SN'KB-1910

KR series

Power rocker switches



DISTINCTIVE FEATURES

Unique rocker design
Wide choice of colors
Laser etched symbols
Illuminated or non-illuminated
Optionally sealed to IP68 or IP69K



ENVIRONMENTAL SPECIFICATIONS

- Sealing options :
- K: IP68 to front panel components of switch only according to IEC 60529
- Z: IP69K panel sealing according to DIN 40050-9
- Salt spray resistance: 96 hours according to IEC 512-6, test 11f
- Vibration resistance: 10-500 Hz / 10 g per IEC 60068-2-6
- Operating temperature : -40 °C to +85 °C (-40 °F to +185 °F)



ELECTRICAL SPECIFICATIONS

- Currrent/voltage rating with resistive load :
- Silver plated contacts :
 - **A**: 5 A 24 VDC, 100,000 cycles
 - 10 A 24 VDC, 10,000 cycles (terminals 6.35 x 0.8 only)
 - S: 20 A 12 V, 10,000 cycles (see "Build your part number")
- Gold plated contacts (D): 20 mA 12 V, 150,000 cycles
- Current/voltage rating with lamp load silver contacts (A):
- functions 1 & 6: 100 W 24 VDC, 10,000 cycles
- other functions: 60 W 24 VDC, 10,000 cycles
- Initial contact resistance : $10 \text{ m}\Omega$ max.
- Insulation resistance : 1,000 M Ω min. at 500 VDC
- Dielectric strength: 2,000 Vrms 50 Hz min. between terminals



GENERAL SPECIFICATIONS

- Mechanical life: 150,000 cycles min.
- Panel thickness: 0.8 mm to 4.6 mm
- Recommended panel thickness: between 2 mm and 3.5 mm

The company reserves the right to change specifications without notice.





Power rocker switches



MATERIALS

• Case : PA 6-6

• Actuator : ABS

• Bezel : PA 6-6

• Contacts & terminals :

brass, solid silver grain, silver plated (A or S) or brass, solid silver grain, gold plated (D)

• Contact roller: brass, nickel plated

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

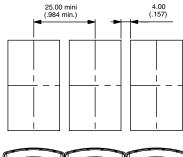


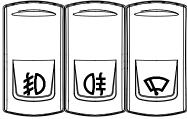
SEALING

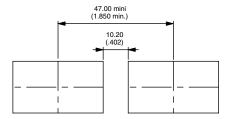
 Sealing is optional. To order a sealed product, complete the appropriate box of ordering format on the following pages.



MATRIX MOUNTING



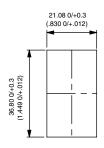




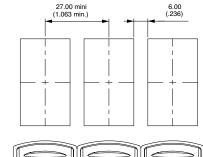


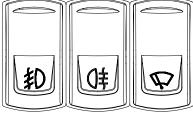


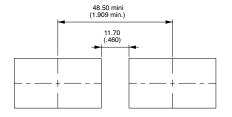
PANEL CUT-OUT



SPECIFIC MATRIX MOUNTING FOR Z VERSION









Power rocker switches



ELECTRICAL FUNCTIONS AND CONNECTIONS

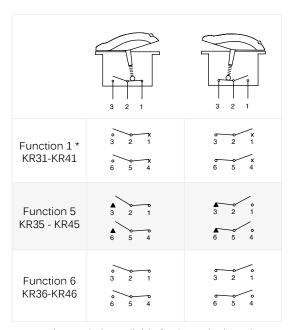
In the tables below, terminal connections as viewed from bottom of switch. Only the contact area is represented. For single pole models, only terminals 1, 2 and 3 are to be considered (not terminals 6, 5, 4).

x = w/o terminal

o = with terminal

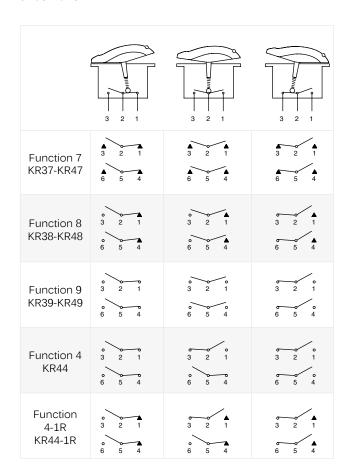
 \triangle = momentary

2 POSITIONS

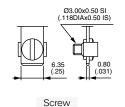


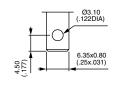
* Function 1: Only available for 6 terminal versions.

