

## Switch Position Indicators for DC or AC Voltage

IPI 24  
IPI 25  
IPI 29  
IPI 36  
IPI 39  
IPIR 24  
IPIR 25  
IPIR 29  
IPIR 36  
IPIR 39



## Application

The switch position indicators **IPI/IPIR 24/25/29/36/39** are used for operation in mimic circuit diagrams of switch gears as well control panels, switchboards and mosaic technology to indicate the switching state in electrical installations.

The switch position indicators provide screw terminals for cable cross-section up to 1.5 mm<sup>2</sup>.

## Functional Principle

The switch position indicators are equipped with a rotary magnet system guaranteeing an accurate position of index symbols. Thermal development in the indicator is negligible due to the low power consumption.

The coil of the system generates a magnetic field. The rotary magnet is axially linked to the index symbol. The position of it is determined by the pole shoes. An external resetting is not necessary.

## Mechanical Data

case format	round thermoplastic case with round or square front-bezel, suitable for mounting in switchboards (IPI/IPIR 25/29/36/39) or mosaic grid panels (IPI/IPIR 24)				
material of case	polycarbonate UL 94 VO				
front-bezel	thermoplastics				
colour of bezel	black				
position of use	any position permissible				
panel fixing	sleeve nut				
terminals	screw terminals up to 1.5 mm <sup>2</sup> with safety touch protection				
enclosure code	IP 54				

	IPI 24 IPIR 24	IPI 25 IPIR 25	IPI 29 IPIR 29	IPI 36 IPIR 36	IPI 39 IPIR 39
front-bezel	□ 24 mm	□ 25 mm	∅ 29 mm	□ 36 mm	∅ 39 mm
case	∅ 21.8 mm				
mounting depth	94 mm				
panel cutout	∅22 <sup>+0.5</sup> mm				
panel thickness	0 ... 12 mm				
weight approx.	0.1 kg	0.1 kg	0.12 kg	0.15 kg	0.15 kg

### option

sleeve 644.121 702 for fitting in mosaic grids, 24–39 mm.

## Electrical Data

switch position indicators are available for use on DC or AC voltage ranging from 24 V to 230 V (see connection diagrams).

type: <b>IPI</b>	for use on DC voltage
type: <b>IPIR</b>	for use on AC voltage
power consumption	0.4 W based on 110 V 1.4 W based on 230 V
dielectric test	3.7 kV
frequency range (AC operation)	40 Hz ... 10 kHz
voltage variation permissible	±20%
measurement category	CAT III
operating voltage	300 V

## Rules and Standards

DIN EN 61010–1	Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1: General requirements
DIN EN 60051–1	Direct acting indicating analogue electrical measuring instruments and their accessories Part 1: Definitions and general requirements common to all parts
DIN EN 61000–6–2	Electromagnetic compatibility (EMC) – Part 6–2: Generic standards – Immunity for industrial environments
DIN EN 61000–6–3	Electromagnetic compatibility (EMC) – Part 6–3: Generic standards – Emission standard for residential, commercial and light-industrial environments

## Indication

There are three positions of indication:



"ON"



out of operation:  
"DISTURBED"  
or "BLOCKED"



"OFF"

### Bar Index Symbol

IPI/IPIR ... – 1



IPI/IPIR ... – 2



IPI/IPIR 29 – 1  
IPI/IPIR 39 – 1



### Break Contact (Circuit Breaker)

IPI/IPIR ... – 5

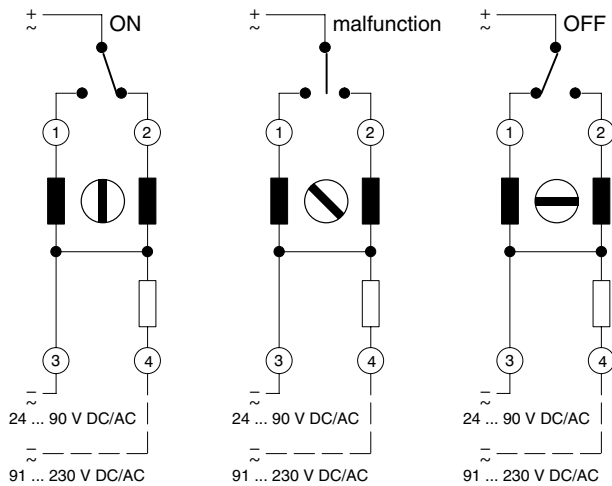


## Environmental

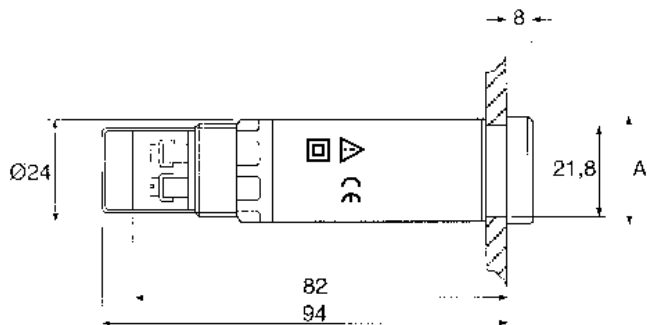
operating temperature range	–25 ... +50° C
storage temperature range	–25 ... +65° C
relative humidity	≤ 75% annual average, non-condensing

# Switch Position Indicators for DC or AC Voltage

## Connections

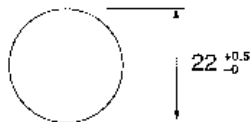


## Dimensions



type	A
IPI 24, IPIR 24	□ 24
IPI 25, IPIR 25	□ 25
IPI 29, IPIR 29	∅ 29
IPI 36, IPIR 36	□ 36
IPI 39, IPIR 39	∅ 39

### panel cut-out



(dimensions in mm)

## Ordering Information

<b>type</b>	switch position indicators for use on DC voltage 24 ... 230 V
<b>IPI 24 ...</b>	square 24 mm x 24 mm (suitable for mosaic grid panels)
<b>IPI 25 ...</b>	square 25 mm x 25 mm
<b>IPI 29 ...</b>	round ∅ 29 mm
<b>IPI 36 ...</b>	square 36 mm x 36 mm
<b>IPI 39 ...</b>	round ∅ 39 mm
-1	bar index, light background
-2 <sup>1)</sup>	bar index, dark background
-5 <sup>1)</sup>	break contact index, light background
<b>type</b>	switch position indicators for use on AC voltage 24 ... 230 V
<b>IPIR 24 ...</b>	square 24 mm x 24 mm (suitable for mosaic grid panels)
<b>IPIR 25 ...</b>	square 25 mm x 25 mm
<b>IPIR 29 ...</b>	round ∅ 29 mm
<b>IPIR 36 ...</b>	square 36 mm x 36 mm
<b>IPIR 39 ...</b>	round ∅ 39 mm
-1	bar index, light background
-2 <sup>1)</sup>	bar index, dark background
-5 <sup>1)</sup>	break contact index, light background
<b>option</b>	
sleeve 644.121.702	for fitting in mosaic grids, 24–36 mm.

<sup>1)</sup> IPI/IPIR 24/25/36 only

### ordering example IPIR 25 – 2

switch position indicator 25 mm x 25 mm with bar index symbol on dark background, operating voltage 24 ... 230 V AC