

**Switching**  
Management Solutions



*Industrial  
**switching**  
with wide range*



## Defining an **interface relay** in simple terms

An interface relay is an electromagnetic switch operated by a relatively small electric current that can turn on or off a much larger electric current.

**Switching**  
**Protection**  
**Controlling**  
**Filtering** **Isolation**

## Which actions are executed?

An interface relay is an electrically operated **switch** that is used where it is necessary to **control** a circuit by a low-power signal.

It provides complete electrical **protective isolation** between control and controlled circuits.

**Filtering** AC power input signals in order to prevent leakage current.

Saving money and increasing efficiency for PLC outputs.

Reduced PLC outputs to meet energy consumption goals.

## Benefits and Advantages

- A wide range of power input from 6V to 230V
- DC and AC supply voltage options
- Integrated RCZ filter option
- Saving wiring time with plug-in bridges
- High quality, long useful life
- Saving space with 6.2mm design
- LED status indicator in order to see actual movement of the contacts
- Labeling with terminal block marking materials
- Highly compact and light weight
- High level of Electromagnetic compatibility (EMC) i.e. maximum immunity to interferences.
- Self-extinguishing plastic housing
- UL certificate

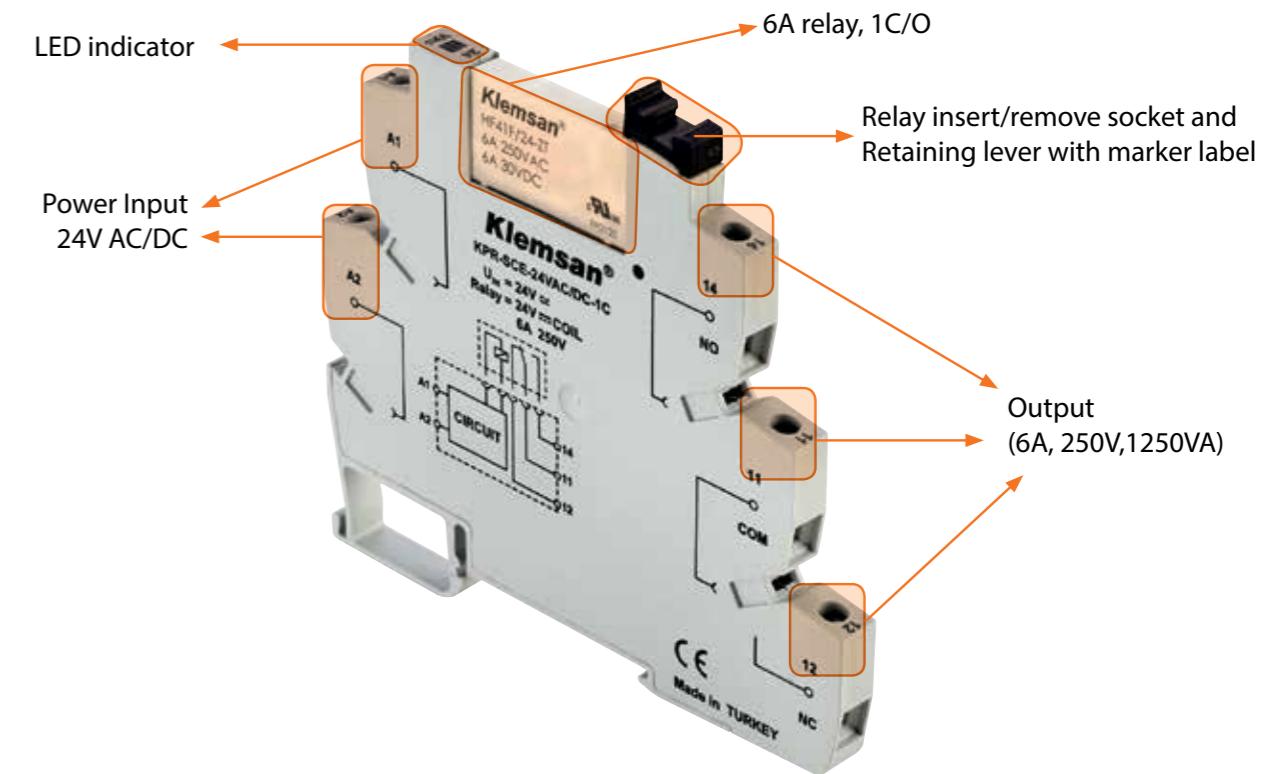
## Mounting

Klemsan interface relays are suitable for snap mounting onto 35 mm standards DIN rails.