3 POSITIONS



TERMINALS





Solder lug / quick-connect





Normalized quick-connect 6.35x0.8

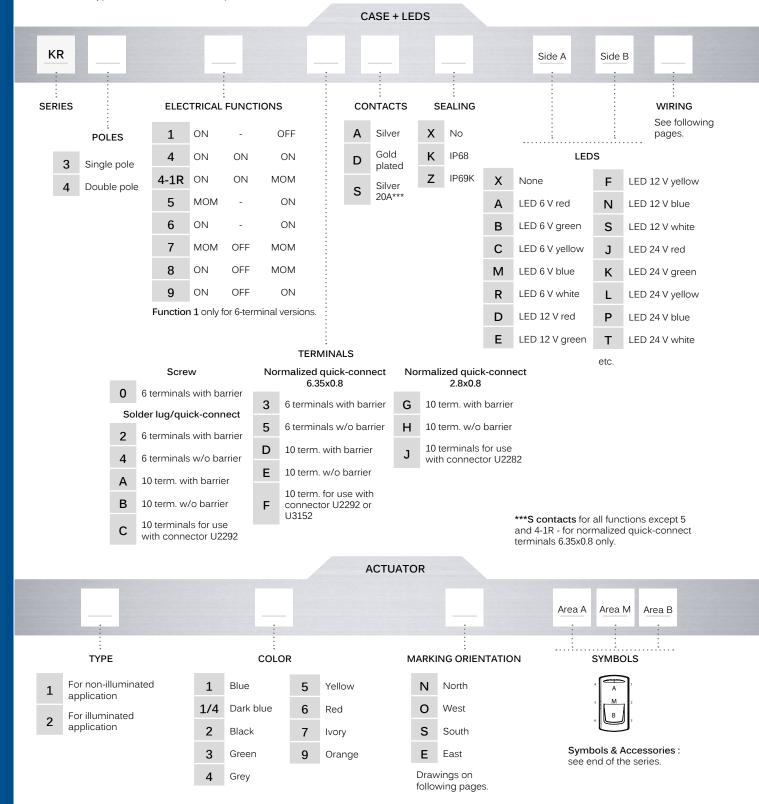
Normalized quick-connect 2.8x0.8

Power rocker switches



BUILD YOUR PART NUMBER

- To order a complete product, fill in all the boxes of the following order guide.
- To order case only (without actuator), finish your order number with the LED wiring code.
- To order actuator only (without case), begin the order number with code KRR, then follow the order format from "actuator type" until the end of the options.



NOTICE: please note that not all combinations of above numbers are available. Refer to the following pages for further information.

Power rocker switches

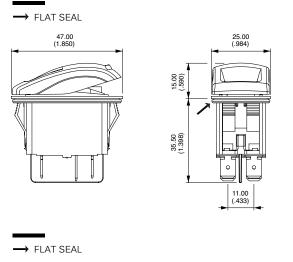


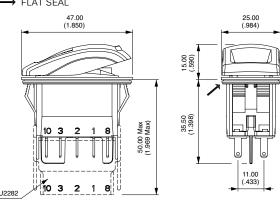


10 TERMINAL VERSION

			2-3 5-6		1-2 4-5
	Single pole	Double pole			
	KR31	KR41	ON	-	OFF
1000		KR44*	ON	ON	ON
		KR44-1R*	ON	ON	MOM
Ph. 17	KR35	KR45	MOM	-	ON
	KR36	KR46	ON	-	ON
	KR37	KR47	MOM	OFF	MOM
	KR38	KR48	ON	OFF	MOM
100	KR39	KR49	ON	OFF	ON

*Function 4 : single pole in double pole case



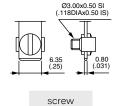


CASE + LEDS	TERMINALS					
BASIC P/N					ACTUATOR	

To order case only (without actuator), finish your order number with the LED wiring code.

