



# Datasheet

## RISH CT DUCER 50 ... 750 A AC



Current Transformers with Transducer - Measurement of AC current



Measure



Control



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Rish CTDucer is a very reliable, efficient and robust current transformer for measurement of AC current. It provides 4 ... 20 mA or 0 ... 20mA DC output.

It is useful in

- Data Monitoring & Network Analysis
- Measurement of non - sinusoidal and distorted networks

## Features

- Two products in one - single device serves functionality of both current transformer as well as transducer
- Measurement of AC current for frequency 50/60Hz
- Provides proportional 4 ... 20 mA or 0 ... 20 mA DC output
- High output load resistance up to 1000 ohm
- Two models for True RMS and Average type measurement available
- Easy and safe electrical connection by means of spring clamp terminal

## Technical Data

### Input Parameter:

Measuring Range (In)	0 ... 300 A AC or 0 ... 750 A AC (Refer Model Info Table)
Input Frequency Range	50/ 60 Hz
Thermal Nominal Continuous Rated Current	1.2 x In

### Output Parameter:

DC Current Output	4...20 mA , 0...20 mA
Max. Burden Resistance at Current Output	For $U_H$ , $R_B$ 1000 $\Omega$ For $U_L$ , $R_B$ 750 $\Omega$ $R_B$ 1000 $\Omega$ ( $U_L > 24V$ DC)
Current Limit Under Overload	< 30 mA
Voltage limit under $R = \infty$	$\leq 25$ V
Response Time	< 600ms
Max. Operating Voltage $U_m$	0.72 kV, $U_{eff}$



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**Auxiliary Power Supply Voltage:**

Auxiliary Voltage ( $U_H$ or $U_L$ )	$U_H$ ...230 V AC, -50 / +15 %, 50/60 Hz (external protection via fuse 250 mA / 250 V, fast) OR $U_L$ ...24 V DC, $\pm$ 15 % (external protection via fuse 250 mA / 250 V, fast)
Current Consumption	For $U_H$ , < 15 mA For $U_L$ , < 50 mA

**Accuracy:(Acc. to IEC/EN 60 688)**

Reference Value	Output Span
Accuracy Class	$\pm$ 0.5 %

**Reference condition for accuracy:**

Ambient temperature	23°C
Relative humidity	45-55 % rH
Measured quantity frequency	50 Hz(Sinusoidal waveform)
Supply voltage	For $U_H$ , 230 V, 50Hz AC supply For $U_L$ , 24 V DC
Burden resistance at output terminals	500 $\Omega$

**Additional Error:**

Temperature Interference	$\pm$ 0.3 % / 10°C
Influence of Variation	As per IEC/EN 60688 Standard
Influence of EMC (as per IEC 61236-1: 2020)	$\pm$ 2 %



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**Safety:**

Protection Class	IP20
Installation Category	III
Pollution Degree	2
Isolation Test Voltage (IEC 61010-1)	For U <sub>H</sub> , 3 kV AC , 50 Hz, 60 Seconds Auxiliary supply vs Measuring output For U <sub>H</sub> & U <sub>L</sub> , 6.4 kV AC , 50 Hz, 60 Seconds Primary Conductor Vs Measuring Output Housing Vs Measuring output and Auxiliary supply

**Environmental:**

Nominal Range of use	0 ... <u>23°C</u> ... 70°C
Relative Humidity	0 ... 95 % rH without condensation
Storage Temperature	-40 ... 90°C
Altitude	Up to 2000 m
Max. Temperature of Primary Conductor	100° C

**Ambient Tests:**

Vibration	As per IEC 60068-2-6 Standard
Acceleration	± 2 g
Frequency range	10...150...10Hz,
Rate of frequency sweep	1 octave/minute
Number of cycles	10, in each of the three axes
Shock	As per IEC 60068-2-27 Standard
Acceleration	3 x 50g 3 shocks in each in 6 directions



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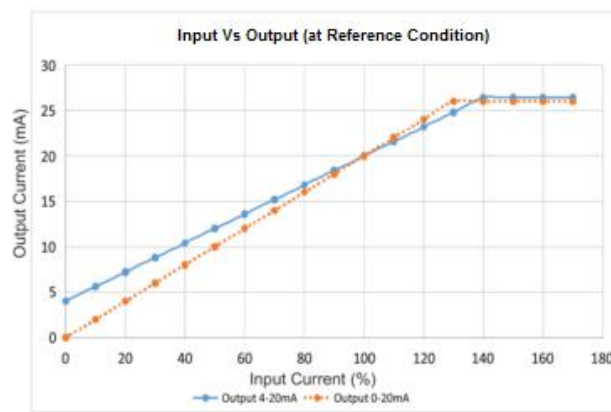
Record



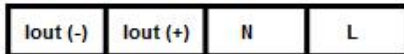
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## Applicable Technical Standards

Electromagnetic Compatibility	IEC 61326-1: 2020
Immunity	IEC 61000-4-2
	IEC 61000-4-3
	IEC 61000-4-4
	IEC 61000-4-6
	IEC 61000-4-8
Emission	CISPR 11
Safety	IEC 61010-1, 2010
Performance	IEC 60688, 2012



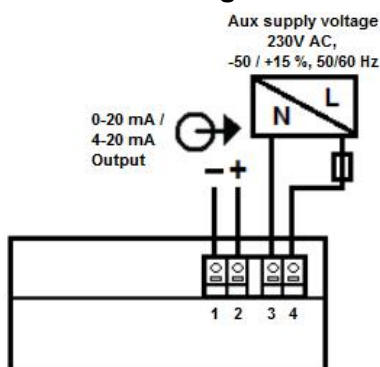
### Electrical Connections for $U_H$



Spring clamp terminal

Connection cross sections: 0.08 ... 2.5 mm

### Connection Diagram for $U_H$



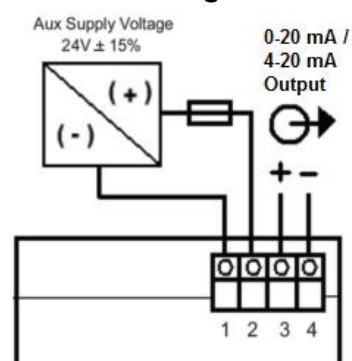
### Electrical Connections for $U_L$



Spring clamp terminal

Connection cross sections: 0.08 ... 2.5 mm

### Connection Diagram for $U_L$



Measure



Control



Record



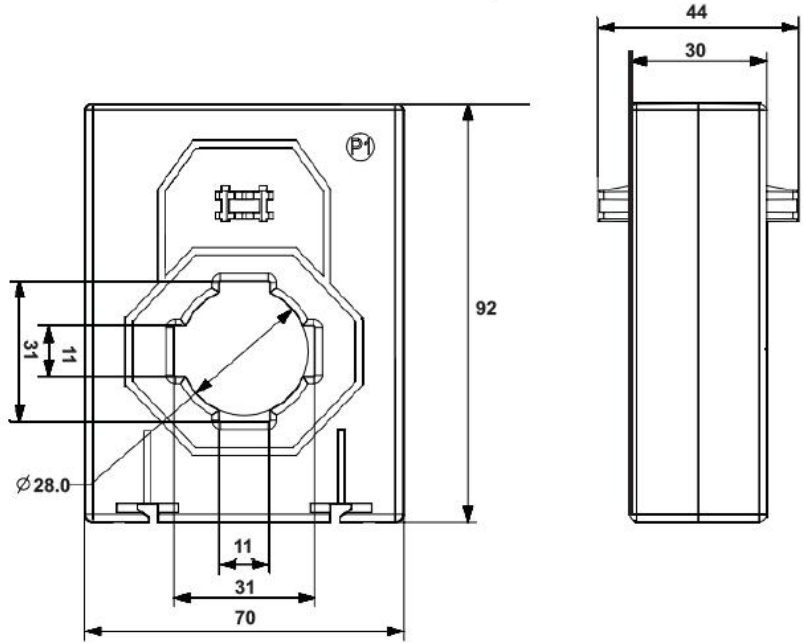
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## Dimensions

Model 70 x 30 mm

Transformer width: 70 mm  
Transformer height: 92 mm  
Transformer depth: 44 mm

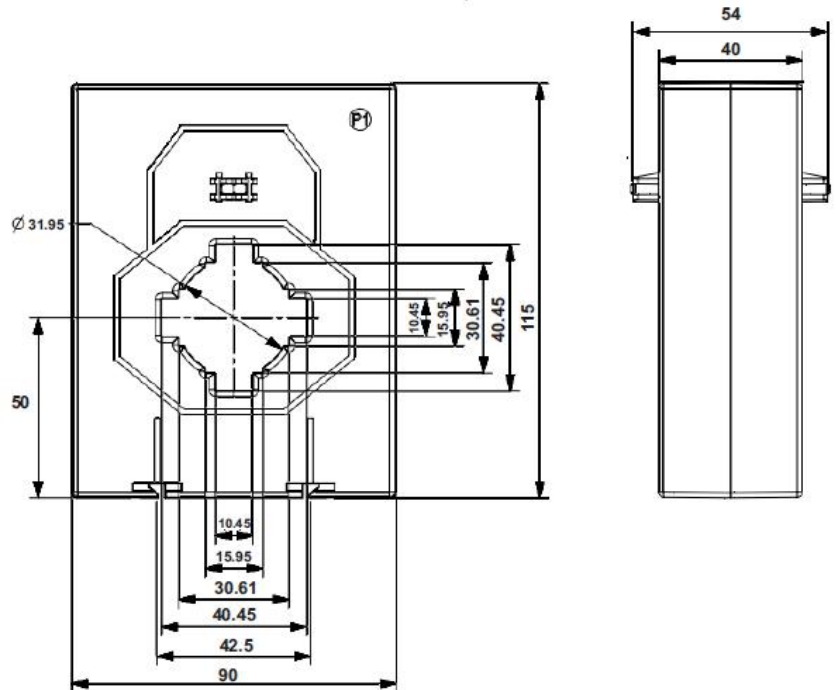
Bus bar: 30 x 10 mm  
Round conductor: 28 mm



Model 90 x 40 mm

Transformer width: 90 mm  
Transformer height: 115 mm  
Transformer depth: 58 mm

Bus bar: 40 x 10 mm  
Round conductor: 31.5 mm



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## Rish CT Ducer, CT with Transducer options

Type	Primary Current (AC)	Current Output (mA DC)
RISH CTDucer 70 x 30mm * ( TRMS or Average)	50	4 ... 20 mA or 0 ... 20 mA
	100	
	150	
	200	
	250	
	300	
RISH CTDucer 90 x 40 mm (TRMS or Average)	50	4 ... 20 mA or 0 ... 20 mA
	100	
	150	
	200	
	250	
	300	
	400	
	500	
	600	
750		

\* Available with lower Aux (U<sub>L</sub>) Power supply only



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## Ordering Information

CT with Transducer	CCT1	XX	X	XX	X	XXXXXXXX
Type	70x30 mm AVG	1A *				
	70x30 mm TRMS	1T *				
	90x40 mm AVG	2A				
	90x40 mm TRMS	2T				
Primary Current Ratio	50A		A			
	100A		B			
	150A		C			
	200A		D			
	250A		E			
	300A		F			
	400A **		G			
	500A **		H			
	600A **		I			
	750A **		L			
	Non Standard Range***		X			
Output	4 ... 20 mA DC			75		
	0 ... 20 mA DC			65		
Power Supply	230V AC				H	
	24V DC				L	
Version	Standard					000000
	Custom					00000XX

\* Available with lower Aux (U<sub>L</sub>) Power supply only

\*\* Available in Size 90 x 40 mm only

\*\*\* After written confirmation from HO Only – Please contact HO



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RISHABH

**Domestic (India):** +91 253 2202028/99 | [marketing@rishabh.co.in](mailto:marketing@rishabh.co.in)

**International:** +91 253 2202004/06/08/99 | [global@rishabh.co.in](mailto:global@rishabh.co.in)

[www.rishabh.co.in](http://www.rishabh.co.in)



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