

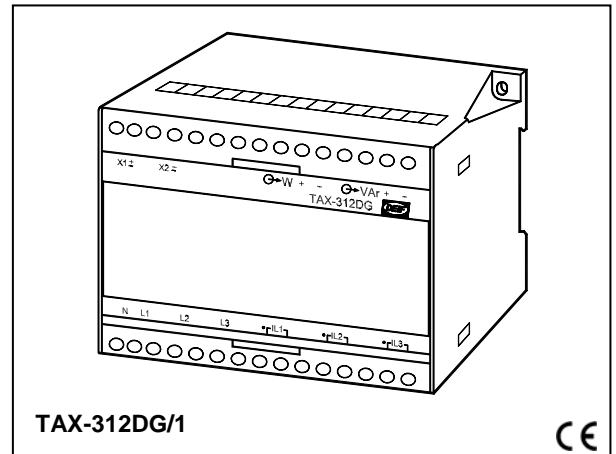
REPLACEMENT

Dual Output Power Transducer

Type TAX-312DG/1

4921240181F

- **Combined watt and var measurement**
- **Accuracy class 0.5/1.0**
- **Voltage up to 690V**
- **Galvanic separation 4000V**
- **35 mm DIN rail or base mounting**



Application

The dual output transducer type TAX-312DG/1 is a power transducer for measurement of active power and reactive power, on a single phase or 3-phase network, providing a separate output for both measurements.

The 2 outputs can be configured for all standard output ranges.

Measuring Principle

The transducer measures current(s) and phase voltage(s). The TDM (Time-Division-Multiplication) principle ensures an accurate measurement of the RMS value of both the active power and the reactive power ($U \times I \times \cos(\varphi)$) and ($U \times I \times \sin(\varphi)$), irrespective of wave form. The TAX-312DG/1 is available with the following couplings:

1W/1VAr	single phase ¹
1W3/1VAr3	1 element 3 phase 3 wire, balanced load ¹
1W4/1VAr4	1 element 3 phase 4 wire, balanced load ¹
2W3/2VAr3	2 element 3 phase 3 wire, unbal. load ²
3W3/3VAr3	3 element 3 phase 3 wire, unbal. load ³
3W4/3VAr4	3 element 3 phase 4 wire, unbal. load ³

- 1) 1 external current transformer
- 2) 2 external current transformers
- 3) 3 external current transformers

In order to measure the reactive power of coupling 1VAr and 1VAr4, the voltage input of the transducer is provided with a built-in 90° phase shifter network. To ensure correct measurements in this coupling, the net frequency must be stable and correspond with the information on the transducer type label (50Hz / 60Hz).

Calculation of Measuring Range

3-phase network

Lowest measuring range: $0.5 \times \sqrt{3} \times U \times I$

Highest measuring range: $2 \times \sqrt{3} \times U \times I$

For single phase networks the factor $\sqrt{3}$ is omitted.

Note: The calibration range of the VAr measurement is equal to 50% of the calibration range of the Watt measurement.