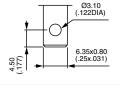
SCREW

0 6 terminals with barrier



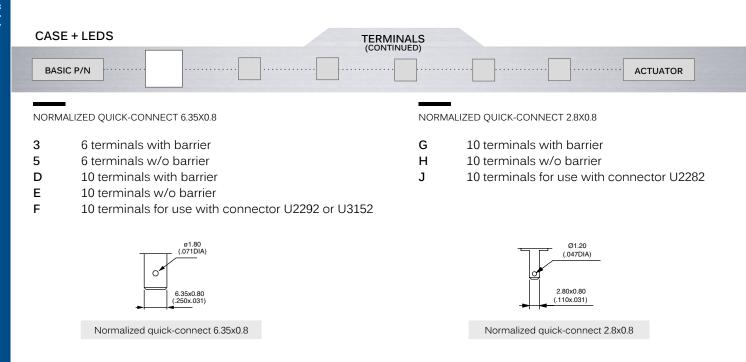
SOLDER LUG / QUICK-CONNECT

- 2 6 terminals with barrier
- 4 6 terminals w/o barrier
- A 10 terminals with barrier
- B 10 terminals w/o barrier
- C 10 terminals for use with connector U2292 or U3152

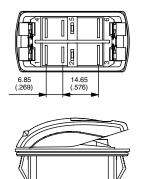


Solder lug / quick-connect

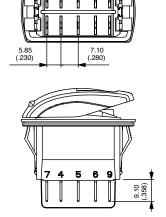
Power rocker switches



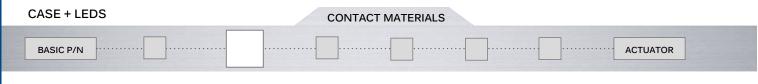
6 TERMINAL VERSION



10 TERMINAL VERSION

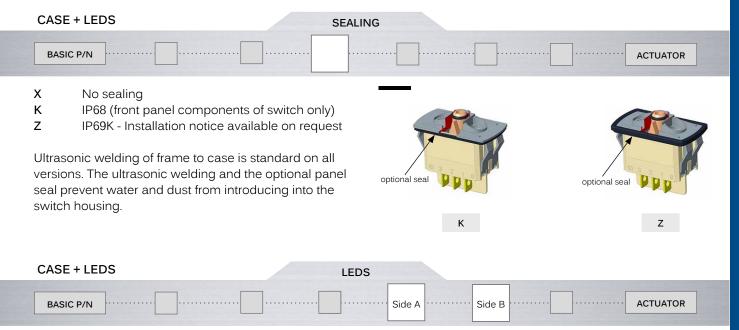


Terminals are marked on the case. The drawings show the maximum possible number of terminals.



- A Silver
- D Silver, gold plated
- S Silver 20A. For all functions except 4 and 4-1R for normalized quick-connect terminals 6.35x0.8 only.

Power rocker switches



Complete each enlarged box with one of the codes listed below.