## Which markets are they used frequently?

- PLC automation systems
- Electrical power plants
- Energy management systems
- Medium Voltage Panels
- Industrial Machines

## Layout



KPR-SCE-24VAC/DC-1C



## Automation System



Reduced PLC outputs to meet energy consumption goals



**I/O CONTROL**  
All models

## Machine Control and Safety



Provides isolation between control and controlled circuits.



**ISOLATION**  
All models

## Scada System



Lengthen PLC outputs lives by using interface relay to turn many devices on and off simultaneously.



**I/O CONTROL**  
All models

## Control Panels



It allows to control more than one load with external pluggable bridges.



**I/O CONTROL**  
All models

## Chemical Industry

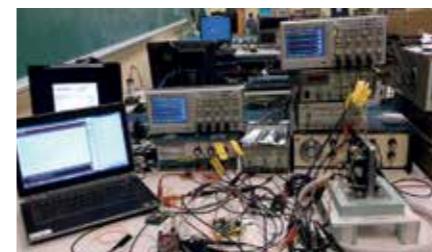


Safe isolation between inputs and outputs for pumps, compressors and air conditioning applications.



**CONTROLLING**  
All models

## Electrical Test Systems



The interface between test equipment and system/I/O devices with a high switching capacity.



**CONTROLLING**  
All models

## Pneumatic Control



Switching currents or voltage too high for PLC outputs to handle.



**SWITCHING**  
All models

## Narrow Cabinets



Only 6.2 mm wide, thus saving considerable space in your enclosures.



**SPACE SAVING**  
All models

## Leakage Current Applications



Preventing to stuck in "ON" state while the relay is switched as "OFF" which is caused by leakage current.



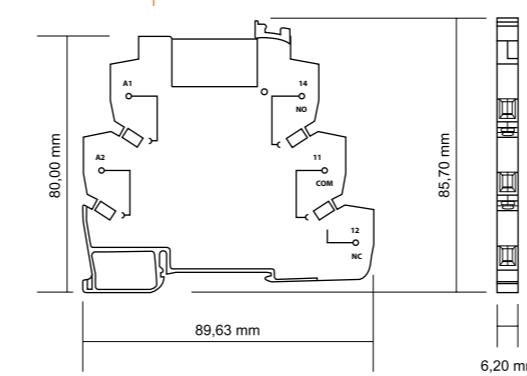
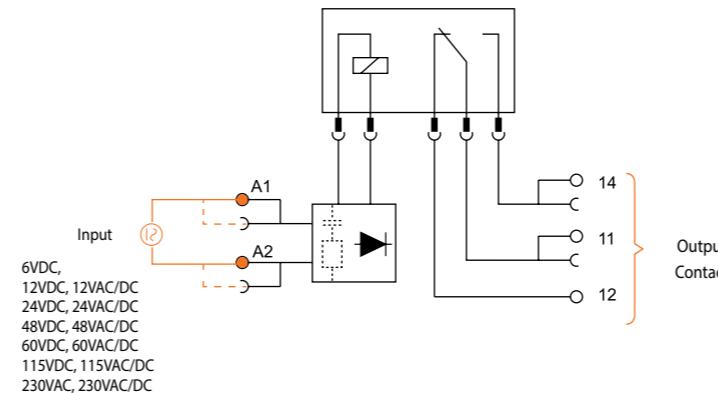
**SWITCHING**  
KPR-SCF series



