

DMG2

TRANSFORMER COUPLED DIGITAL MULTIFUNCTION METER

DMG2 is a three-phase class 1 or 0.5 digital watt-hour meter, and class 2 or 3 var-hour meter, and class 1 maximum demand indicator. Meter is intended for transformer coupling on 5A in indirect or half-indirect connection in industrial applications. Meter **DMG2** is placed in polycarbonate case having mains connector with up to three modules: tariff module, switch clock and RCR module, and communication module.

Meter **DMG2** satisfies technical requirements of EPS.

Meter **DMG2** can be used in three-system/four-wire connection on 230V/400V and 58V/100V or two-system/ three-wire connection on 2x100V, and for transformer current coupling on 5A.

Measured values of active and reactive energy and maximum demand indicator in different tariffs, date and time are shown on LCD indicator, cyclically. Besides standard measurement data, meter shows current values of active power, date and time, phase voltages, currents, maximums of power and active and reactive powers, meter status (open/close), number, date and time of reset of maximum demand indicator and number of power failure. Display content is changed by list push-button.

Meter **DMG2** is equipped by peripheral devices:

- optical infrared port for programming and reading meter, ripple control receiver and switch clock;
- serial RS232/485 port for programming and reading of meter, ripple control receiver and switch clock with pear to pear or with network connection;
- external inputs for control up to four tariffs;
- LED and wired S0 pulse outputs for energy;
- programmable S0 outputs for power relay control or tariff control or maximum demand indicator control.
- maximum demand indicators of 15-minute mean active power and time interval generator 900s/9s;
- switch clock, ripple control receiver or ripple control receiver with switch clock function for tariff control and for events registration.

Meter **DMG2** can register and record:

- values of all active and reactive energy counters and maximum demand indicator registers saved on the first day of month at 00.00h, for 12 months;
- values of counters of power failures by phase and number of reset of maximum demand indicator saved on the first day of month at 00.00h for 12 months;
- 40 days load profile of active power. Users have possibility to read profile for last 24h or for all 40 days.

Upon request, custom time schedules are available.

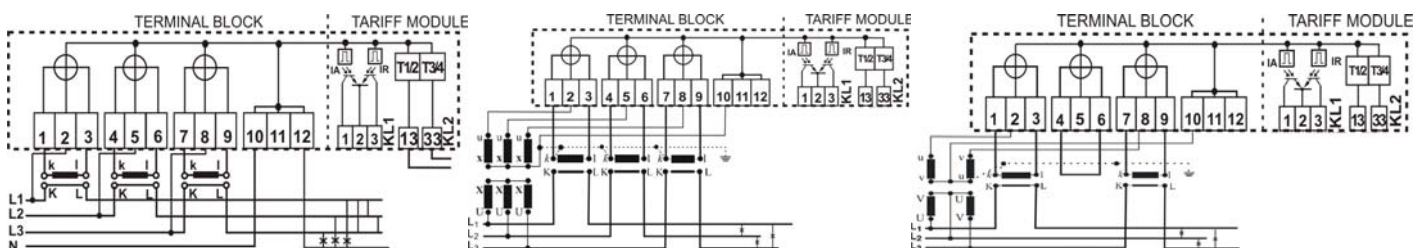
Registered and recorded data can be read on display or by meter communication port by PC software DB2FServis. Hand held unit PSION software DMGFPSi is available also.

Watt-hour meter **DMG2** is a multiprocessor system based on digital processing of input currents and voltages obtained by A/D converters. Power of microcomputers provides application of complex algorithms for tariff, load management, data processing, tests and communications.

Device **DMG2** is realized in VLSI CMOS technology having reliability, low power consumption, operation in wide range of ambient temperatures, low aging and EMI immunity.

Detailed description of device is given in "User guide for DMG2" witch is intended for managers and designers.

Connection diagram



Technical characteristics

Type	DMG2
Rated voltage V_n	3x230/400V, 3x58/100V, 2x100V (+15%, -20%)
Rated frequency f_n	50 Hz
Base current I_B	5A
Maximum current I_M	5A
Constants of meter	1000 impulses/kWh (kvarh) or 5000 impulses/kWh (kvarh) or 10000 impulses/kWh (kvarh)
Class of accuracy active	IEC 1036 class 1 MUS.F-0/1 class 0,5
Class of accuracy reactive	IEC 1268 class 2 or 3
Starting current threshold	< 5mA/phase
Pulse out:	optocoupled, S0, IEC62053-31 Class B, 1, 0.2 or 0.1 Wh (varh)/pulse
voltage	15V
current (max)	15mA
duration	30ms
Optical infrared port	IEC 61107, Mode C
AC voltage withstand	4kV, 50Hz, 1 minute

