9	29.2 x 13.2 x 27.5	24.0 x 6.5 x 21.2	25.1 x 6.5 x 21.2
Terminal Type	Screw	Screw	PCB	PCB	PCB
Approvals		UL & CUR		UL & CUR, TÜV CQC	TÜV CQC

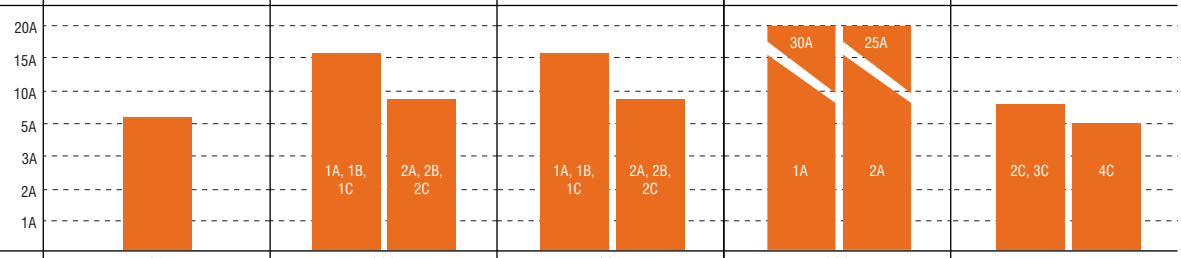
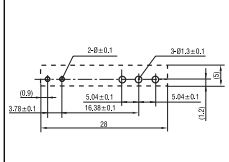
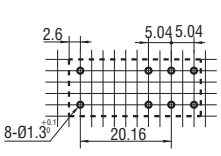
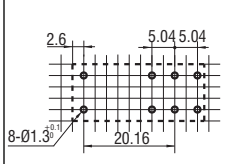
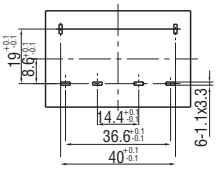
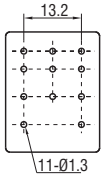
Model	 **SSR06**	 **SSR07**	 **SSR08**	 **SSR09**	 **SSR10**
Features	• 4000V dielectric strength • Photo isolation • Built-in snubber • Zero cross/random turn-on • Panel mount	• 2500Vrms dielectric strength • LED status indicator • Photo isolation • Bipolar transistor output • Printed circuit board mount	• 4000V dielectric strength • Photo isolation • LED status indicator • Built-in snubber • Zero cross/random turn-on • Panel mount	• Photo isolation • 1500VAC dielectric strength • Insulation resistance:1000M • Printed circuit board mount	• Double SCR AC output or TRIAC AC output • 4000VAC dielectric strength • Printed circuit board mount
Input					
Input Voltage	3 to 32 VDC, 24VAC, 110VAC, 220VAC	5, 12, 24VDC	3 to 32VDC		3 to 15VDC, 15 to 32VDC
Input Current (Max.)	15mA (AC) 25mA (DC)	20mA	35mA	20mA	40mA (1B), 20mA(2B)
Status Indicators	YES/NO	YES	YES	NO	NO
Output					
Load Voltage Range	48 to 400VAC	3 to 125VDC	48 to 440VAC	60 to 400VAC	48 to 480VAC
Max. Rated Switching Current (Resistive load)					
Max. Surge Current (10ms)	10 times of rated current	8Apk	10 times of rated current	0.3Akp	SCR 250Apk, Triac 10x rated
Max. On-State Voltage Drop	1.5VAC	1.5VDC	1.5VAC		1.5VAC
Max. Off-State Leakage Current	5mA	0.1mA	10mA	1μA	1.5mA
Min. Off-State (dv/dt)	200V/μS		200V/μS		200V/μS
Max. Turn-on Time Zero Cross Turn-on	1/2 cycle +1ms		1/2 cycle +1ms		1/2 cycle +1ms
Max. Turn-on Time Random at 50Hz	1ms	1ms	10ms	0.3ms	1ms
Max. Turn Off Time	1/2 cycle +1ms	1ms	10ms	0.5ms	1/2 cycle +1ms
General					
Dielectric Strength	4000VAC 1min	2500VAC 1min	4000VAC 1min	1500VAC 1min	4000VAC
Min Insulation Resistance	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Ambient Operating Temperature	-30˚C to +80˚C	-30˚C to +80˚C	-30˚C to +80˚C	-40˚C to +85˚C	-30˚C to +80˚C
Layout (Bottom View)					
Dimensions (mm)	58.0 x 45.0 x 22.9	29.2 x 13.2 x 27.5	105.0 x 75.0 x 30.0	10.3 x 7.6 x 3.5	49.8 x 26.5 x 9.5
Terminal Type	Screw	PCB	Screw	DIP	PCB
Approvals	UL & CUR CQC		UL & CUR		UL & CUR, CQC

