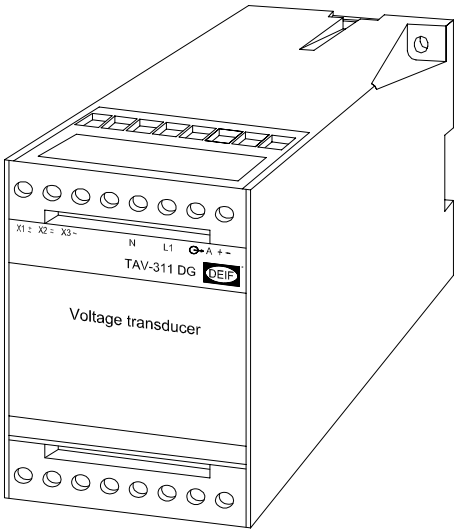
Installation instructions

Transducer type TAV-311DG, TAV-321DG

4189300010F (UK)



- *TAV-311DG: Output 0...5mA, 0...10mA, 0...20mA, 4...20mA DC, 0...10V DC*
- *TAV-321DG: Output 0...10mA, 0...20mA DC, 0...10V DC*
- *TAV-311DG: Aux. supply 110/230V AC, 440V AC, 24V DC, 48...110V DC or 88...220V DC*
- *Class 0.5*
- *Mounting: 35 mm DIN rail or base mounting*

CE

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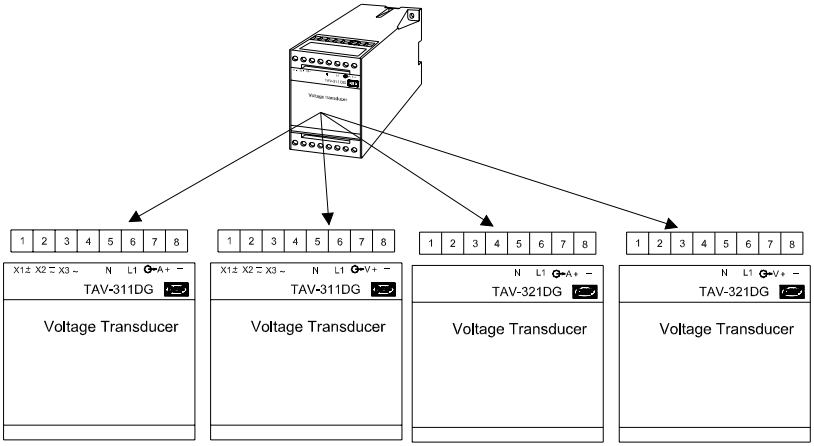
DEIF A/S

1. Description

TAV-311DG and TAV-321DG are voltage transducers for measurement of sinusoidal AC-voltage.



Label: A B C D

If a TAV-311DG is to be installed, please continue with section 2 on this page.

If a TAV-321DG is to be installed, please continue with section 3 page 4.

2. TAV-311DG

2.1 General

TAV-311DG is either with current output (front label A) or with voltage output (front label B). The input and output calibration and the built-in aux. supply are stated on the top label, see section 5.

2.2 Aux. supply connection

Aux. supply	Terminal		
	1	2	3
110/230V AC	110V AC	230V AC	N
440V AC		440V AC	440V AC
DC-supply	xV DC	GND	

2.3 Input measuring voltage V AC connection

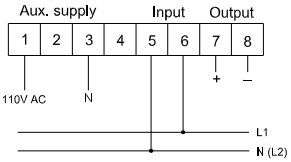
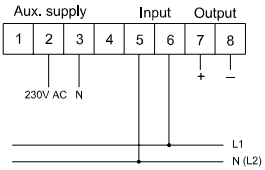
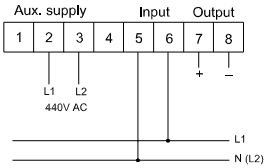
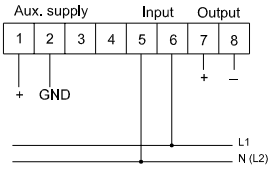
The measuring voltage is connected to terminals 5 (N) and 6 (L1), see labels A and B.