Impulse voltage withstand	6kV, 1.2/50 μ s
Operating temperature range	-20°C, +65°C
Ambient relative humidity	<90%
Case dimensions	250.5x170.0x65.3 mm
Hole for wire	6.5 mm diameter
Weight	1.0 kg

Function of maximum demand indicator of class 1

Class of accuracy	IEC 211 class 1
Measurement period for mean power measurement	15 minute/9s

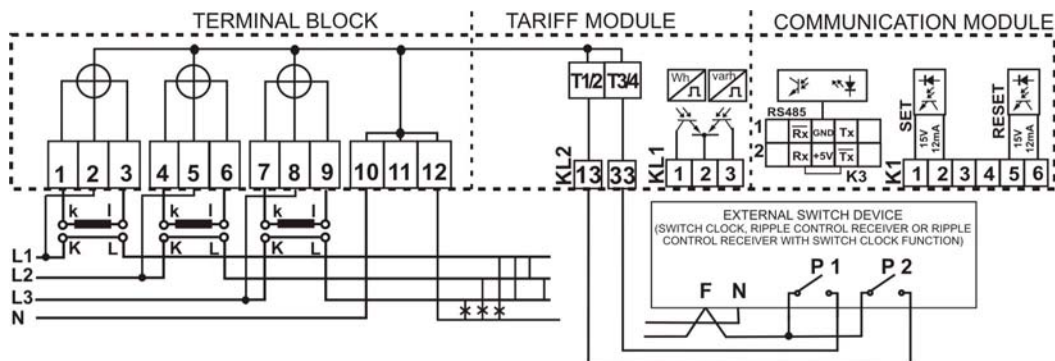
Function of switch clock

Real time clock stability	± 1 minute/month
Expected battery life	> 15 years

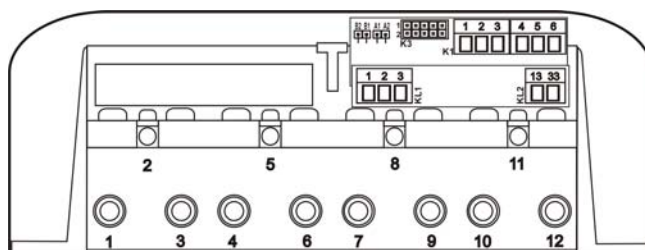
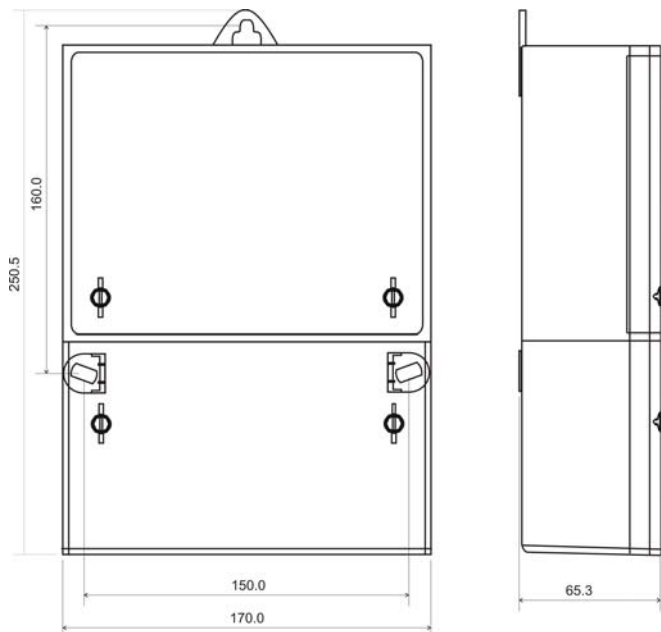
Function of ripple receiver

Mains frequency f_n	50-60Hz
Carrier frequency f_0	on request
Filter Q factor	20
Threshold voltage V_{op}	0.1 \div 4.5% V_n
Nonoperative threshold voltage V_{on}	0.1 \div 4.5% V_n
Time delays	0s to 99999s

Connection diagram for connection meter with external switch clock or RCR device



Assembling data



Ordering information

DMG2 230 US MTK 1;2;1 4T
 model voltage switch ripple class four
 clock receiver tariffs

Additional data and price list are available upon request.

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