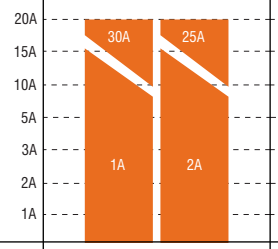
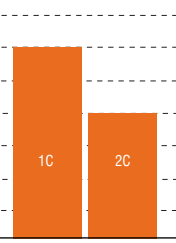
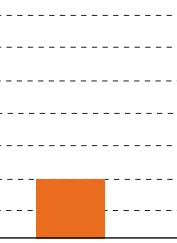
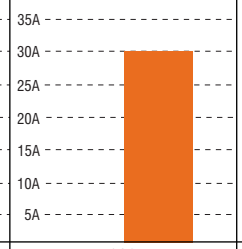
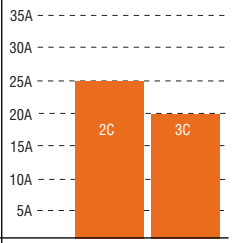
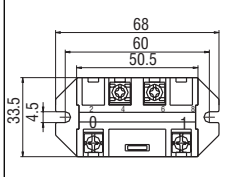
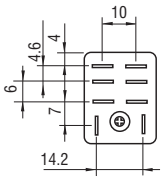
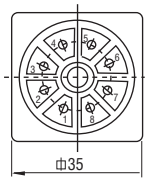
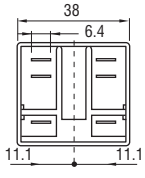
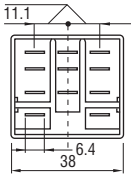
Solid State Relays

Model		
	SSR11	**SSR12**
Features	• I/O modules for interface between CPU & external input devices or loads • 2500Vrms dielectric strength • Printed circuit board mount • AC & DC input options	• I/O modules for interface between CPU & external input devices or loads • 2500Vrms dielectric strength • Printed circuit board mount • AC & DC input options
Input		
Input Voltage	12VDC, 24VDC, 110VAC, 240VAC	5VDC, 12VDC, 24VDC, 240VAC
Input Current (Max.)	10mA	25mA
Status Indicators	NO	NO
Output		
Load Voltage Range	5VDC	3 to 30VDC, 75 to 265VAC
Max. Rated Switching Current (Resistive load)	4mA	1A
Max. Surge Current (10ms)		
Max. On-State Voltage Drop		
Max. Off-State Leakage Current		
Min. Off-State (dv/dt)		
Max. Turn-on Time Zero Cross Turn-on		
Max. Turn-on Time Random at 50Hz	25ms	1ms
Max. Turn Off Time	30ms	11ms
General		
Dielectric Strength	2500VAC 1min	2500VAC 1min
Min Insulation Resistance	1000MΩ	1000MΩ
Ambient Operating Temperature	-30˚C to +80˚C	-30˚C to +80˚C
Layout (Bottom View)		
Dimensions (mm)	20.0 x 5.0 x 17.0	20.0 x 5.0 x 17.0
Terminal Type	PCB	PCB
Approvals	CQC	CQC

