

Datasheet: Digital-kWh-Meter with MID, Series RZK



■ SCHRACK-INFO

- Electricity meter for measuring of active energy for billing purposes and reactive power
- Compact design, only 3 module wide on DIN-rail
- Impulse output SO, M-Bus-interface or RS485 Modbus optional
- Measuring of instantaneous values
- With EC type-examination certificate acc. to directive 2014/32/EU (MID = Measuring Instrument Directive)

Technical data

Measuring input	
Type (connection):	three-phase (4u)
Reference current (I _{ref}):	5A
Maximum current (I _{max}):	65 A
Minimum current (I _{min}):	0.25 A
Transitional current (I _{tr}):	0.5 A
Starting current:	20 mA
Power consumption at I _{ref}	0.1 VA
Nominal voltage (Un):	230 V (+15-20 %)
Power consumption per phase at U _n :	< 8 VA
Nominal frequency (f _n):	50 Hz and 60 Hz
Minimum measuring time:	10 s

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Accuracy		
Active energy:	class 1 EN 62053-21,	
	class B EN 50470-3	
	±1.5% from Imin to Itr	
	±1% from Itr to Imax	
Reactive energy :	class 2 EN 62053-23	
	±2.5% from Imin to Itr	
	±2% from Itr to Imax	
Voltage:	±1% of measured value	
Current:	±1% of Iref from 1st to 1ref	
	±1% of measured value from Iref to Imax	
Active Power:	±1% of nominal power (Un*Iref) from 1st to 1ref	
	±1% of measured value from Iref to Imax	
Reactive, Apparent power:	±2% of nominal power from 1st to 1ref	
	±2% of measured value from Iref to Imax	
Frequency:	±0.5% of measured value	
LCD		
Number of digits:	8 (7+1)	
Height of digits:	4.52 mm	
LED		
Colour:	red	
Pulse rate:	1000 imp/kWh	
LED on:	no load indication	



Pulse output (only MGRZK065)	
Pulse rate:	1000 imp/kWh
Pulse duration:	32 ± 2 ms
Rated voltage DC:	40 V max
Switched current	40 mA max
Standard:	EN 62053-31 (A&B)

M-BUS Serial communication (only MGRZK365)		
Type: M-BUS		
Speed:	1200 to 9600 bit/s (default 2400bit/s)	
Protocol:	col: M-BUS	
Primary address:	O – (default)	

RS-485 Serial communication (only MGRZK465)		
Туре:	RS-485	
Speed:	1200 to 19200 bit/s (default 19200bit/s)	
Frame:	8, n, 2	
Protocol:	MODBUS RTU	
Address:	33 – (default)	

Optical communication (on side)		
Type:		
Connection:	via RZK-USB adapter	
Remark:	All settings are fixed	

Safety and ambient conditions		
According to standards for indoor active energy meters.		
Temperature and climatic condition according to EN 62052-11.		
Degree of protection	IP50	
Operating temperature	-25°C - +55°C	
Storage temperature	-40°C - + 70°C	
Enclosure	self extinguish, complying UL94-V	
Indoor meter:	yes	
Degree of pollution:	2	
Protection class:	II	
Standard:	IEC 62052-31	
Rail mounting according	DIN EN 60715	

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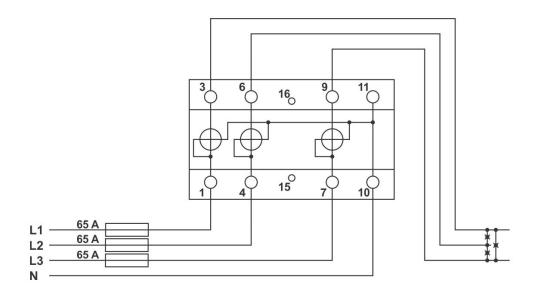


Terminals		
Main inputs		
ConductormaterialRigid (flexible):		
Contacts capacity:	2.5mm ² 25 (16) mm ²	
Connection screws:	M5	
Max torque:	3.5 Nm (PZ2)	
Length of removed isolation:	> 10 mm	

Optional modules		
Conductormaterial:	Copper	
Contact capacity:	1 2.5 mm ²	
Screws:	M3	
Max torque:	1.2 Nm	

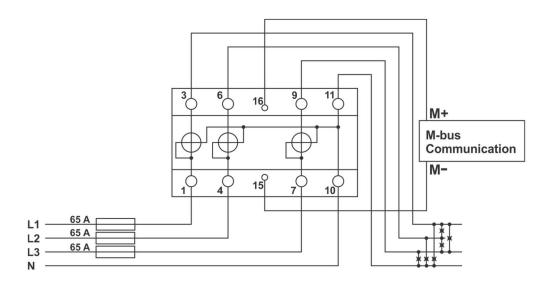
Circuit diagram

MGRZK065

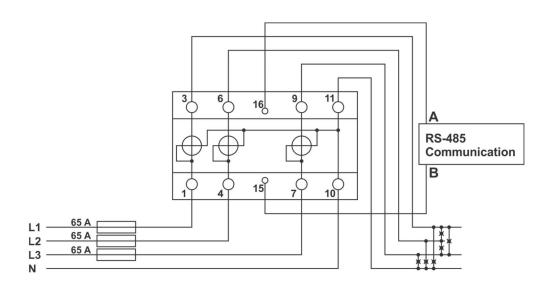




MGRZK365

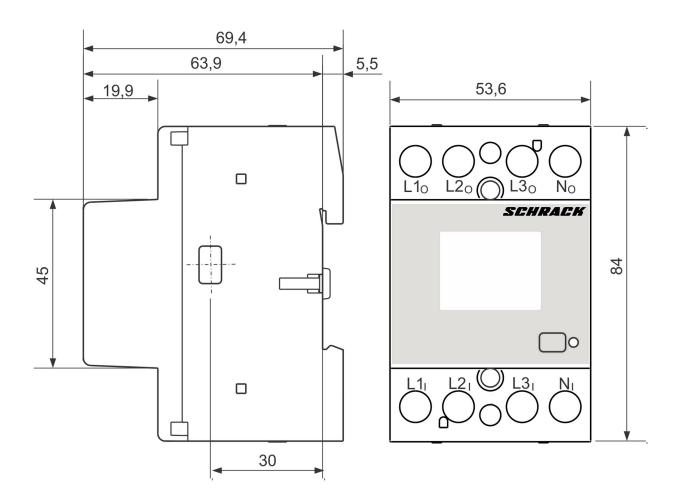


MGRZK465





Measurements



Articles

Description	Artikelnr.
Modular 4-wire-kwh-meter 65A direct, digital, MID	MGRZK065
Modular 4-wire-kwh-meter 65A direct, with MID and M-Bus, 3MW	MGRZK365
Modular 4-wire-kwh-meter 65A, with RS485 connection, 3 MW	MGRZK465