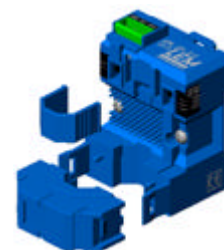


# AC Current transducer APR-B420L

$I_{PN} = 10 \dots 400 \text{ A}$

Split core transducer for the electronic measurement distorted AC waveforms current, with galvanic isolation between the primary (High power) and the secondary circuits (Electronic circuit). Switch selectable ranges and True RMS 4-20mA current output.



## Electrical data

Primary Nominal Current $I_{PN}$ (A.t.RMS)	Analogue Output Signal $I_{OUT}$ (mA)	Type
10,25,50	4-20	<b>APR 50 B420L</b>
50,75,100	4-20	<b>APR 100 B420L</b>
100,150,200	4-20	<b>APR 200 B420L</b>
200,300,400	4-20	<b>APR 400 B420L</b>

$R_L$	Load resistance (See the graph "Load Resistance vs. Supply Voltage")	< 350 $\Omega$
$V_C$	Supply voltage (loop powered) Limitation of output current Overloaded input current	+12 .. 24 V DC < 25 mA no limitation

## Features

- VFD and SCR waveforms current measurement
- True RMS output
- Split core type
- Loop powered 4-20mA current output
- DIN mounting & Panel mounting
- Eliminates insertion loss
- Switch selectable ranges

## Accuracy-Dynamic performance data

$X$	Accuracy @ $I_{PN}, T_A = 25^\circ\text{C}$ (without offset)	< $\pm 1$ % of $I_{PN}$
$e_L$	Linearity (0 .. $\pm I_{PN}$ )	< $\pm 0.5$ % of $I_{PN}$
$I_{OE}$	Electrical offset current, $T_A = 25^\circ\text{C}$	4 mA
$I_{OT}$	Thermal drift of $I_{OE}$	$\pm 1$ $\mu\text{A/K}$
$TCE_G$	Thermal drift of the gain (% of reading)	$\pm 0.1$ %/K
$t_r$	Response time @ 90% of $I_p$	< 400 ms
$f$	Frequency bandwidth ( $\pm 1\%$ )	30 .. 6000 Hz

## Advantages

- Large aperture for cable up to  $\varnothing 18\text{mm}$
- High isolation between primary and secondary circuits
- Easy to mount

## General data

$T_A$	Ambient operating temperature	-20 .. +60 $^\circ\text{C}$
$T_S$	Ambient storage temperature	-20 .. +85 $^\circ\text{C}$
$m$	Mass	90 g
	Protection type	IP20
$dCp$	Creepage distance	5.5 mm
$dCl$	Clearance distance	5.5 mm
$CTI$	Comparative tracking index (Group I) UL94 classification	600 V V0

## Applications

- VFD Controlled Loads:  
VFD output indicates how the motor and attached load are operating.
- SCR Controlled Loads:  
Accurate measurement of phase angle fired or burst fired (time proportioned) SCRs. Current measurement gives faster response than temperature measurement.
- Switching Power Supplies and Electronic Ballasts:  
True RMS sensing is the most accurate way to measure power supply or ballast input power.