Χ Without LED

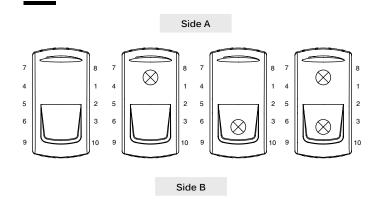
	Red	Green	Yellow	Blue	White	Amber	Red/green
6 VDC	Α	В	С	М	R	4	1
12 VDC	D	E	F	N	S	5	2
24 VDC	J	K	L	Р	Т	6	3
No resistor	U	V	W	Υ	Z	9	8

LED consumption: 20 mA @ nominal voltage (25 °C / 77 °F)

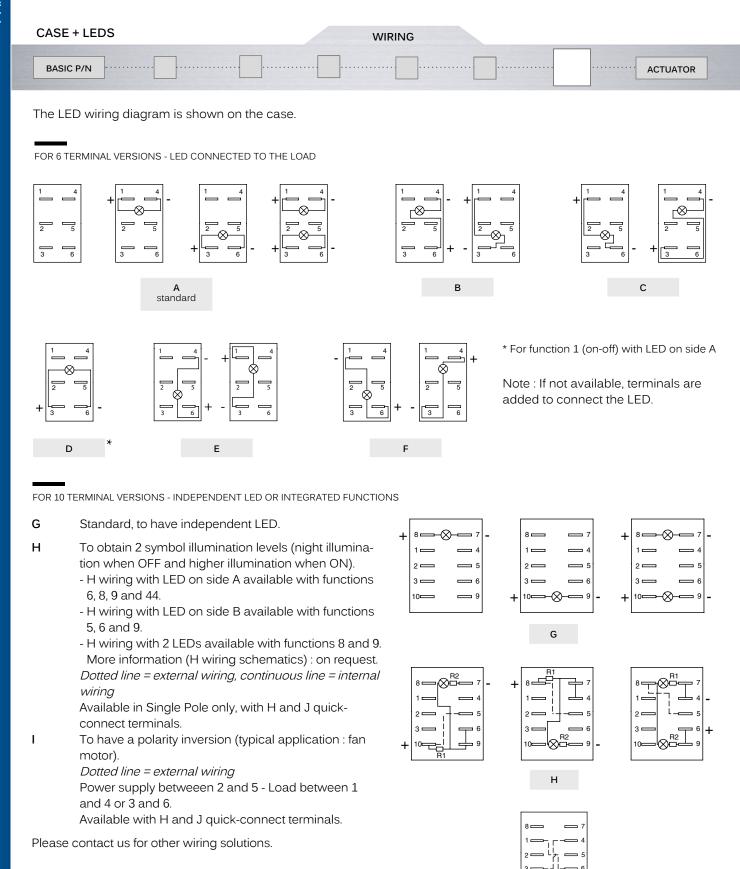
Other illumination solutions: on request.

For non-stabilized on-board power supplies submitted to potential voltage surges due to the alternator, 15 V and 30 V LED configurations are also available on request.