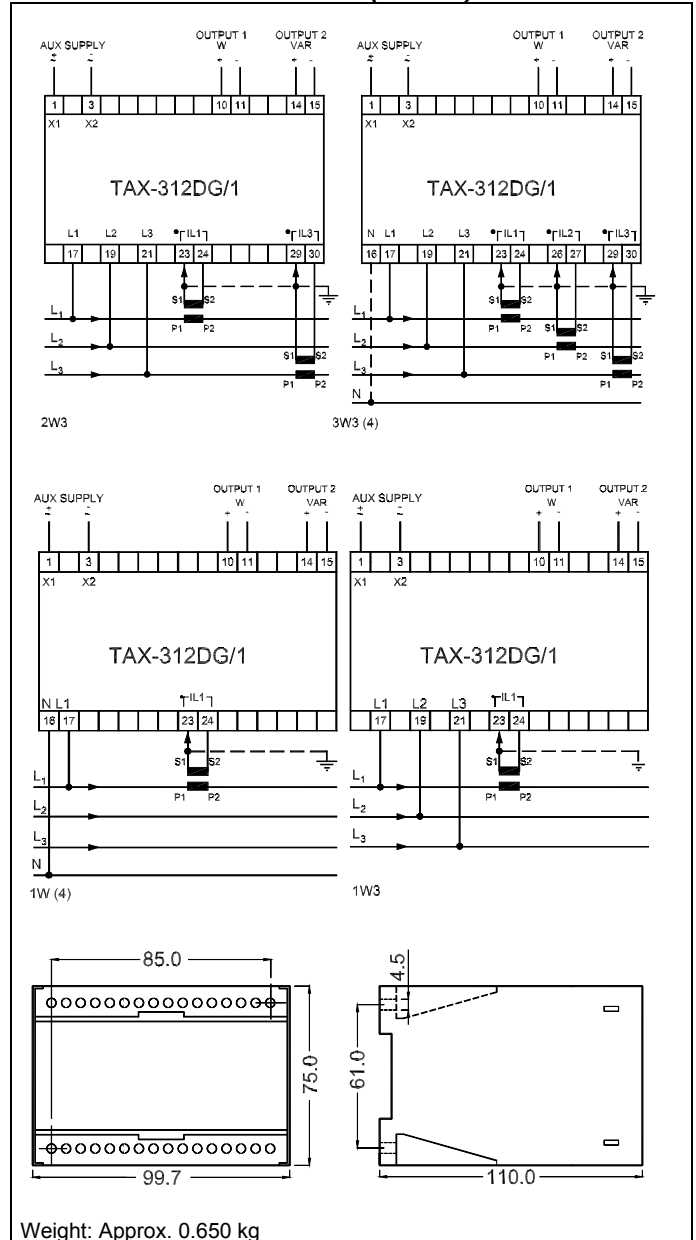
Type TAX-312DG/1

Technical specifications

Meas. current (I_n):	0.5...5A AC
overload:	4 x I_n , continuously, 20 x I_n for 10 s (max. 75A) 80 x I_n for 1 s (max. 300A)
load:	Max. 0.5VA per phase.
Meas. voltage (U_n):	(see supply voltage - AC ranges).
overload:	1.2 x U_n , continuously, 2 x U_n for 10 s
load:	2k Ω /V.
Frequency range:	40...45...65...70Hz.
Outputs:	2 analog outputs, referring to mutual ground.
Range:	
Output (0...100%):	0..1mA, 0...5mA, 0..10mA, 0..20mA, 0..1V, 0..10V
Output (20...100%):	0,2..1mA, 1..5mA, 2..10mA, 4..20mA, 0,2V..1V, 2..10V
Output(-100..0..100%):	-1..0..1mA, -5..0..5mA, -10..0..10mA, -20..0..20mA, -1..0..1V, -10..0..10V
Output load current:	Max. 10V
Output load voltage:	Max. 20mA
Accuracy:	
Watt:	Class 0.5 (-10...15...30...55°C) according to IEC 688.
Var:	Class 1.0 (-10...15...30...55°C) according to IEC 688.
Response time/ ripple:	150ms/1%pp
Temperature coefficient:	max. +/-0.2% of full scale per 10°C.
Ambient temperature:	-10..+55 °C (nominal) -25..+70 °C (operating) 40..+70 °C (storage)
Galvanic separation:	Between inputs, outputs and aux. voltage: 4000V - 50Hz - 1 min.
Supply voltage (U_n):	57.7-63.5-100-110-127-200-220-230- 240-380-400-415-440-450-660- 690VAC \pm 20% (max. 3.5VA)
	24-48-110-220V DC -25/+30% (max. 2W).
Climate:	HSE, to DIN 40040.
Connections:	Max. 4 mm ² (single-stranded). Max. 2.5 mm ² (multi-stranded).
Materials:	All plastic parts are self-extinguishing to UL94 (V1).
Protection:	Case: IP40. Terminals: IP20, to IEC 529 and EN 60529.

The transducer is equipped with a green LED marked "POWER" for indication of power ON.

Connections/dimensions (in mm)



Order specifications

Type – Coupling – Measuring range (W) – Ct – Measuring voltage – Vt – Nom. frequency (only for coupling 1W/1VAr and 1W4/1VAr4) – Output 1 – Output 2 – Supply

Due to our continuous development we reserve the right to supply equipment which may vary from the described.



DEIF A/S, Frisenborgvej 33
DK-7800 Skive, Denmark

Tel.: +45 9614 9614, Fax: +45 9614 9615
E-mail: deif@deif.com, URL: www.deif.com

