

# KI series

LED indicators



## DISTINCTIVE FEATURES

- Wide choice of bezel colors
- Wide choice of LEDs
- Laser etched symbols
- Long life expectancy



## ENVIRONMENTAL SPECIFICATIONS

- Salt spray resistance : 96 hours according to IEC 512-6, test 11f
- Operating temperature : -40 °C to +85 °C (-40 °F to +185 °F)



## ELECTRICAL AND GENERAL SPECIFICATIONS

- Operating voltage : 6 VDC, 12 VDC or 24 VDC
- Nominal current : 20 mA per LED
- Panel thickness : 0.8 mm to 4.6 mm
- Recommended panel thickness : between 2 mm and 3.5 mm

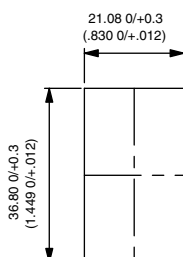


## MATERIALS

- Case : ABS
- Bezel : ABS
- Terminals : brass, silver plated



## PANEL CUT-OUT



The company reserves the right to change specifications without notice.

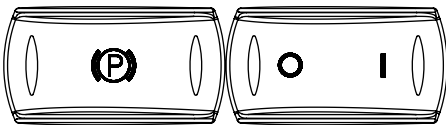
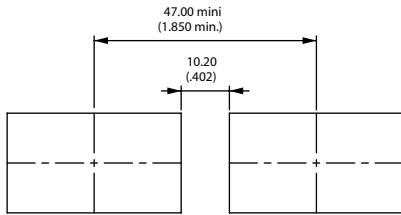
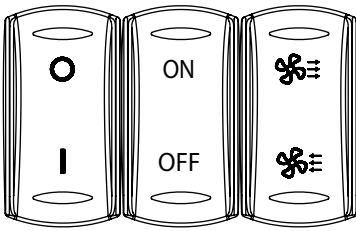
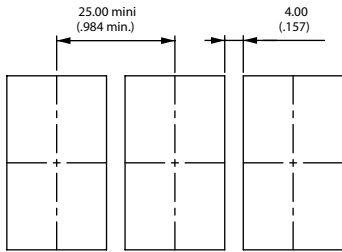


# KI series

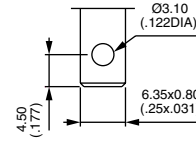
LED indicators



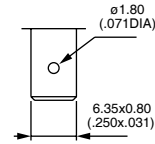
## MATRIX MOUNTING



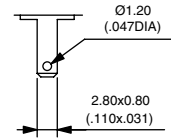
## TERMINALS



Solder lug / quick-connect



Normalized quick-connect 6.35x0.8



Normalized quick-connect 2.8x0.8



### BUILD YOUR PART NUMBER

**CASE + LEDS**

<b>KI</b>		<b>Side A</b>	<b>Center M</b>	<b>Side B</b>			<b>Area A</b>	<b>Area M</b>	<b>Area B</b>		<b>X</b>
<b>SERIES</b>		<b>LEDS</b>				<b>SYMBOLS</b>					

**COLORS**

<b>1</b>	Blue
<b>1/4</b>	Dark blue
<b>2</b>	Black
<b>3</b>	Green
<b>4</b>	Grey
<b>5</b>	Yellow
<b>6</b>	Red
<b>9</b>	Orange

**TYPE OF ILLUMINATION**

<b>X</b>	Standard
<b>S</b>	Super bright

**MARKING ORIENTATION**

<b>N</b>	North
<b>O</b>	West
<b>S</b>	South
<b>E</b>	East

Drawings on the following pages.

**TERMINALS WITH BARRIER**

<b>C</b>	Solder lug / quick-connect
<b>F</b>	Quick-connect 6.35 mm
<b>J</b>	Quick-connect 2.8 mm

**LEDS**

<b>X</b>	None
<b>A</b>	LED 6 V red
<b>B</b>	LED 6 V green
<b>C</b>	LED 6 V yellow
<b>M</b>	LED 6 V blue
<b>R</b>	LED 6 V white
<b>D</b>	LED 12 V red
<b>E</b>	LED 12 V green
<b>F</b>	LED 12 V yellow
<b>N</b>	LED 12 V blue
<b>S</b>	LED 12 V white
<b>J</b>	LED 24 V red
<b>K</b>	LED 24 V green
<b>L</b>	LED 24 V yellow
<b>P</b>	LED 24 V blue
<b>T</b>	LED 24 V white