2.4 Output signal V DC or A DC connection

In both cases the connection terminals are 7 (+) and 8 (-).

2.5 Examples of connection – TAV-311DG

Recommended fuse 2A on aux. supply.

	For aux. supply 110V AC (Please note that transducers with 110V AC supply can also be connected to 230V AC)
	For aux. supply 230V AC (Please note that transducers with 230V AC supply can also be connected to 110V AC)
	For aux. supply 440V AC
	For aux. supply V DC

Important!

Aux. supply and measuring voltage (input) must not be connected to single- or three-phase systems where phase zero or phase earth is more than 300V.

If a TAV-321DG is not to be installed, please continue with section 4.

3. TAV-321DG

3.1 General

TAV-321DG is either with current output (front label C) or with voltage output (front label D). The input and output calibration is stated on the top label, see section 5. TAV-321DG does not have built-in aux. supply and therefore uses the measuring voltage as supply of the internal electronics.

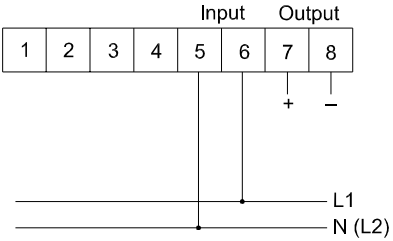
3.2 Input measuring voltage V AC connection

The measuring voltage is connected to terminals 5 (N) and 6 (L1), see labels C and D.

3.3 Output signal V DC or A DC connection

In both cases the connection terminals are 7 (+) and 8 (-).

3.4 Example of connection – TAV-321DG



Important!
Measuring voltage (input) must not be connected to single- or three-phase systems where phase zero or phase earth is more than 300V.

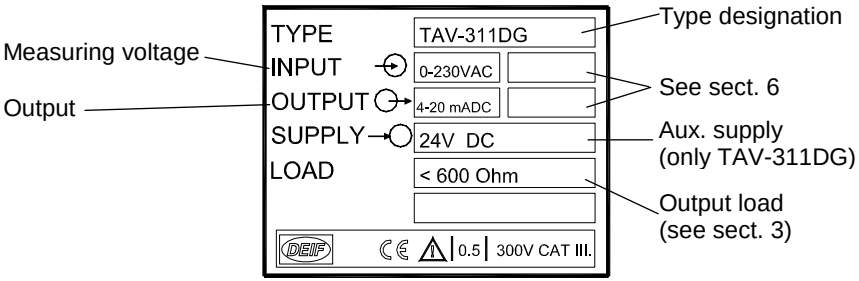
4. Output loads

By voltage output the load must not drop below the stated resistance (LOAD) on the top label, see section 5.

By current output the load must not exceed the stated resistance (LOAD) on the top label, see section 5.

The output is internally protected against overload, but under these conditions the signal will not form a correct picture of the measuring voltage.

5. Top label and order number



DEIF's order number is placed on the back of the transducer (an eight-figure number). This number identifies the transducer and should be stated when you contact DEIF A/S.

