



DATCON

INDUSTRIAL MEASUREMENT

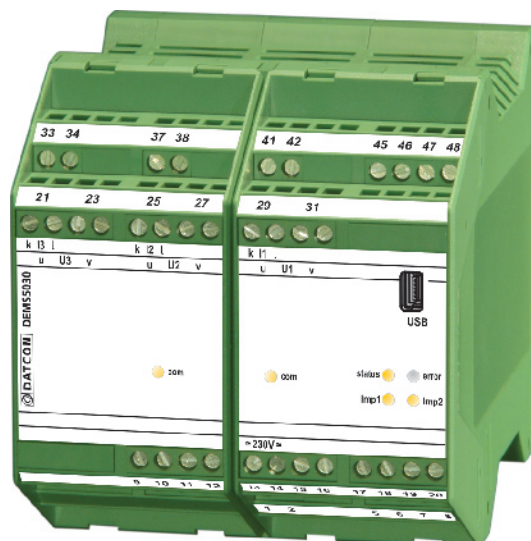
DEMS5030 ...



Three-phase Power Transmitter

Product features:

- Measuring of 50 different parameters:
 U_{eff} , I_{eff} , P , S , Q , PF , φ , $+E_p$, $-E_p$, $+E_Q$, $-E_Q$ per phase,
 P , S , Q , $+E_p$, $-E_p$, $+E_Q$, $-E_Q$ per 3 phase,
 f , U_{L1-L2} , U_{L2-L3} , U_{L1-L3} , φ_{L1-L2} , φ_{L1-L3} ,
 $P_{1/4h}$ average value (demand), $P_{1/4h}$ estimated average value,
 P_{last} 1/4h average value, $t_{1/4h}$ rest
- 3 x 0–125 VAC / 0–250 VAC / 0–450 VAC,
3 x 0–5 AAC / 0–1 AAC galvanic isolated inputs
- 2 / 4 x 0–20 mA / 4–20 mA galvanic isolated
outputs
- MODBUS RTU / PROFIBUS DP / ETHERNET
communication
- 2 limit-relay outputs
- Synchronous and time zone signal inputs
- Pulse outputs
- Configuration via USB port
- 24 V AC/DC, 230 V AC/DC power supply
- TS-35 rail mounting, 90 mm width



DEMS5030

INPUT

I1	0–1 A
I5	0–5 A
U125	0–125 V
U250	0–250 V
U450	0–450 V

OPTION*				
IA	RS2	RS4	PDP	ETH
2 x 0–20 mA / 4–20 mA active outputs	RS232 MODBUS	RS485 MODBUS	PROFIBUS DP	ETHERNET

DEMS5030

RL2	2 LIMIT-RELAY OUTPUTS
PS	18–40 V AC/DC POWER SUPPLY
PS	180–250 V AC/DC POWER SUPPLY

* maximum two options at the same time

The **DEMS5030 ... Three-phase Power Transmitter** suitable for the measuring of 50 different parameters of the three-phase power network:

- the TRMS values of phase voltages and phase currents
- active power, reactive power, apparent power and power factor per each phase
- + active energy, - active energy, inductive energy, capacitive energy per each phase and per 3 phase
- frequency, phase angle, line voltages, phase angles between phase voltages
- 1/4 h demand, 1/4 h estimated demand, last 1/4 h demand

The inputs of the equipment are isolated from the network with wideband current- and voltage-transformers.

The current inputs 3 x 0–5 AAC or 3 x 0–1 AAC, as well as the voltage inputs 3 x 0–125 VAC / 0–250 VAC / 0–450 VAC are in compliance with the requirements for measurement category CAT III.

The **DEMS5030 ...** is available with the following output options:

- 2 relays with closing contacts (SPST) for limit-switching, and for simple control tasks
 - 2 / 4 x 0–20 mA / 4–20 mA galvanic isolated, scalable, active analog current outputs *
 - MODBUS RTU or PROFIBUS DP or ETHERNET communication which makes possible the reading of all measurement values via the communication line, with a PLC or with a PC *
- (* maximum two options at the same time)

All of the outputs are galvanic isolated.

The measurement and output parameters are configurable from PC via USB port with the help of a user friendly configuration software. The configuration software is free of charge.

The **DEMS5030 ...** has two power supply versions: 18–40 V AC/DC (DEMS5030 ...) or 180–250 VAC (DEMS5030 ...PS).

Technical specification

Safety data:

The connectoin terminals of the supply voltages are isolated from each other, the isolation is in compliance with the standard EN 61010-1, taking into consideration the following:

Pollution level:	2
Measurement category:	CAT III

Input parameters:

Measured parameters:	see above
Input current:	3 x 0–5 AAC / 0–1 AAC (specified at ordering)
Input voltage:	3 x 0–125 VAC / 0–250 VAC / 0–450 VAC (specified at ordering)
Overrange:	2 x I, 2 x U (continuous), 500 V (max.) 20 x I, 100 A (1 sec), 2 x U, 500 V (max.)
Frequency range	40–400 Hz
Error:	< 0,2% @ Ta = 23°C ± 2°C
Temperature coefficient:	25 ppm / °C (max.)

Digital input:

Input signal:	3 x CMOS, non isolated, 0–30 VDC max.
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Output parameters:

Analogue outputs (optional):

Output type:	2 / 4 active current outputs (configurable, specified at ordering)
Range:	0–20 mA / 4–20 mA (scalable)
Error:	< 4 uA @ Ta = 23°C ± 2°C

Limit outputs (optional):

Outputs:	2 NO SPST relays, contact rating: 30 VDC, 3 ADC / 240 VAC, 3 AAC
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Pulse outputs:

Output signal:	2 galvanic isolated transistor outputs, rating: 30 V, 50 mA
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Communication interface (optional):

Protocol:	MODBUS RTU / PROFIBUS DP / ETHERNET
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Indicator:

Indicator:	6 LED (power, error, output1, output2, communication1, communication2)
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Power supply:

Power supply:	18–40 V AC/DC (DEMS5030 ...) 180–250 VC/DC (DEMS5030 ...PS)
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Ambient conditions:

Operating temperature range:	0–50°C (-20–50°C for customer request)
Relative humidity:	90% (max., non condensing)
Place of installation:	cabinet

Electromagnetic compatibility (EMC) accordance with the standard EN 61326:2000:

Immunity:	-B- criterion
Noise emission:	-A- class

General data:

Housing:	terminal assembly box, rail mounting on TS-35 rail, material: polyamide PA6.6
Connection:	screw terminal
Connection cable:	0,25–1,5 mm ²
Dimensions / weight:	90 x 99 x 115 mm (width x height x depth) / 0,6 kg
Protection:	IP 20

Detailed information see in operating instructions. The Manufacturer maintains the right to change the technical data!

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