Technical Specification

- ✓ For industry and billing purposes
- ✓ Measuring of active energy
- ✓ Compact design, only 7 pitch wide
- ✓ Drum register with 7 digits
- ✓ Secondary or primary impulse output
- ✓ M-Bus- or RS485 interface
- ✓ **with MID Type-examination certificate**
  (**M**easuring **I**nstrument **D**irective, Guideline 2004/22/EC)

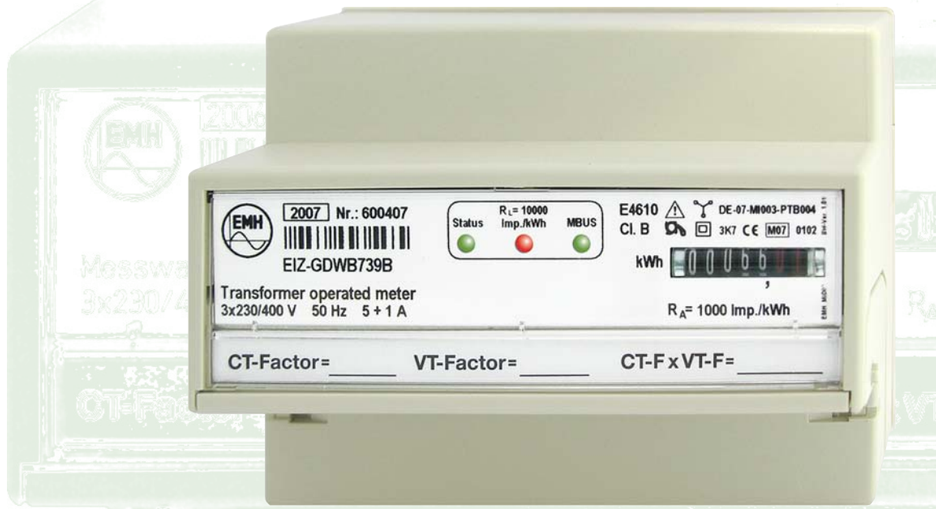
Following certified and uncertified meter types are available on stock:

Impulse meter

	EIZ-GDWB7393	EIZ-GDWL7393
Voltage	3x230/400 V	3x230/400 V
Current	5II1 A / 5 + 1 A	5(65) A / 0.25 - 5(65) A
Features	pulse output, 1-tariff version	
S0-output	1 000 Imp./kWh, 100 ms	100 Imp./kWh, 100 ms

M-Bus meter

	EIZ-GDWB739B	EIZ-GDWL739B
Voltage	3x230/400 V	3x230/400 V
Current	5II1 A / 5 + 1 A	5(65) A / 0.25 - 5(65) A
Features	pulse output, 1-tariff version, M-Bus	
S0-output	1 000 Imp./kWh, 100 ms	100 Imp./kWh, 100 ms
M-Bus-settings	2400 baud, primary address = 001, secondary address = serial number	
Load-profile-setting	registering period: 15 min registering type: energy feed	