## Slim Interface Relays

																		
Pre-assembled module (relay + socket)		Type	KPR-SCE-6VDC-1C	KPR-SCE-12VAC/DC-1C	KPR-SCE-12VDC-1C	KPR-SCE-24VAC/DC-1C	KPR-SCE-24VDC-1C	KPR-SCE-48VAC/DC-1C	KPR-SCE-48VDC-1C	KPR-SCE-60VAC/DC-1C	KPR-SCE-60VDC-1C	KPR-SCE-115VAC/DC-1C	KPR-SCE-115VDC-1C	KPR-SCF-115VAC/DC-1C	KPR-SCE-230VAC/DC-1C	KPR-SCE-230VAC-1C	KPR-SCF-230VAC/DC-1C	KPR-SCF-230VAC-1C
		Definiton	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module	Interface relay module with filter	Interface relay module	Interface relay module	Interface relay module	Interface relay module with filter	
		Order Number	270794	270800	270804	270810	270814	270820	270824	270830	270834	270840	270844	270846	270850	270852	270856	270858
Casing Width(mm)		6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	
Connection		Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal	
Packaging unit		10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	
Input	Nominal Voltage(Un)	6VDC	12VAC/DC	12VDC	24VAC/DC	24VDC	48VAC/DC	48VDC	60VAC/DC	60VDC	115VAC/DC	115VDC	115VAC/DC	230VAC/DC	230VAC	230VAC/DC	230VAC	
	Operating voltage range	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	(0,8 – 1,15) x Un	
	Release voltage	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	0,2 x Un	
	Integrated RCZ filter	-	-	-	-	-	-	-	-	-	-	-	OK	-	-	OK	-	
	Power Consumption	AC	<0.35VA	-	<0.2VA	-	<0.6VA	-	<0.4VA	-	<0.7VA	-	<1.1VA	<1.3VA	-	<2.3VA	-	
Contact Characteristic	Type	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	1 C/O (SPDT)	
	Material	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2	AgSnO2
	Coil voltage	5VDC	12VDC	12VDC	24VDC	24VDC	24VDC	24VDC	60VDC	60VDC	60VDC	60VDC	60VDC	60VDC	60VDC	60VDC	60VDC	24VDC
	Coil impedance	147x(± 10%) Ω	212x(± 10%) Ω	212x(± 10%) Ω	3390x(± 15%) Ω	3390x(± 15%) Ω	3390x(± 15%) Ω	3390x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	16600x(± 15%) Ω	3390x(± 15%) Ω	
	Coil consumption	170mW	170mW	170mW	170mW	170mW	170mW	170mW	210mW	210mW	210mW	210mW	210mW	210mW	210mW	210mW	210mW	
	Operate time	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	10 ms max.	
	Release time	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	5 ms max.	
	Max. ratings (AC)	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	6A/250VAC; 1500VA	
	Max. ratings (DC)	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	6A/30VDC; 180W	
	Mechanical life time	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	10 <sup>7</sup> operations	
Electrical life time operations (UL approval, 85°C )	NO	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	3 × 10 <sup>4</sup> operations	
	NC	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	1 × 10 <sup>4</sup> operations	
Isolation resistance		1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	1000MΩ (500VDC)	
Dielectric Strength	Between relay coil and contacts	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	4000VAC 1 min.	
	Between contacts	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	1000VAC 1 min.	
Permissible ambient temperature	During operation	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	
	During storage	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	-40 to +85 °C	
Relative Humidity		5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	5% .. 85% (no condensation)	
Degree of protection		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	
Weight(gr)		32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	
Max. cable cross-section		2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	
Max. torque		0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	0.4Nm	
Permissible mounting position		any	any	any	any	any	any	any	any	any	any	any	any	any	any	any	any	
Certificates	UL508, IEC EN 61984-2011, IEC EN 61947-1:2010	-	-	-	OK	-	OK	-	OK	-	OK	-	-	OK	-	-	-	
Accessories and Components	Socket	Type	KPR-SCE-6VDC-1C (RELAY SOCKET)	KPR-SCE-12VAC/DC-1C (RELAY SOCKET)	KPR-SCE-12VDC-1C (RELAY SOCKET)	KPR-SCE-24VAC/DC-1C (RELAY SOCKET)	KPR-SCE-24VDC-1C (RELAY SOCKET)	KPR-SCE-48VAC/DC-1C (RELAY SOCKET)	KPR-SCE-48VDC-1C (RELAY SOCKET)	KPR-SCE-60VAC/DC-1C (RELAY SOCKET)	KPR-SCE-60VDC-1C (RELAY SOCKET)	KPR-SCE-115VAC/DC-1C (RELAY SOCKET)	KPR-SCE-115VDC-1C (RELAY SOCKET)	KPR-SCF-115VAC/DC-1C (RELAY SOCKET)	KPR-SCE-230VAC/DC-1C (RELAY SOCKET)	KPR-SCF-230VAC/DC-1C (RELAY SOCKET)	KPR-SCF-230VAC-1C (RELAY SOCKET)	
	Definiton	Interface relay socket (6VDC)	Interface relay socket (12VAC/DC)															