LED Tolerance ±10 %



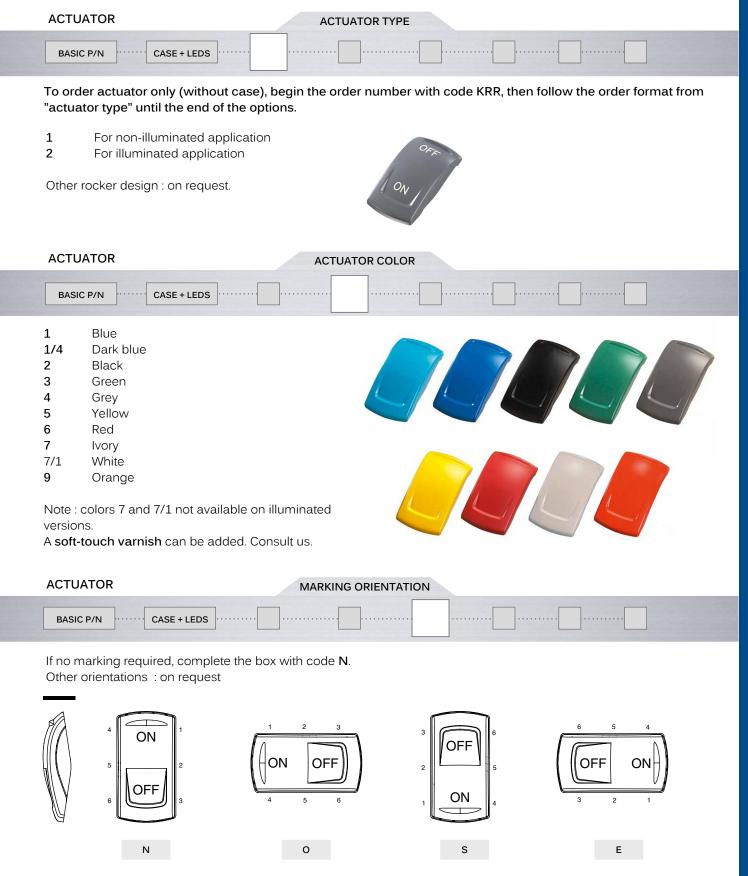
Power rocker switches



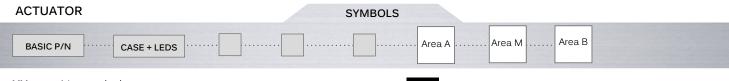
VPEM

KR series

Power rocker switches



Power rocker switches



XX No symbol

Available symbols: Complete each enlarged box with the one of the codes listed on the following pages.

Marking color: White marking for illuminated rockers (laser etching) and non-illuminated black rockers (pad printing). Black marking for non-illuminated color rockers (pad printing).

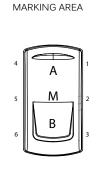
Other: on request.

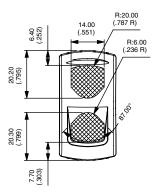
Laser etching resistance

- Water and petrol resistant according to EN 61058-1
- Tear resistant (cross-cut test) according to NF ISO 2409 : class 0 $\,$
- UV resistant according to ISO 4892-2

Marking area

For illuminated versions. The symbol will be included in the hatched area. Marking in M area: on request.





Power rocker switches and indicators • symbols and accessories

Most symbols meet the ISO 7000 standard "graphical symbols for use on equipment" (code given in bracket in the description). Contact us for symbols not featured in the following tables.



CODE	SYMBOL	DESCRIPTION	CODE	SYMBOL	DESCRIPTION	CODE	SYMBOL	DESCRIPTION
xx	None	-	16		Revolving light	32	4 0	Emergency first aid vehicle (2565)
01	ON	-	17	A	Rear ventilator	33	4	Load tipping (1557)
02	OFF	-	18	<u>****</u>	Heating (0637)	34		Loading light (2457)
03	0	-	19	\bigcirc	Door opening	35	€9>	Tractor, rear-ward (1667)
04	ı	-	20	***	Windshield demister/ defroster (0635)	36	← ∑√>	Combine, direction of movement (1678)
05	II	-	21	∇	Windshield wiper (0086)	37	*	Use no forks (2406)
06	STOP	-	22		Windshield washer (0088)	38	\Diamond	Transmission (1166)
07	Α	Stop	23	¥5	Ventilator fan (0089)	39		Working spot light (1145)
08	М	Motion	24		Side mirror defroster	40	£_2)	Engine (0640)
09	Δ	Up motion	25	6 5	Restarting pump	41	b	Horn (0244)
10	ightharpoons	Down motion	26	却	Front fog lights (0633)	42		Lock (1656)
11	業	Hot	27	() ‡	Rear fog lights (0634)	43	TAXI	Taxi sign light (2551)
12	\times	Cold	28	†	Propulsion system trim	44	<i>J</i>	Working light (1204)
13		Hazard warning (0085)	29	沚	Beacon (1141)	45	<i>Q</i> (Working light symmetric (1204)
14	氚	Traveller lighting	30	ţ	Anchor	46		-
15	深	Driver lighting (1421)	31	4	Electric motor (0011)	47	ASM	-