## Insulation category

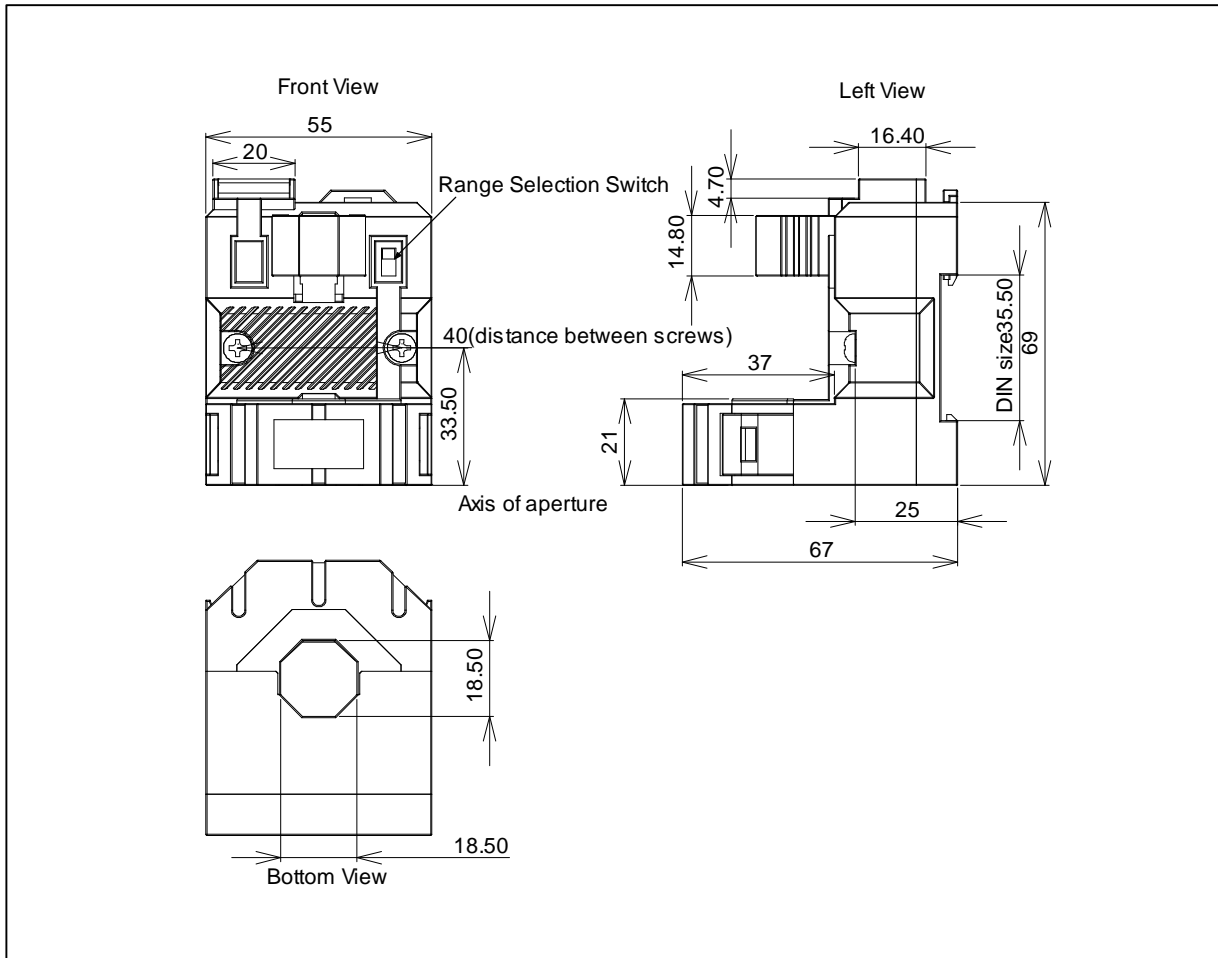
$V_b$	Rated Voltage	300	V
	with IEC 61010-1 standards and following conditions : - Single insulation - Over voltage category CAT III - Pollution degree PD2 - None uniform field		
$V_d$	R.m.s. voltage for AC insulation test, 50Hz, 1mn	5	kV
$V_e$	R.m.s. voltage for partial discharge extinction @ 10pC	1.5	kV
$V_w$	Peak impulse withstand voltage 1.2/50 $\mu\text{s}$	6.1	kV
	If insulated cable is used for the primary circuit, the voltage category could be improved with the following table :		
	Cable insulation (primary)	Category	
	HAR 05	600V CAT III	
	HAR 07	1000V CAT III	

041029/3

**Notes :** Installation and maintenance should be done with power supply disconnected.  
The operator must have accreditation to install this material.  
The users must take care of all protection guarantee against electrical shock.

## Dimensions AP(R)-B420L

(unit : mm, 1mm = 0.0394 inch)



### Mechanical characteristics

- General tolerance  $\pm 1$  mm
- Primary aperture  $\varnothing 18.5$  mm
- Panel mounting 2 holes  $\varnothing 4.0$  mm
- Distance between holes 40.0 mm

For panel mounting, replace M4 screws by new one (not supplied) with appropriate length to panel's thickness.

### Connections

- Wires up to 2 mm  $\varnothing$