Type		KPR-SCE-6VDC-1C	KPR-SCE-12VAC/DC-1C	KPR-SCE-12VDC-1C	KPR-SCE-24VAC/DC-1C	KPR-SCE-24VDC-1C	KPR-SCE-48VAC/DC-1C	KPR-SCE-48VDC-1C	KPR-SCE-60VAC/DC-1C	KPR-SCE-60VDC-1C	KPR-SCE-115VAC/DC-1C	KPR-SCE-115VDC-1C	KPR-SCF-115VAC/DC-1C	KPR-SCE-230VAC/DC-1C	KPR-SCF-230VAC-1C	KPR-SCE-230VAC/DC-1C	KPR-SCF-230VAC-1C	
Accessories and Components	Relay	Type	Slim type 5VDC relay	Slim type 12VDC relay	Slim type 12VDC relay	Slim type 24VDC relay	Slim type 24VDC relay	Slim type 24VDC relay	Slim type 60VDC relay	Slim type 24VDC relay	Slim type 60VDC relay	Slim type 24VDC relay	Slim type 24VDC relay					
		Definiton	Relay for 270794 and 270795	Relay for 270800 and 270801	Relay for 270804 and 270805	Relay for 270810 and 270811	Relay for 270814 and 270815	Relay for 270820 and 270821	Relay for 270824 and 270825	Relay for 270830 and 270831	Relay for 270834 and 270835	Relay for 270840 and 270841	Relay for 270844 and 270845	Relay for 270846 and 270847	Relay for 270850 and 270851	Relay for 270852 and 270853	Relay for 270856 and 270857	Relay for 270858 and 270859
		Order Number	095043	095042	095042	095041	095041	095041	095041	095040	095040	095040	095040	095040	095041	095040	095041	
		Packaging unit	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	10 pcs.	
	Plug-in bridge-16	Type	TK-KPR-S (KPR-SCE BRIDGE/16)															
		Definiton	Plug-in bridge for 16 hole															
		Order Number	476605															
		Packaging unit	25 pcs.															
	Plug-in bridge-8	Type	TK-KPR-S (KPR-SCE BRIDGE/8)															
		Definiton	Plug-in bridge for 8 hole															
		Order Number	476606															
		Packaging unit	50 pcs.															
	Dekafix	Type	DG 10/6T															
		Definiton	Terminal Labels for interface relays															
		Order Number	505390															
		Packaging unit	360 pcs.															