Etc.  
DC voltage standard

**SYMBOLS**

**On request :** 48 VDC voltage - AC voltage - new design.  
**Symbols & Accessories :** see end of the series.



### ABOUT THIS SERIES

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

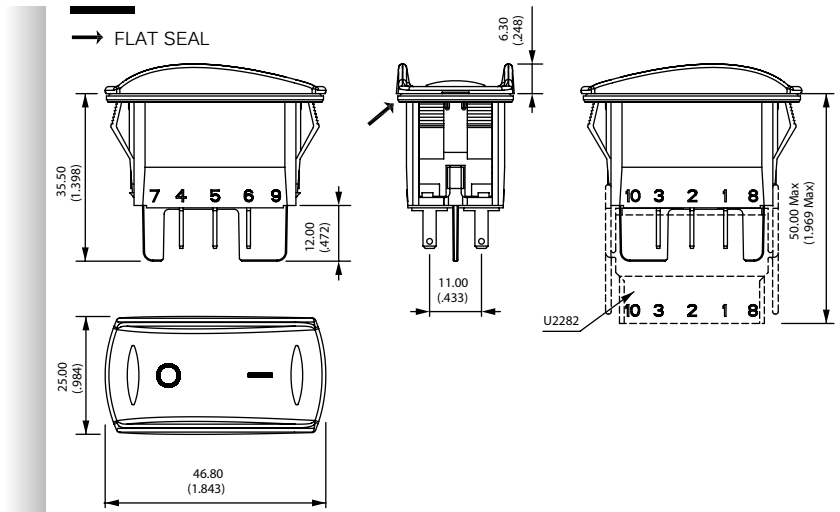
# KI series

LED indicators

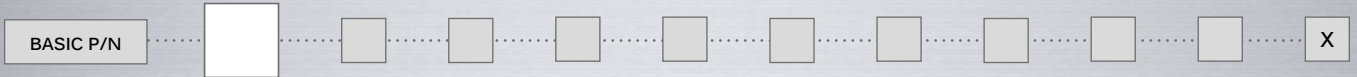
## DIMENSIONS



KI

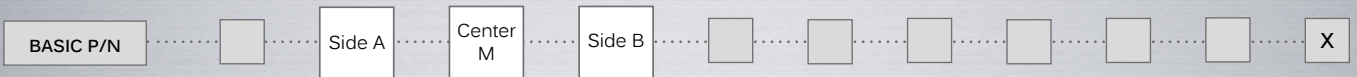


## BEZEL COLOR



- 1 Blue
- 1/4 Dark blue
- 2 Black
- 3 Green
- 4 Grey
- 5 Yellow
- 6 Red
- 9 Orange

## LEDS



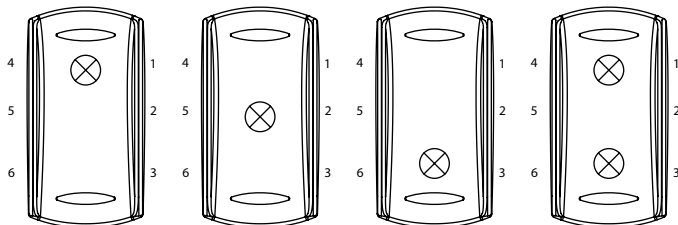
Complete each enlarged box with one of the codes listed below.

X Without LED

	Red	Green	Yellow	Blue	White	Amber	Red/green
6 VDC	A	B	C	M	R	4	1
12 VDC	D	E	F	N	S	5	2
24 VDC	J	K	L	P	T	6	3
No resistor	U	V	W	Y	Z	9	8

LED consumption : 20 mA  
 @ nominal voltage (25 °C / 77 °F)  
 Other illumination solutions : on request.