6. Adjustment instruction

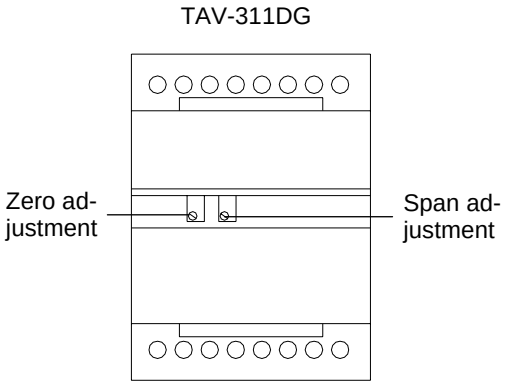


Fig. 6.1

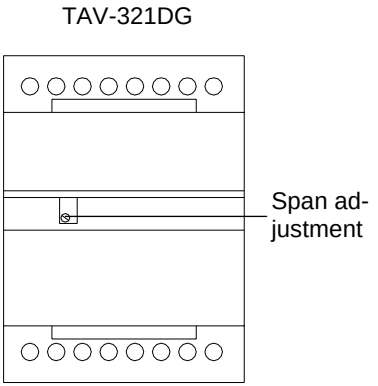


Fig. 6.2

On receipt the transducer is adjusted to zero and span to full scale (FS) according to the top label (section 5). By TAV-321DG span is adjusted to full scale (FS) according to the top label (section 5).

Readjustment of zero and span after receipt can be done by tipping the front plate up with a screwdriver or the like. Then the adjustment can be done on the potmeters shown in fig. 6.1 for TAV-311DG and fig. 6.2 for TAV-321DG.

Ex. TAV-311DG

a) Connect the transducer to aux. supply.
b) Connect measuring equipment to output.
c) Apply the new nominal voltage on input.
d) Turn span adjustment till FS on output is reached.
e) Set input voltage to zero point.
f) Turn zero adjustment till output response for zero point input is reached. Zero adjustment is not permitted when the transducer is without live zero (e.g. 0...20mA).
g) Repeat points c) to f) till nominal and 0-value on input correspond to nominal and zero on output. (When span and zero are not to be adjusted further, the new measuring range is adjusted).
h) Put the front panel back in the transducer.

Ex. TAV-321DG

a) Connect measuring equipment to output.
b) Apply the new nominal voltage on input.
c) Turn span adjustment till nominal output is reached.
d) Set input voltage to 0.0V AC, output = 0.0.
e) Repeat points c) and d) till the adjustment is correct.
f) Put the front panel back in the transducer.

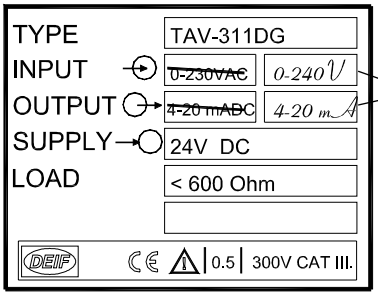
The newly adjusted values can be entered in the empty fields off input and output on the top label. (Please see the example below).

TAV-311DG

Zero can be adjusted ± 20% of 4mA.
Span can be adjusted ± 20% of output FS.
Output limit < 22.0mA.

TAV-321DG

Span can be adjusted +10%/-20% of output FS.



The new ranges mean:
0V ~ 240V
4mA ~ 20mA

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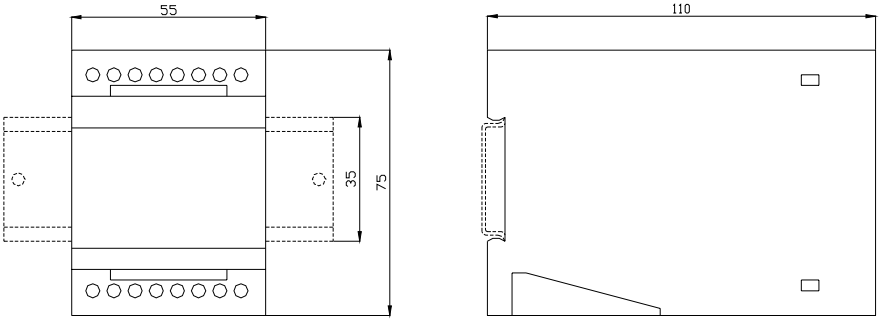
7. Installation

The transducers can be mounted close to each other horizontally on a DIN rail or on a mounting plate.

If the transducers are mounted close to other equipment with more heat emission a minimum distance of 10 mm must be kept.

Connections: Max. 4 mm^2 (single-stranded).
Max. 2.5 mm^2 (multi-stranded).

Mechanical drawing:



Weight: TAV-311DG appr. 0.4 kg
TAV-321DG appr. 0.3 kg