Power rocker switches and indicators • symbols and accessories

CODE	SYMBOL	DESCRIPTION	CODE	SYMBOL	DESCRIPTION	CODE	SYMBOL	DESCRIPTION
48	五	All wheel drive	69	idle/diag	Engine idle control	90	₹	ECAS reset
49		Differential lock (1662)	70	CRUISE RES/SET	Cruise res/set	91	4	Driver windows heating
50	TOP	-	71	?	Driver windows up/ down	92	CRUISE SET+/SET-	Cruise set
51	1000	-	72	2	Middle door opening	93	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Air bag up/down
52	540E	-	73	1	Front door opening	94	が出	Read lighting
53	N	-	74	χ. _	Lighting in baggage room	95	-\̈́\;\	Lighting main switch
54	\Box	Rear window wiper (0097)	75	CRUISE ON/OFF	Cruise on/off	96		Heating using water
55	\Box	Rear window washer (0099)	76	TV	TV	97	≣ D	Low beam
56	↑ \$	Lower load (2223)	77	ᡊᢆ	Pump	98	∌ 0€	Position lights
57	<u>8°°°</u>	Cab lock (1560)	78	WC	Toilet	99	(+)	Diesel acceleration
58	‰≡	Extraction	79	₩C	Toilet decontamination	A1		Manual mode
59	‰≡	Pumping in	80	(111)	Front windshield heating	A2	ŢŢ,	Clockwise cabin rotation
60		Rear PTO (1572)	81	AUS	Aus	А3		Anticlockwise cabin rotation
61		Front PTO	82	36	Radiator fan	A4	r	-
62		Rockshaft down	83		Remove retarder	A5	t	-
63		Rockshaft up	84	(<u> </u> <	Restricted speed	A6	(P)	Parking brake
64		Indicator	85	00	Preheater	A7	1	-
65		Brake release	86	(ABS)	ABS detection	A8		-
66	L	Baggage room left door	87	(ECAS)	ECAS detection	A9	(M)	-
67	R	Baggage room right door	88	\bowtie	Engine stop	AA		-
68		Power blinds	89	CRUISE RES/CAN	Cruise res/cancel	АВ	- - ⊊	-

Power rocker switches and indicators • symbols and accessories

CODE	SYMBOL	DESCRIPTION
AC		-
AD	<u></u>	-
AE		-
AF	‰ _₂	-
AG	==	Battery charging condition (0247)
АН	4	Turn signals (0084)
AJ	≣D	High beam (0082)
AK	¥	Differential lock, bogie (2600)
AL	\odot	Brushing with a rotating brush (0070)
AM	Ž,	Differential lock, transfer case 4x4 (2475)
AN	₩	Loader bucket, float (1441)
AP	Z	Loader bucket (1437)
AQ	\tilde{\	Rear window washer & wiper (0098)
AR		Header, Header drive (1579)
AS	<u>T</u>	Excavator/backhoe boom side shift (2091)
АТ		Chemical water treatment (1851)
AU	P	Grapple skidder, single funct° boom (1762)

CODE	SYMBOL	DESCRIPTION
AV	<u>;</u>	-
AW	₫ ,	-
AY	©į.	-
AZ	희 ;	-
B1	HIGH	-
В2	LOW	-
В3	\bigcap_{1}^{2}	-

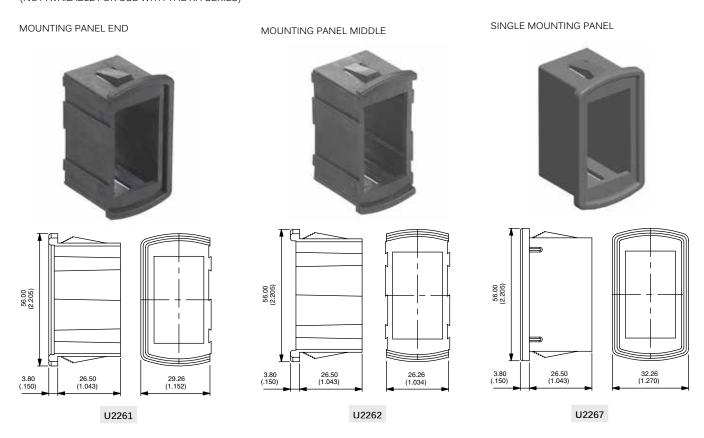
Legend scale

Depending on space available on the product (see "Symbols" section at the end of each series).