INDUSTRIAL POWER + SOCKETS

Industrial Power Relays

Model					
	ETS	**SRRHN/SRP**	**SRRHN/SRP-AC**	**HY1/2**	**HY**
Features	• 6A switching capability • 1 Form A & 1 Form C configurations • 6KV impulsive withstand voltage (between coil & contacts) • Slim 5mm size	• 16A switching capability • Low height: 15.7mm • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • Sealed IP67 & flux proof types available	• AC coil voltage type • 16A switching capability • 5KV dielectric strength (between coil & contacts) • Creepage distance: 10mm • VDE: 0435/0110 VDE: 0631/0700	• 4KV dielectric strength (between coil & contacts) • Heavy load up to 7500VA • Class F insulation	• 1.5KV dielectric strength (between coil & contacts) • Gold plated contact available • Conform to the CE low voltage directive • Various terminals available • Various sockets available
Contact Ratings					
Contact Form	1A, 1C	1A, 1B, 1C / 2A, 2B, 2C	1A, 1B, 1C / 2A, 2B, 2C	1A, 2A	2C, 3C, 4C
Contact Material	AgNi AgNi+Au plated	$AgSnO_2$ AgNi	$AgSnO_2$ AgNi	$AgSnO_2$	AgCe AgCe+Au plated
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current	6A	16A	16A	30A	
Max. Switching Voltage	400VAC/125VDC	440VAC/125VDC	440VAC	277VAC/28VDC	250VAC/30VDC
Max. Switching Power	1500VA/180W	4000VA/3000VA / 2000VA	3000VA/4000VA / 2000VA	7500VA/840W	1750VA/210W
Rated Load (Resistive)	6A 250VAC/30VDC	16A 250VAC 12A 250VAC / 8A 250VAC	16A 250VAC 12A 250VAC / 8A 250VAC	TV-10 120VAC 1A: 30A 250VAC 3HP 240VAC/1.5HP 120VAC 2A: 25A 250VAC	2C/3C: 7A 250VAC/30VDC 4C: 5A 250VAC/30VDC
Coil Ratings					
Rated Voltage	5 to 60VDC	5 to 110VDC	24, 115, 230 VAC	6 to 220VAC/3 to 200VDC	6 to 240VAC/5 to 110VDC
Nominal Operating Power	170mW to 210mW (48 to 60VDC)	0.4W	0.75VA	2.7VA, 1.9W	1.2VA, 0.9W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	1000MΩ	1000MΩ	1000MΩ	1000MΩ
Dielectric Strength (1min) Between Coil & Contacts	4000VAC	5000VAC	5000VAC	4000VAC	1500VAC
Dielectric Strength (1min) Between Adjacent Contacts		2500VAC	2500VAC		1500VAC
Dielectric Strength (1min) Between Open Contacts	1000VAC	1000VAC	1000VAC	2000VAC	1000VAC
Surge Withstand	6000VAC	10000VAC			
Ambient Temperature	-40˚C to +85˚C	-40˚C to +85˚C	-40˚C to +70˚C	-55˚C to +70˚C	-55˚C to +70˚C
Operate / Release Time	8ms/4ms	15ms/8ms	15ms/5ms	30ms/30ms	25ms/25ms
Mechanical Life (min)	1 x 10^7 OPS	1 x 10^7 OPS	1 x 10^6 OPS	1 x 10^7 OPS	2 x 10^7 OPS
Electrical Life (min)	1 x 10^4 OPS	1 x 10^5 OPS	5 x 10^4 OPS	1 x 10^5 OPS	2 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	28.0 x 16.0 x 5.0	29.0 x 12.7 x 15.7	29.0 x 12.7 x 15.7	50.5 x 33.5 x 36.0	28.0 x 21.5 x 35.0
Terminal Type	PCB	PCB	PCB	PCB, QC, Screw	PCB, Plug-in
Approvals	UL & CUR	UL & CUR, VDE CQC FIMKO	Pending	UL & CUR, TÜV CQC	cURus
Socket	SRSI	SRN3-S, SRN5-S	SRN3-S, SRN5-S	-	SRN4C, SRN3C, SRN2D