Side A



Side B

### TYPE OF ILLUMINATION

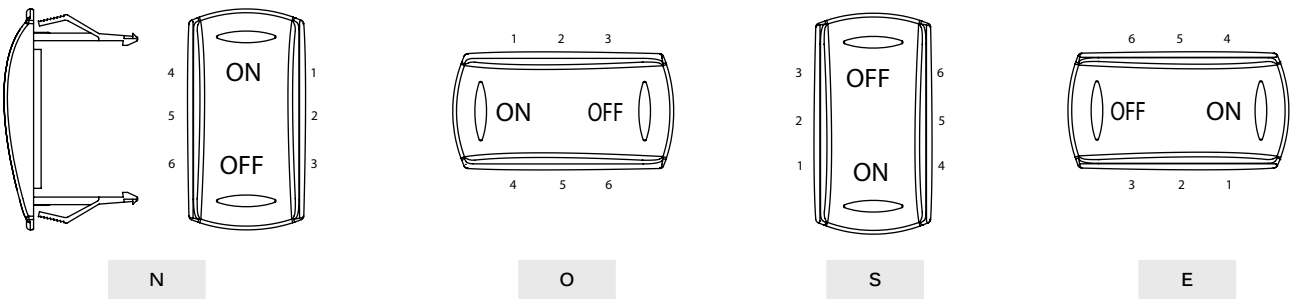


- X Standard
- S Super bright

### MARKING ORIENTATION



If no marking required, leave box blank.  
Other orientations : on request



### SYMBOLS



- XX No symbol

#### Available symbols

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

#### Marking color

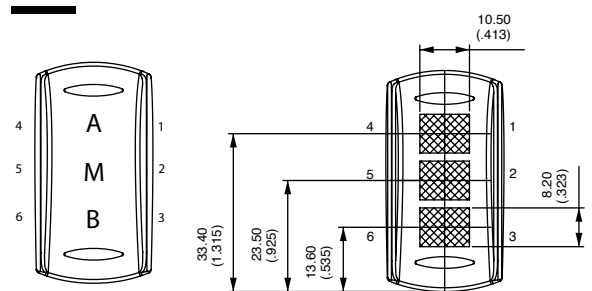
White (laser etching)

#### Laser etching resistance

- Water and petrol resistant according to EN61058-1
- Tear resistant (cross-cut test) according to NF ISO 2409 : class 0
- UV resistant according to ISO 4892-2

#### Marking area

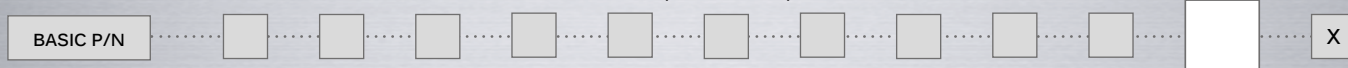
The symbol will be included in the hatched area.



# KI series

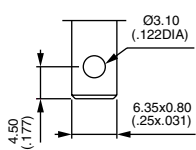
LED indicators

TERMINALS  
(WITH BARRIER)

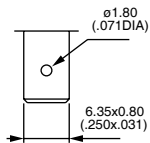


- C Solder lug / quick-connect : 10 terminals for use with connector U2292
- F Normalized quick-connect 6.35x0.8 : 10 terminals for use with connector U2292
- J Normalized quick-connect 2.8x0.8 : 10 terminals for use with connector U2292

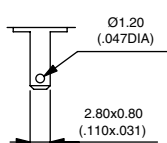
Terminals are marked on the case.



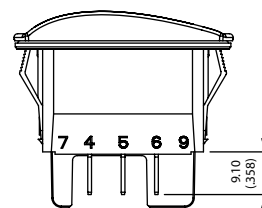
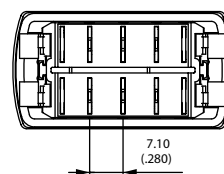
C



F



J



# K range

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
XX	None	-
01	<b>ON</b>	-
02	<b>OFF</b>	-
03	○	-
04	I	-
05	II	-
06	<b>STOP</b>	-
07	<b>A</b>	Stop
08	<b>M</b>	Motion
09	▲	Up motion
10	▼	Down motion
11	☀	Hot
12	✖	Cold
13	⚠	Hazard warning (0085)
14	☀	Traveller lighting
15	☀	Driver lighting (1421)