Power rocker switches and indicators • symbols and accessories

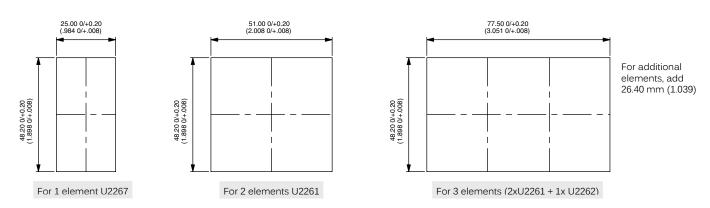
MOUNTING PANELS

(NOT AVAILABLE FOR USE WITH THE KH SERIES)



Recommended panel thickness: 1.10~mm - 1.80~mm - 2.60~mm - 3.40~mm - 4.20~mm - 5~mm - 5.80~mm

MOUNTING PANEL CUT-OUT



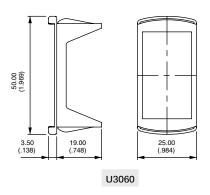
APEM

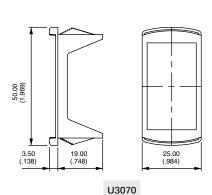
K range

Power rocker switches and indicators • symbols and accessories

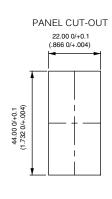
22 X 44 ADAPTERS

FRONT PANEL DISMOUNTING





REAR PANEL DISMOUNTING



Recommended panel thickness

U3060 0.60 mm to 1.50 mm

U3070 1.60 mm -0.1/0 to 5.60 mm -0.1/0 in stages of 0.40 mm

Adapter colors (replace 0 with code)

1/4 Dark blue

White

2 Black

4 Grey

5 Yellow

6 Red

7/1

ACTUATOR REMOVING TOOL

(NOT SUITABLE FOR USE WITH KH1 MODELS - 4-SIDE PROTECTION GUARDS)

Extract actuator (KR only)

Allows the extraction of the rocker / rocker support assembly. Place the 2 claws under the support and push as indicated by the arrow.

Extract rocker (KR only)

Allows to separate the rocker from its support. Insert the tool between rocker and support as indicated by the arrrow. Pull out the tool in the opposite direction.

Extract switch (KR, KL and KI)

Allows to extract switch from panel mounting units. 2 Tools are necessary. Insert the tools between switch and panel mounting units from the rear to compress the snap-in device. Pull off switch manually.



to be ordered by pairs

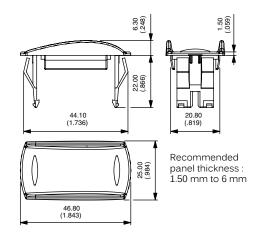
BLANKING CAPS

Usefull for future extensions.

Connectors can be hanged on specific hole plugs. Contact APEM.

U2271 U2271/4	Blue Dark blue	U2275 U2276	Yellow Red
U2272	Black	U2277	lvory
U2273	Green	U2279	Orange
11227/	Gray		





Power rocker switches and indicators • symbols and accessories

CONNECTORS

Standard color: black. Other colors: on request. Connectors cannot be combined with wiring types H and I.

U2260 6 terminal version. For use with terminals type 2, 3, 4 or 5. 6.35 (1/4) tabs to be fitted by the user (example: TE42282-2).

Can be used for the KG series.