Model	 **EY**	 **QY**	 **RS**	 **731**	 **72**
Features	• 4KV dielectric strength (between coil & contacts) • Heavy load up to 7500VA • Class F insulation	• 15A switching capability • 1.5KV dielectric strength (between coil & contacts) • Conform to the CE low voltage directive • Various terminals available • Various sockets available	• Arc barriers to prevent flashover between contacts • Visible latch facility • Plug in • Mechanical flag indicator	• 30A switching capability • Single pole, double contact • Chassis mount • 0.25 push on terminals	• 25A switching capability • 2 PCO, 3 PCO • Chassis mount • 0.25 push on terminals
Contact Ratings					
Contact Form	1A, 2A	1C, 2A	2C, 3C	1C	2C, 3C
Contact Material	$AgSnO_2$	AgCe	$AgSnO_2$		
Max. Rated Switching Current (Resistive load)					
Max. Rated Carrying Current		15A	10A	30A	25A
Max. Switching Voltage	277VAC/28VDC	250VAC/30VDC	250VAC/30VDC	250VAC	250VAC
Max. Switching Power	7500VA/840W	3750VA/450W	2500VA/300W	7500VA	
Rated Load (Resistive)	1A: 30A 250VAC/28VDC 3HP 240VAC/1.5HP 120VAC 2A: 25A 250VAC/28VDC	1C: 15A 250VAC/30VDC 2C: 10A 250VAC/30VDC	10A	Resistive: 30A 250VAC Motor: 1.5HP 120VAC	2C: Resistive: 25A 250VAC Motor: 1.5HP 250VAC 3C: Resistive: 20A 250VAC Motor: 1HP 250VAC
Coil Ratings					
Rated Voltage	6 to 220VAC/3 to 200VDC	6 to 240VAC/5 to 110VDC	6 to 230VAC/6 to 110VDC	12 to 240VAC, 12 to 110VDC	12 to 240VAC, 12 to 110VDC
Nominal Operating Power	2.7VA, 1.9W	1.2VA, 0.9W	2.7VA AC, 1.5W DC	3.4VA, 1.5W	2.0VA, 1.2W
Characteristics					
Insulation Resistance at 500VDC	1000MΩ	500MΩ	1000MΩ		
Dielectric Strength (1min) Between Coil & Contacts	4000VAC	1500VAC	2500VAC	2200VAC	1600VAC
Dielectric Strength (1min) Between Adjacent Contacts		1500VAC	2000VAC		
Dielectric Strength (1min) Between Open Contacts	2000VAC	1000VAC	1000VAC		
Surge Withstand					
Ambient Temperature	-55˚C to +70˚C	-40˚C to +70˚C	-40 to +55˚C	-40 to +60˚C	-40 to +70˚C
Operate / Release Time	30ms/30ms	25ms/25ms	25ms/25ms	25ms/20ms	25ms/20ms
Mechanical Life (min)	1 x 10^7 OPS	2 x 10^7 OPS	1 x 10^7 OPS	10 x 10^6 OPS	10 x 10^6 OPS
Electrical Life (min)	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS	1 x 10^5 OPS
Layout (Bottom View)					
Dimensions (mm)	50.5 x 33.5 x 36.0	28.0 x 21.5 x 35.0	Refer to data	69.85 x 34.8 x 38.0	69.85 x 34.8 x 38.0
Terminal Type	PCB, QC, Screw	PCB, Plug-in	Plug in	PCB, QC	QC
Approvals	UL & CUR, TÜV CQC	UL & CUR, TÜV CQC	UL, cURus	UL & CUL	UL & CUL
Socket	-	SRH2C	SRR8, SRR11	-	-