CODE	SYMBOL	DESCRIPTION
16	☀	Revolving light
17	☐	Rear ventilator
18	☀	Heating (0637)
19	☐	Door opening
20	☀	Windshield demister/ defroster (0635)
21	☀	Windshield wiper (0086)
22	☀	Windshield washer (0088)
23	☀	Ventilator fan (0089)
24	☀	Side mirror defroster
25	⚙	Restarting pump
26	☀	Front fog lights (0633)
27	☀	Rear fog lights (0634)
28	☀	Propulsion system trim
29	☀	Beacon (1141)
30	⚓	Anchor
31	☀	Electric motor (0011)

CODE	SYMBOL	DESCRIPTION
32	☀	Emergency first aid vehicle (2565)
33	☀	Load tipping (1557)
34	☀	Loading light (2457)
35	☀	Tractor, rear-ward (1667)
36	☀	Combine, direction of movement (1678)
37	☀	Use no forks (2406)
38	⚙	Transmission (1166)
39	☀	Working spot light (1145)
40	☀	Engine (0640)
41	☀	Horn (0244)
42	☀	Lock (1656)
43	☀	Taxi sign light (2551)
44	☀	Working light (1204)
45	☀	Working light symmetric (1204)
46	☀	-
47	<b>ASM</b>	-

The company reserves the right to change specifications without notice.

# K range

Power rocker switches and indicators • symbols and accessories

CODE	SYMBOL	DESCRIPTION	CODE	SYMBOL	DESCRIPTION	CODE	SYMBOL	DESCRIPTION
48		All wheel drive	69		Engine idle control	90		ECAS reset
49		Differential lock (1662)	70		Cruise res/set	91		Driver windows heating
50		-	71		Driver windows up/down	92		Cruise set
51		-	72		Middle door opening	93		Air bag up/down
52		-	73		Front door opening	94		Read lighting
53		-	74		Lighting in baggage room	95		Lighting main switch
54		Rear window wiper (0097)	75		Cruise on/off	96		Heating using water
55		Rear window washer (0099)	76		TV	97		Low beam
56		Lower load (2223)	77		Pump	98		Position lights
57		Cab lock (1560)	78		Toilet	99		Diesel acceleration
58		Extraction	79		Toilet decontamination	A1		Manual mode
59		Pumping in	80		Front windshield heating	A2		Clockwise cabin rotation
60		Rear PTO (1572)	81		Aus	A3		Anticlockwise cabin rotation
61		Front PTO	82		Radiator fan	A4		-
62		Rockshaft down	83		Remove retarder	A5		-
63		Rockshaft up	84		Restricted speed	A6		Parking brake
64		Indicator	85		Preheater	A7		-
65		Brake release	86		ABS detection	A8		-
66		Baggage room left door	87		ECAS detection	A9		-
67		Baggage room right door	88		Engine stop	AA		-
68		Power blinds	89		Cruise res/cancel	AB		-



# K range

Power rocker switches and indicators • symbols and accessories

CODE	SYMBOL	DESCRIPTION
AC		-
AD		-
AE		-
AF		-
AG		Battery charging condition (0247)
AH		Turn signals (0084)
AJ		High beam (0082)
AK		Differential lock, bogie (2600)
AL		Brushing with a rotating brush (0070)
AM		Differential lock, transfer case 4x4 (2475)
AN		Loader bucket, float (1441)
AP		Loader bucket (1437)
AQ		Rear window washer & wiper (0098)
AR		Header, Header drive (1579)
AS		Excavator/backhoe boom side shift (2091)
AT		Chemical water treatment (1851)
AU		Grapple skidder, single funct° boom (1762)

CODE	SYMBOL	DESCRIPTION
AV		-
AW		-
AY		-
AZ		-
B1	HIGH	-
B2	LOW	-
B3		-

### Legend scale

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

# K range

Power rocker switches and indicators • symbols and accessories

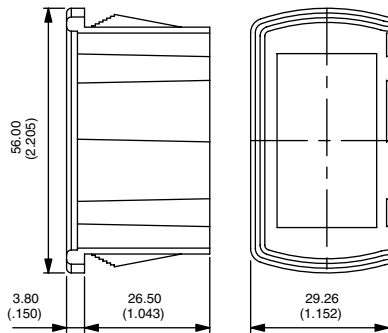
## MOUNTING PANELS

(NOT AVAILABLE FOR USE WITH THE KH SERIES)

