

## AC Current transducer AKR-B420L

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



$I_{PN} = 2..200A$



### Features

- VFD and SCR waveforms current measurement
- True RMS responding
- Split core box
- Current output
- Loop powered transducers
- Panel mounting
- Jumper selectable ranges

### Electrical data

Primary Nominal Current $I_{PN}$ (A.t.RMS)	Analogue Output Signal <sup>1)</sup> $I_{OUT}$ (mA)	Type
2,5	4-20	<b>AKR 5 B420L</b>
10,20,50	4-20	<b>AKR 50 B420L</b>
100,150,200	4-20	<b>AKR 200 B420L</b>

$V_c$	Supply voltage (Loop powered)	24	V DC
$R_L$	Load resistance	see power supply diagram	
$V_d$	RMS Isolation voltage test, 50 Hz, 1mn	5	kV AC
$f$	Frequency bandwidth	10-400	Hz

### Advantages

- Large aperture
- High isolation between primary and secondary circuits
- Easy to mount

### Accuracy - Dynamic performance data

X	Accuracy @ $I_{PN}$ , $T_A = 25^\circ C$	$\pm 1$	%
$t_r$	Response time @ 90% of $I_{PN}$	< 600	mS

### General data

$T_A$	Ambient operating temperature (0-95% RH)	-20..+50	$^\circ C$
$T_S$	Ambient storage temperature	-20..+85	$^\circ C$
m	Mass	120	g

Note: <sup>1)</sup> For 4-20mA output model, no saturation output up to 23 mA

### Selecting the transducer

VFD (Variable Frequency Drive) and SCR (Semi Conductor Rectifier) output waveforms are rough approximations of a sine wave. There are numerous spikes and dips in each cycle. AKR transducers use a mathematical algorithm called "True RMS," which integrates the actual waveform over time. True RMS is the only way to accurately measure distorted AC waveforms. *Select AKR transducers for nonlinear loads or in "noisy" power environments.*

### Applications

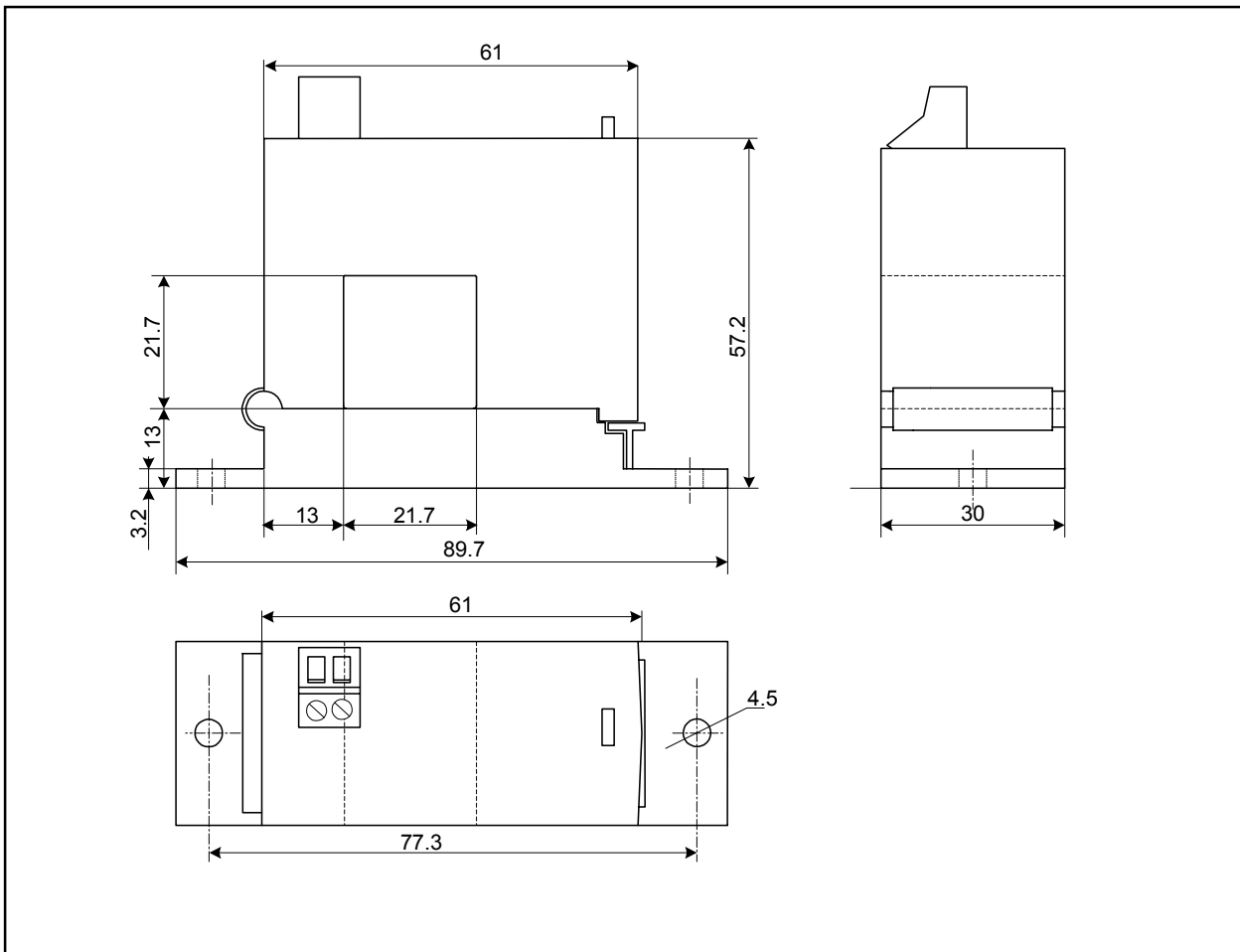
- VFD Controlled Loads: VFD output indicates how the motor and attached load are operating.
- SCR Controlled Loads: Accurate measurement of phase angle fired or burst fired (time proportioned) SCRs.
- Switching Power Supplies and Electronic Ballasts: True RMS sensing is the most accurate way to measure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

### Options on request

- DIN mounting

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**Dimensions AKR-B420L** (unit : mm, 1mm = 0.0394 inch)

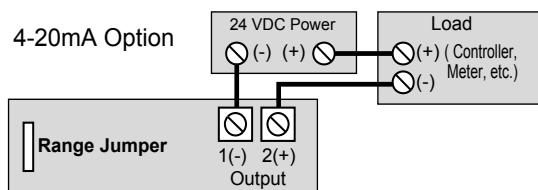


**Mechanical characteristics**

- General tolerance  $\pm 1$  mm
- Primary aperture 21.7 mm sq.
- Panel mounting 2 holes  $\varnothing 4.5$ mm
- Distance between holes 77.3 mm

**Connections**

- 2 x UNC8 Cylindric Head



- Notes:
- Captive screw terminals.
  - 12-22 AWG solid or stranded.
  - Observe polarity.

**Power Supply diagram**