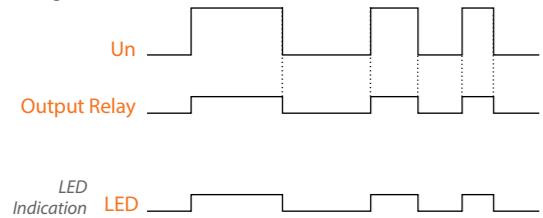
## Function Diagrams

## Notes

### KPR Series / Switching

#### All Models

Figure



When nominal voltage( $U_n$ ) is applied from A1 and A2 inputs, output relay energizes and changes its position automatically. When input voltage drops below 20% of  $U_n$ , output relay de-energizes automatically.

Tip / Type	Giriş tipi / Input type	Sipariş no / Order no
KPR-CIE-6VDC-1C	6V DC	271 504
KPR-CIE-12VAC/DC-1C	12V AC/DC	271 510
KPR-CIE-12VDC-1C	12V DC	271 514
KPR-CIE-24VAC/DC-1C	24V AC/DC	271 520
KPR-CIE-24VDC-1C	24V DC	271 524
KPR-CIE-48VAC/DC-1C	48V AC/DC	271 530
KPR-CIE-48VDC-1C	48V DC	271 534
KPR-CIE-60VAC/DC-1C	60V AC/DC	271 540

### AKSESUARLAR / ACCESSORIES

Tip / Type	Paket / Packaging	Sip. no / Or. no
Nihayet plakası / End plate	10 adet / 10 pcs.	450 389
2'li Köprü / Plug-in bridge for 2 hole	25 adet / 25 pcs.	470 112
3'lü Köprü / Plug-in bridge for 3 hole	20 adet / 20 pcs.	470 113
4'lü Köprü / Plug-in bridge for 4 hole	15 adet / 15 pcs.	470 114
5'li Köprü / Plug-in bridge for 5 hole	10 adet / 10 pcs.	470 115

### Kontak bilgileri

Kontak tipi	1 CO
Kontak malzemesi	AgSnO <sub>2</sub>
Kontak kapasitesi (cosφ=1)	6A 250VAC / 30VDC
Maksimum anahtarlama gerilimi	400VAC / 125VDC
Maksimum anahtarlama akımı	6A
Maksimum anahtarlama gücü	1500VA / 180W
Mekanik ömür	1 x 10 <sup>7</sup> anahtarlama
Elektriksel ömür (UL onayı)	(NO) 3 x 10 <sup>4</sup> anahtarlama (85°C) (NC) 1 x 10 <sup>4</sup> anahtarlama (85°C)

### Genel

İzolasyon direnci	1000MΩ (500VDC)
Dielektrik dayanımı	röle bobini ve kontakları arası 4000VAC 1 dakika röle kontakları arası 1000VAC 1 dakika
Çekme süresi (nominal gerilimde)	10msn maks.
Bırakma süresi (nominal gerilimde)	5msn maks.
Bağıl nem	%5 .. %85 (Yokuşuma olmadan)
Çalışma sıcaklığı	-40°C .. +85°C

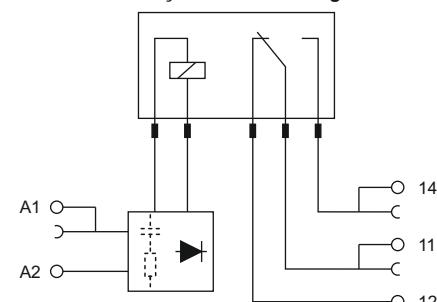
### Giriş

Giriş gerilimi (U <sub>N</sub> )	6VDC, 12V, 24V, 48V, 60V, 115V, 230V(DC, AC/DC), 230VAC	
Röle çekme gerilimi	%80 x U <sub>N</sub>	
Röle bırakma gerilimi	%20 x U <sub>N</sub>	
Kullanılan röle (bobin)	6VDC 12V (DC, AC/DC) 24V,48V (DC, AC/DC) 60V,115V, 230V (DC, AC/DC) 230V AC	5VDC, 170mW 12VDC, 170mW 24VDC, 170mW 60VDC, 210mW 24VDC, 170mW