Electronic Impulse Meter

EMH Elektrizitätszähler
GmbH & Co KG
Südring 5
D-19243 Wittenburg

Tel. +49 - (0)3 88 52 - 645 - 0
Fax +49 - (0)3 88 52 - 645 - 29

E-mail info@emh-meter.de
Web www.emh-meter.de

EN Edition: 06 August 2007
EIZG-DAB-E-3.20

Electronic Impulse Meter EIZ

Electricity meter for measuring active energy for billing purposes

		Transformer operated meter 5II1 A / 5 + 1 A und 1 A	Direct connected meter 5(65) A / 0.25 - 5(65) A
Voltage	4-wire meter 3-wire meter 2-wire meter	3x230/400 V, 3x290/500 V, 3x58/100 V, 3x63/110 V 3x100 V, 3x110 V, 3x230 V 3x400 V, 3x500 V 1x100 V, 1x230 V	3x230/400 V, 3x290/500 V 3x400 V, 3x500 V 1x230 V
Starting current		2 mA	20 mA
Frequency		50 Hz	
Accuracy	active energy	Cl. 1 or Cl. 2 accord. to IEC 62053-21 Cl. B or Cl. A accord. to EN 50470-1/-3	
Measuring types	active energy	+A (with non-reverse ratchet)	
Meter constants	LED primary output secondary output	10...100 000 Imp./kWh (depending on meter type) 1 Imp./kWh (fixed, pulse length 500 ms) 100...200 000 Imp./kWh (depending on meter type)	1 000...2 000 Imp./kWh (depending on meter type) 10...2 000 Imp./kWh (depending on meter type)
Energy registers	number	1 tariff register	
Load profile[1]	typical memory depth at 1 channel registering period registering type	288 values 15, 30, 60 min, 24 h energy or energy feed	
Real Time Clock[1]	accuracy synchronisation running reserve capacitor	within ± 5 ppm via data interfaces > 7 days	
Data retention time		without voltage in the FLASH / EEPROM, at least 20 years	
Display	drum register digit size in the value range	7 digits, 2 with decimals digits	7 digits, 1 with decimal digit 2.1 x 5.2 mm
Data interfaces (option)	electrical data interface data protocol M-Bus baud rate	M-Bus, RS485 accord. to DIN EN 13757-2, -3 300, 2400, 9600 baud	
Output (option)	number OptoMOSFET S0-output	maximum 1 maximum 250 V AC/DC, 100 mA for impulse transmission (fulfils S0-specifications) maximum 27 V DC, 27 mA	
Energy supply	switched-mode power supply	3-phase from the measuring voltage	
Power consumption per phase	voltage path current path	< 2.0 VA / 1.0 W < 0.5 VA	< 2.5 VA
EMC-characteristics	isolation resistance surge voltage resistance against HF-fields	Isolation: 4 kV AC, 50 Hz, 1 min EMV: 4 kV, Impulse 1.2/50 µs ISO: 6 kV, Impulse 1.2/50 µs 10 V/m (under load)	
Temperature range	operation / limit and storage	-25°C...+55°C / -40°C...+70°C	
Relative humidity		95% accord. to IEC 62052-11, EN 50470-1 and IEC 60068-2-30	
Housing	dimensions class of protection degree of protection housing degree of terminal block housing material fire characteristics weight	7 pitch = 126 x 90 x 70 mm (B x H x D) 2 IP 51 IP 20 polycarbonate flame-inhibiting (without halogen) approx. 500 g	
Connection-cross section	current voltage / auxiliary terminals, neutral conductor	maximum 4 mm² maximum 2.5 mm²	maximum 16 mm² maximum 2.5 mm²
Further features	measuring of instantaneous values[1] status LED communication LED[1]	power, voltage and current display of phase failure, undervoltage and critical error display of communication	

[1] only meters with data interface

Product specifications are subject to change without notice!

Settable pulse constants and pulse lengths depending on the meter type

Meter type		Pulse constants	Pulse lengths
Transformer operated meter 5II1 A / 5 + 1 A			
4-wire meter	**290/500 V, 230/400 V**	100, 200, 500, **1 000**, 2 000 Imp./kWh 5 000 Imp./kWh 10 000 Imp./kWh	30, 50, **100** ms 30, 50 ms 30 ms
4-wire meter	**63/110 V, 58/100 V**	100, 200, 500, 1 000, 2 000, 5 000, **10 000** Imp./kWh 20 000 Imp./kWh	30, 50, **100** ms 30, 50 ms
3-wire meter	**500 V**	100, 200, 500, **1 000**, 2 000 Imp./kWh 5 000 Imp./kWh	30, 50, **100** ms 30, 50 ms
3-wire meter	**400 V**	100, 200, 500, **1 000**, 2 000 Imp./kWh 5 000 Imp./kWh 10 000 Imp./kWh	30, 50, **100** ms 30, 50 ms 30 ms
3-wire meter	**110 V, 100 V**	100, 200, 500, 1 000, 2 000, 5 000, **10 000** Imp./kWh 20 000 Imp./kWh	30, 50, **100** ms 30, 50 ms
2-wire meter	**230 V**	100, 200, 500, **1 000**, 2 000, 5 000, 10 000 Imp./kWh 20 000 Imp./kWh	30, 50, **100** ms 30, 50 ms
2-wire meter	**110 V**	100, 200, 500, 1 000, 2 000, 5 000, **10 000**, 20 000 Imp./kWh 50 000 Imp./kWh	30, 50, **100** ms 30 ms
2-wire meter	**100 V**	100, 200, 500, 1 000, 2 000, 5 000, **10 000**, 20 000 Imp./kWh 50 000 Imp./kWh	30, 50, **100** ms 30, 50 ms
Transformer operated meter 1 A			
4-wire meter	**63/110 V, 58/100 V**	1 000, 2 000, 5 000, 10 000, 20 000, **50 000** Imp./kWh 100 000 Imp./kWh 200 000 Imp./kWh	30, 50, **100** ms 30, 50 ms 30 ms
Direct connected meter 5(65) A / 0.25 - 5(65) A			
4-wire meter	**290/500 V**	10, **100**, 200 Imp./kWh 500 Imp./kWh	30, 50, **100** ms 30, 50 ms
4-wire meter	**230/400 V**	10, **100**, 200 Imp./kWh 500 Imp./kWh 1 000 Imp./kWh	30, 50, **100** ms 30, 50 ms 30 ms
3-wire meter	**500 V**	10, **100**, 200 Imp./kWh 500 Imp./kWh	30, 50, **100** ms 30, 50 ms
3-wire meter	**400 V**	10, **100**, 200 Imp./kWh 500 Imp./kWh 1 000 Imp./kWh	30, 50, **100** ms 30, 50 ms 30 ms
2-wire meter	**230 V**	10, **100**, 200, 500, 1 000 Imp./kWh 2 000 Imp./kWh	30, 50, **100** ms 30, 50 ms

The bold highlighted values are the factory settings of the meters!