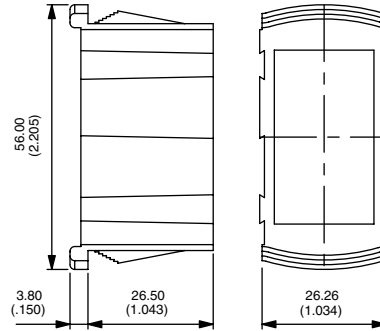
MOUNTING PANEL END

MOUNTING PANEL MIDDLE

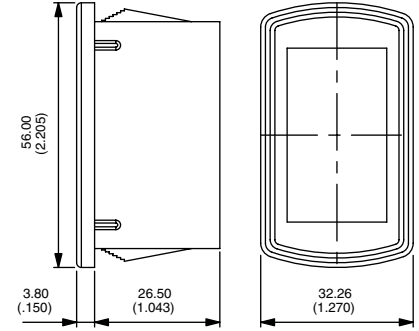
SINGLE MOUNTING PANEL



U2261



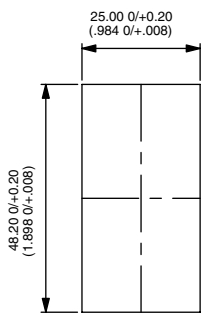
U2262



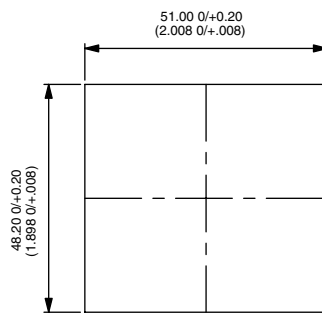
U2267

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

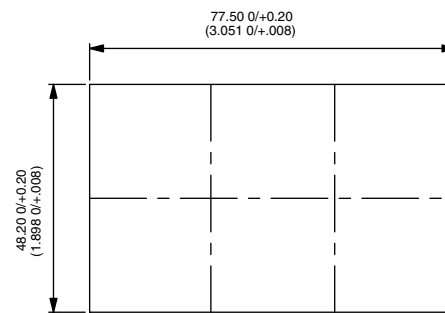
## MOUNTING PANEL CUT-OUT



For 1 element U2267



For 2 elements U2261



For 3 elements (2xU2261 + 1x U2262)

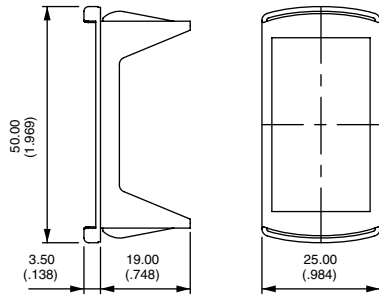
For additional elements, add 26.40 mm (1.039)

# K range

Power rocker switches and indicators • symbols and accessories

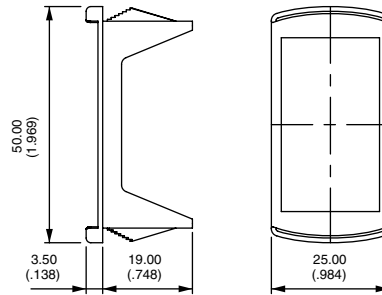
## 22 X 44 ADAPTERS

FRONT PANEL DISMOUNTING



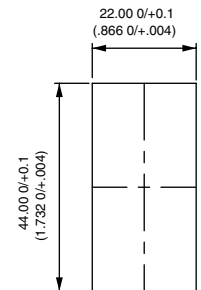
U3060

REAR PANEL DISMOUNTING



U3070

PANEL CUT-OUT



**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
- 2 Black
- 4 Grey
- 5 Yellow
- 6 Red
- 7/1 White

## 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 arrow. 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.



U3052

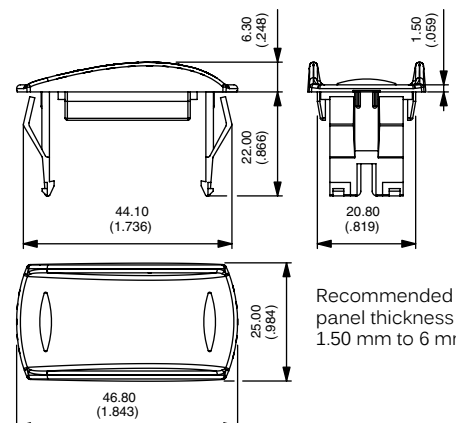
to be ordered by pairs

## BLANKING CAPS

Usefull for future extensions.