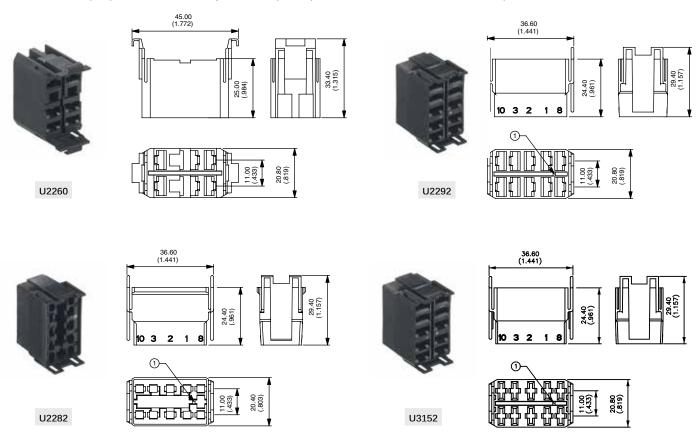
U2282 10 terminal version. For use with terminals type H or J.

2.8 (.110) tabs to be fitted by the user (example : AMP/Tyco 0-927779-3).

U2292 10 terminal version: For use with terminals type B, C, E or F. 6.35 (1/4) tabs to be fitted by the user (example: TE42282-2).

U3152 10 terminal version. For use with terminals type B, C, E or F.

6.35 (1/4) tabs to be fitted by the user (example: "Timer" terminals TE927833-2)



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Apem:

KRR12N09XX10 KRR26NXXXX13 KRR22N09XX10 KR375AKXXA12XX KRR26NXXXXXX KRR22NXXXXA6 KRR22NXXXX21 KRR15 KRR22NXXXX29 KRR12NXXXX03 KRR22NXXXX41 KRR17 KRR22NXXXX49 KRR22NXXXX33 KRR22NXXXX26 KRR26 KRR12NXXXXX02 KRR22NXXXXXX KRR1A KRR12NXXXXX01 KRR22NXXXX23 KRR22 KRR22NXXXX22 KRR22NXXXXAJ KRR22NXXXX27 KRR22NXXXX KR390AKXXA12NXXXXXX KR362AKXXA12NB1XXB2 KR370AKXXA12N012302 KR353AKXXA16N06XXXX KR48CAKLXG KR48CAKJXG KR49CAKLLG KR48FAKFFG KR49DDKTTG214N090210 KR49CAKJJG KR44DDKTTG22N050421 KR45CAKLLG KR45DDKKTG22NXXXX22 KR36FAKDDG22N24XX02 KR46CAXSXG KR46CAKJJG KR48DAKSSG KR372AKXXA12N09XX10 KR413DKKTA22N64XXAJ KR355AKXXA12XX KR362AKXJA KR363AKXXA16E08XX07 KR45CAKDDG KR47CAKLLG KR48CAKDXG KR453DKKTG22N64XXXX KR47CAKKKG KR45DAKSSG KR413DKKTA22N64XX15 KR46CAKKKG KR315AKEXA KR413DKESA22N64XX29 KR413DKKTA22N64XX44 KR465AKXXA12XX KR45CAKKKG KR47DDKTTG22N01XX02 KR384AKXXA12XX KR375AXXXA12 KR415AKXXA12XX KR45DDKESG22NXXXX22 KR45DDKKTG22NXXXX55 KR47CAKJJG KR412AKEXD22NXX KR474AKXXA12NXX KR45CAKFFG KR45CAKJJG KR365AKXXA12XX KR44DDKTTG22N050454 KR312AKEXD22NXX KR47DAKSSG KR49DAKSSG KR312AKXXA15XX KR310AKXEA KR312AKXXA KR47CAKFFG KR375AXXXA KR413AKXXA12OAKPXXXXW3 KR492AKXXA19XX KR49CAKKKG22N010201 KR46DAKSSG KR49DDKTTG214E090210 KR48CAKEXG KR495AKXXA12XX KR48CAKFXG KR49CAKDDG KR49CAKKKG