Sockets

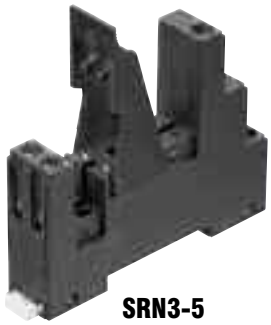
A complete range of relay sockets and clips for all types of mounting and connection

SRC4

SRH2-C

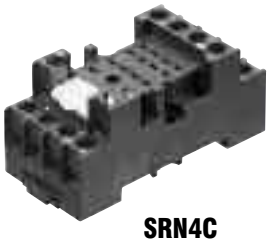
SRN2-5

SRN2-D



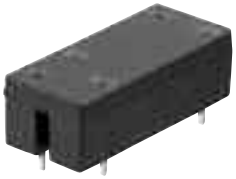
SRN3-5

SRN4-5



SRN4C

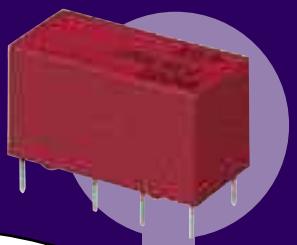
SRR11



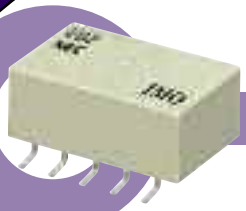
SRS1

SRSI

Relays **Index**



If disc is missing, please contact IMO for a replacement



IMO

Relay Data

ISSUE 1

This CD contains full technical specifications of IMO PCB relays in a printable format

www.imopc.com

IMO: connections worldwide

IMO Precision Controls Limited
1000 North Circular Road
Staples Corner, London
NW2 7JP United Kingdom
Tel: +44 (0)20 8452 6444
Fax: +44 (0)20 8450 2274
Email: imo@imopc.com
Web: www.imopc.com

IIMO Jeambrun Automation SAS
Europarc Berthe Morisot
6 Place Berthe Morisot, 69800
Saint Priest, Lyon
France
Tel: +33 (0)4 78 14 20 50
Fax: +33 (0)4 78 14 20 51
Email: info@imopc.fr
Web: www.imopc.fr

IMO Deutschland
Für weitere Einzelheiten zu IMO Agenten und Distributoren in Ihrer Nähe schreiben. Sie bitte ein E-mail an folgende Adresse:
Email: imo@imopc.com

IMO Italia
Viale A. Volta 127/a
50131 Firenze, Italia
Tel: +39 800 783281
Fax: +39 800 783282
Email: info@imopc.it
Web: www.imopc.it

IMO Canada
Unit 10, 1 Whitmore Road
Woodbridge, Ontario
L4L 8G4 Canada
Tel: +1 905 265 9844
Fax:+1 905 265 1749
Email: imocanada@imopc.com

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- Motor Control Gear
- Panel Meters
- Relays
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- Sockets
- Timers
- Transformers & Power Supplies

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- Limit Switches
- Photoelectric Switches
- PLCs
- Proximity Switches
- Temperature Controls

PROCESS

- Data Acquisition & Control
- Drives
- Intelligent Terminals/HMI
- Limit Switches
- Photoelectric Switches
- Proximity Switches
- PLCs
- Signal Conditioning
- Temperature Controls

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- Safety Limit Switches
- Safety Relays

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- Chip-on-Board
- Device programmers
- LEDs & 7 seg. displays
- PCB Terminal blocks
- Relays - automotive
- Relays - power
- Relays - signal
- Switches

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3 YEAR GUARANTEE

5 YEAR GUARANTEE

IMO has a policy of continuous improvement and therefore specifications may change without notice