### Diğer

Röle indikatörü	Yeşil LED
Bağlantı şekli	Yay baskılı
Maksimum kablo kesiti	2.5mm <sup>2</sup>
Maksimum tork	0.4Nm
Montaj	Raya montaj
Montaj rayı	MR 35 x 7.5 / MR 35 x 15
Paketleme	10 adet

### Blok Şeması / Block Diagram:



\*\*\* NOT: Ürün isminde  
görullen "F" harfi, ilgili  
üründe RCZ filtresi  
bulundugu gösterir.

\*\*\* NOTE: The letter "F"  
which is seen in product  
name, indicates related  
product has internal  
RCZ filter.

Tip / Type	Giriş tipi / Input type	Sipariş no / Order no
KPR-CIE-60VDC-1C	60V DC	271 544
KPR-CIE-115VAC/DC-1C	115V AC/DC	271 550
KPR-CIE-115VDC-1C	115V DC	271 554
KPR-CIF-115VAC/DC-1C	115V AC/DC	271 556
KPR-CIE-230VAC/DC-1C	230V AC/DC	271 560
KPR-CIE-230VAC-1C	230V AC	271 562
KPR-CIF-230VAC/DC-1C	230V AC/DC	271 566
KPR-CIF-230VAC-1C	230V AC	271 568

### AKSESUARLAR / ACCESSORIES

Tip / Type	Paket / Packaging	Sip. no / Or. no
10'lu köprü / Plug-in bridge for 10 hole	5 adet / 5 pcs.	470 119
DG 6/5 - Etiket / Label	440 adet / 440 pcs.	505 330
DB 5 - Etiket / Label	500 adet / 500 pcs .	505 850
11.2 Şerit etiket / Strip label	1 adet / 1 pc.	1020100

### Contact data

Contact type	1 CO
Contact material	AgSnO <sub>2</sub>
Contact rating (cosφ=1)	6A 250VAC / 30VDC
Max. switching voltage	400VAC / 125VDC
Max. switching current	6A
Max. switching power	1500VA / 180W
Mechanical life	1 x 10 <sup>7</sup> operations
Electrical life (UL approval)	(NO) 3 x 10 <sup>4</sup> operations (85°C) (NC) 1 x 10 <sup>4</sup> operations (85°C)

### General

Isolation resistance	1000MΩ (500VDC)
Dielectric strength	between relay coil and contacts 4000VAC 1 min. between relay contacts 1000VAC 1 min.
Operate time (at nominal voltage)	10ms max.
Release time (at nominal voltage)	5ms max.
Humidity	%5 .. %85 (non-condensing)
Operating temperature	-40°C .. +85°C

### Input

Input voltage (U <sub>N</sub> )	6VDC, 12V, 24V, 48V, 60V, 115V, 230V(DC, AC/DC), 230VAC	
Operate voltage	%80 x U <sub>N</sub>	
Release voltage	%20 x U <sub>N</sub>	
Relay type (coil)	6VDC 12V (DC,AC/DC) 24V,48V (DC, AC/DC) 60V,115V, 230V (DC, AC/DC) 230V AC	5VDC, 170mW 12VDC, 170mW 24VDC, 170mW 60VDC, 210mW 24 VDC, 170mW

### Other

Relay indicator	Green LED
Connection type	Cage Clamp
Max. cable cross-section	2.5mm <sup>2</sup>
Max. torque	0.4Nm
Mounting type	Rail mounted
Mounting rail	MR 35 x 7.5 / MR 35 x 15
Packaging unit	10 pcs.

### Boyutlar / Dimensions:

