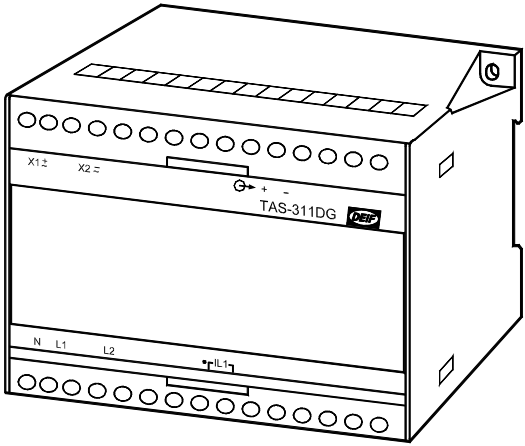
Installation and start up instructions

TAS-311DG

Selectable AC transducer

4189300013J (UK)



- *Voltage, current, frequency or phase angle transducer*
- *Supply voltage up to 690V*
- *Configuration via PC-interface possible*
- *35 mm DIN rail or base mounting*

CE

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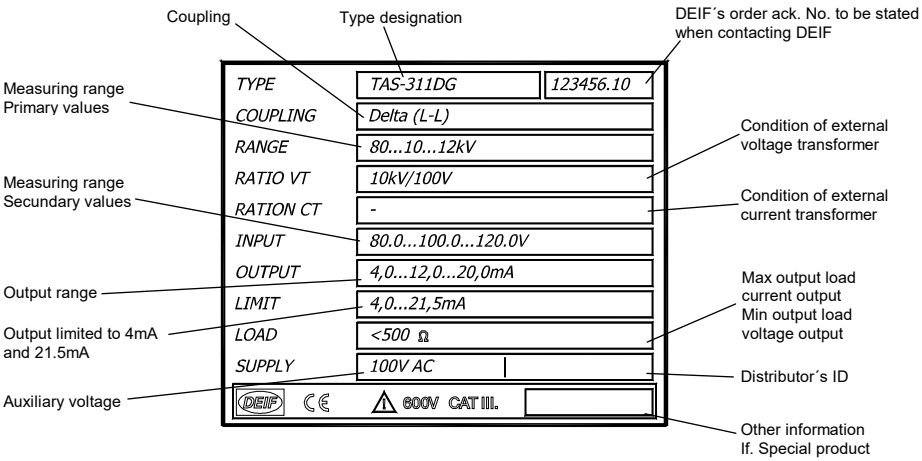
Description

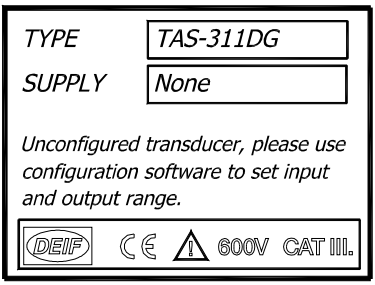
TAS-311DG is a micro controller based AC-transducer with 1 analog output for measurement of RMS-voltage, RMS-current, frequency or phase angle on an AC-network.

Label

The configured transducer is provided with a label with the following data (the example is for a voltage transducer):

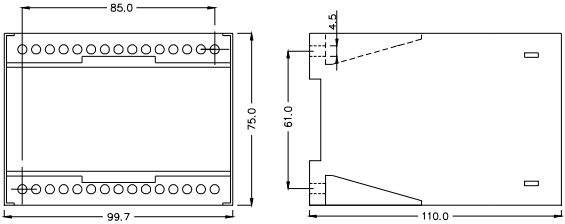


The un-configured transducer is provided with a label with the following data:



DEIF´s order ack no can be found on a paper label on the transducerbox.
About configuration see special manual.

Mounting instructions



TAS-311DG is designed for panel mounting, being mounted on a 35 mm DIN rail, or by means of two 4-mm screws.

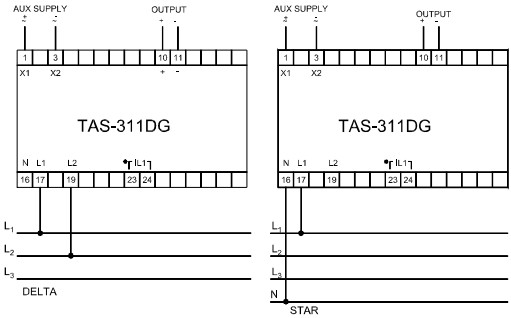
Weight: Approx. 0.600 kg

The design of the transducer makes mounting of it close to similar equipment possible, however make sure there is min. 50 mm between the top and bottom of the transducer and other equipment.

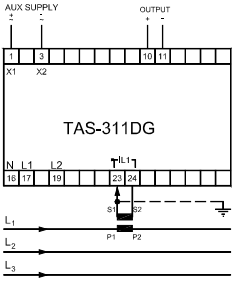
The DIN rail must always be placed horizontally when several transducers are mounted on the same rail.

Connection diagram

VOLTAGE/FREQUENCY

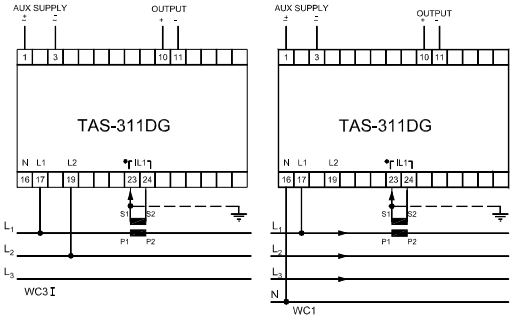


CURRENT *



With voltages above 480V phase-phase. The secondary side of the current transformer must be connected to earth. Alternatively a double insulated current transformer can be used.

PHASE ANGLE *



COUPLING	17 19	23/24
WC3 I	L1 L2	L1
WC3 II	L2 L3	L1
WC3 III	L3 L1	L1

It is not necessary to protect the measuring voltage inputs. But it is recommended to use a 2A fuse for the supply input (terminals 1 and 3).

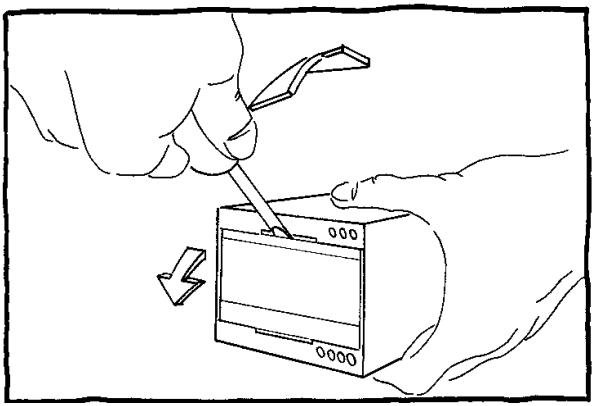
The transducer is protected against ESD (electrostatic electricity), and further special protection against this during the mounting of the transducer is not necessary.

Connection/set up

The transducer is equipped with a red LED for indication of errors in the calibration or the configuration. This LED is placed under the front plate. The function of the LED is as follows:

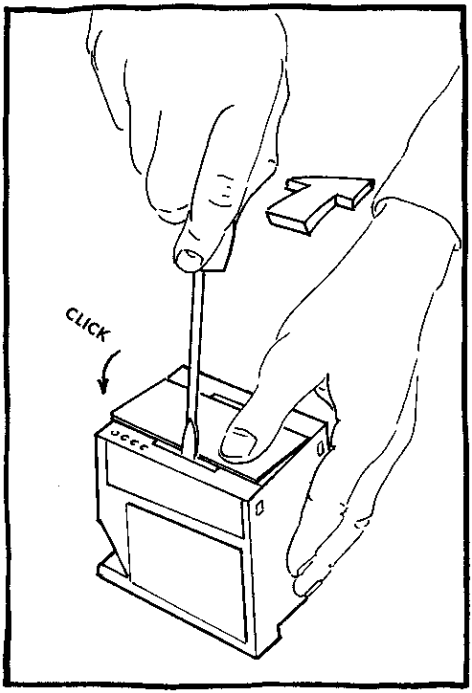
Fast pulse 5Hz. The calibration data are corrupted. Contact DEIF.
Slow pulse 1Hz. The configuration data are wrong or corrupted. Make a re-configuration or contact DEIF. About configuration see special manual.

Opening of the unit



The front panel is removed by means of a screwdriver. The front panel may be loosened in the right side first and is then totally demounted by moving the screwdriver towards left.

Mounting of the front panel



Press with a screwdriver as indicated by the arrow and press the front panel down with your thumb, simultaneously. It is recommended that one side of the front panel snaps into place before the other.

General technical specifications

Accuracy:	Voltage/current: Class 0.5 (-10…15…30…55°C) according to IEC 688 Frequency: Class 0.2 of f max. (-10…15…30…55°C) according to IEC 688 Phase angle: Class 1.0 (-10…15…30…55°C) according to IEC 688
Meas. current (In):	0.75/1.5/3.0/6.0A Meas. range (In): 0…200%
Overload, currents:	20A max., continuously 75A max. for 10 s 240A max. for 1 s
Load:	Max. 0.5VA
Meas. voltage (Un):	73/140/254/400V phase to neutral Meas. range (Un): 1…120% 127/240/440/690V phase to phase Meas. range(Un): 1…120% U_n can be set between 57.7…690V
Overload, voltages:	1.2 x U_n max., continuously 2 x U_n max. for 10 s
Load:	Min. 480kΩ
Frequency range:	30…45…65…80Hz
Indication:	Red LED function: (The LED is located behind the front plate) Calibration error = flash frequency 5Hz Configuration error = flash frequency 1Hz
Output:	1 analogue output
Standard range:	Output (0...100%): 0...1mA, 0…5mA, 0...10mA, 0...20mA, 0...1V, 0...5V, 0...10V Output (10...100%): 0.1...1mA, 0.5...5mA, 1...10mA, 2...20mA, 0.1...1V, 0.5...5V, 1...10V Output (20...100%): 0.2...1mA, 1...5mA, 2...10mA, 4...20mA, 0.2...1V, 1...5V, 2...10V Output (-100...0...100%): -1...0...1mA, -5...0...5mA, -10...0...10mA, -20...0...20mA, -1...0..1V, -5...0...5V, -10...0...10V Other ranges possible

Limit:	±120% of nominal output
Output load:	Burden if current output: Max. 10 V (max. 1kΩ) Burden if voltage output: Max. 20 mA
Output cable:	Max. length 30 m
Ambient temperature:	-10…55°C (nominal) -25…70°C (operating) -40…70°C (storage)
Temp. coefficient:	Max. ±0.2% of full scale per 10°C
Response time:	Current/voltage: <105 ms in the range 0...90 % of nominal input acc. to IEC 688 <300 ms in the range 0...30 % of nominal input <85 ms in the range 30...100 % of nominal input Frequency: <75 ms, typical value 50 ms Phase angle: <275 ms, typical value 200 ms
Ripple:	Twice the class index (peak to peak measurement) according to IEC 688
Galvanic separation:	AC aux. supply models: Between inputs, output and aux. supply: 3750V-50Hz-1 min. DC aux. supply models: Between inputs and outputs: 3750 V-50 Hz-1 min. Between inputs and supply: 3750 V-50 Hz-1 min. Between supply and outputs: 1500 V-50 Hz-1 min.
Aux. supply voltage:	57.7-63.5-100-110-127-200-220-230-240-380-400-415-440-450-480-660-690V AC ±20% 24-48-110-220V DC -25/+30%
Consumption:	(Aux. supply) 3.5VA/2W
Climate:	HSE, to DIN 40040
EMC:	According to EN 61000-6-1/2/3/4
Protection:	Housing: IP40. Terminals: IP20 to IEC 529 and EN 60529
Connections:	Max. 2.5mm² multi-stranded Max. 4.0mm² single-stranded
Materials:	All plastic parts are self-extinguishing to UL94 (V1)
Weight:	0.600kg

Specific technical specifications

Voltage:	Meas. voltage:	57...690V AC
	Start value:	0…67% of end value
	End value:	100…120% of measuring voltage
	Connection:	Star connection (UL1-N): 57V…400V AC
		Delta connection (UL1-L2): 100V…690V AC
Current:	Meas. current:	0.5...8A
	Start value:	0...67% of end value
	End value:	100% of measuring current
Frequency:	Meas. range:	20Hz...80Hz
	Start value:	20Hz...76Hz
	End value:	40Hz...80Hz
	Meas. range:	4Hz ≤end value - start value
	Connection:	Star connection (UL1-N): 57V…400V AC
		Measuring range (Un): 30...120%
		Delta connection (UL1-L2): 100V…690V AC
		Measuring range (Un): 30...120%
Phase angle:	Reference:	Delta phi = 180°, sine wave Unom and Inom (Inom = 1A or 5A)
		Voltage influence 1.5% between 50…120% Unom
		Current influence 1.5% between 50…150% Inom
		2.5% between 20…50% Inom
	Meas. range:	0°…60° / 360° electrical degrees
	Start value:	-359.9°…360°
	End value:	-359.9°…360°
	Meas. span:	60° ≤difference between start and end values ≤360°
	Connection:	WC1: (IL1 and UL1-N) or (IL2 and UL2-N) or
		(IL3 and UL3-N): 57…400V AC
		WC3 I: (IL1 and UL1-L2): 100…690V AC
		WC3 II: (IL1 and UL2-L3): 100…690V AC
		WC3 III: (IL1 and UL3-L1): 100…690V AC
		Measuring range (Un): 30...120%

If the current transformer is placed in another phase than L1, the voltage is connected in accordance with the tables below.

CT in phase L1 standard

COUPLING	17	19
WC3 I	L1	L2
WC3 II	L2	L3
WC3 III	L3	L1

CT in phase L2

COUPLING	17	19
WC3 I	L2	L3
WC3 II	L3	L1
WC3 III	L1	L2

CT in phase L3

COUPLING	17	19
WC3 I	L3	L1
WC3 II	L1	L2
WC3 III	L2	L3