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

- |         |           |       |        |
|---------|-----------|-------|--------|
| U2271   | Blue      | U2275 | Yellow |
| U2271/4 | Dark blue | U2276 | Red    |
| U2272   | Black     | U2277 | Ivory  |
| U2273   | Green     | U2279 | Orange |
| U2274   | Grey      |       |        |



# K range

Power rocker switches and indicators • symbols and accessories

## CONNECTORS

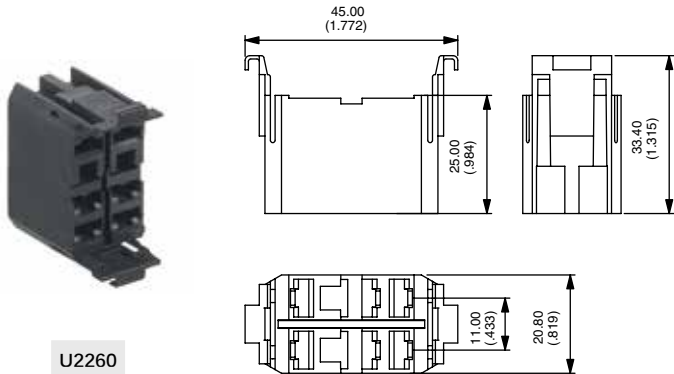
Standard color : black. Other colors : on request. Connectors cannot be combined with wiring types H and I.

**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.

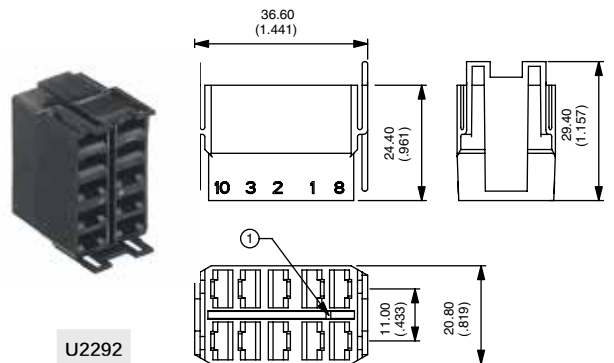
**U2282** 10 terminal version. For use with terminals type H or J.  
2.8 (.110) tabs to be fitted by the user (example : AMP/Tyco 0-927779-3).

**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).

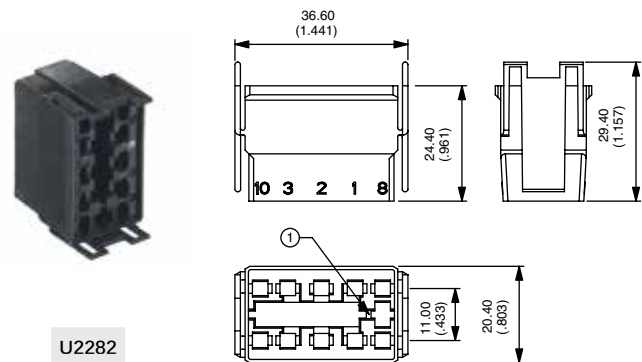
**U3152** 10 terminal version. For use with terminals type B, C, E or F.  
6.35 (1/4) tabs to be fitted by the user (example : "Timer" terminals TE927833-2)



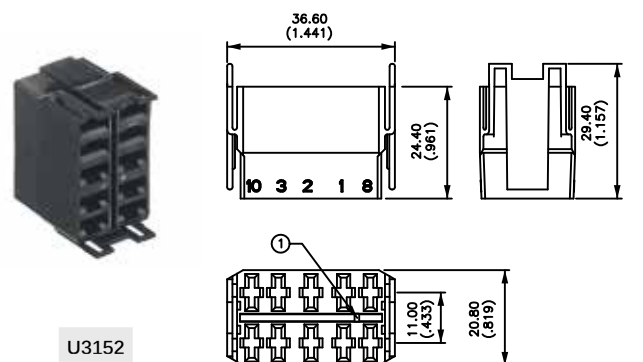
U2260



U2292



U2282



U3152