Energy meter for three-phase current

for current transformer connection, secondary 1 / 5 A
with S0 and analogue output

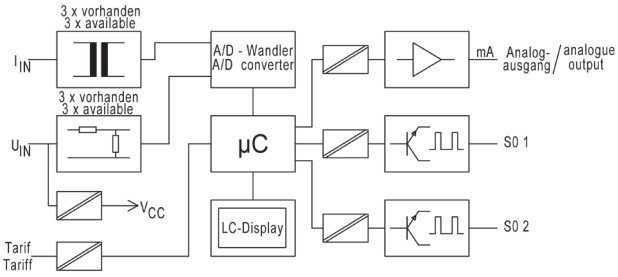
Type:
EGZ-S0 1/5

Application

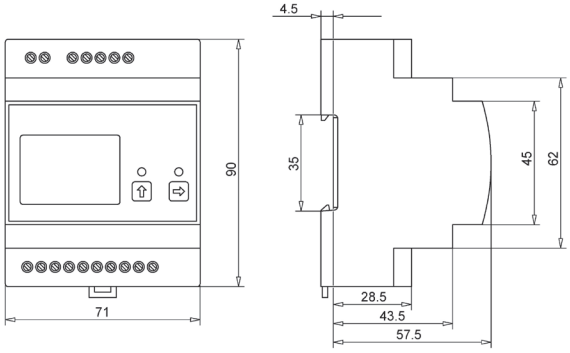
The electronic energy meter EZD-S0 is used to record the active and reactive energy during import and export in three-phase systems under any load. Their application covers for example industrial plants, workshops, machines and offices. The energy values are displayed, saved and made available as pulses for further processing. The current active or reactive power value can be output via an analogue output (20 mA). All values for current, voltage, frequency, power and energy can be read on an LCD display. The connection is made via current transformers with a nominal secondary current of 1 or 5 amps.

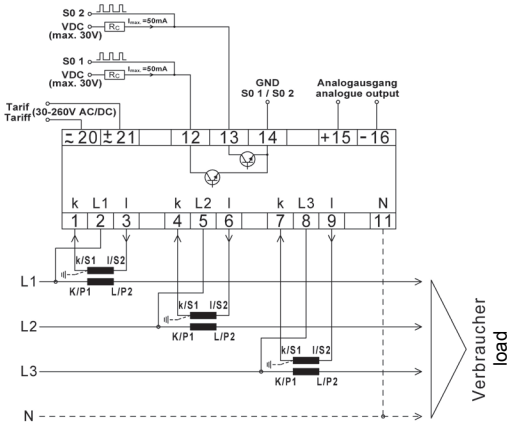
Function

The values to be measured are transferred to an integrated module via external and internal current transformers and voltage dividers. The instantaneous values of current and voltage are recorded here. A microcontroller takes over the evaluation, the output of the impulses as well as the storage of the measured values. The values are shown on an LCD display.
The pulse output of active or reactive energy is realized via two open collector transistor outputs (S0 interfaces). An analogue output of 20 mA represents the current active or reactive power. A separate auxiliary voltage is not required, it is obtained from the measuring voltage. The meter readings and programming are saved in case of a power failure.



Dimensions / Connection





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Technical data

Input	Mains connection	three-phase four-wire power system, CT measurement, bidirectional meter, 2-tariff measurement
	Rated voltage	50-300 V / 87-520 V and 3 x 87-520 V
	Current information acc. to meter print	I_{min} - I_{ref} (I_{max}) A
	Starting current I_{st}	0,002 A (symmetrical per phase)
	Minimum current I_{min}	0,01 A
	Transition current I_{tr}	0,05 A
	Reference current I_{ref}	1 / 5 A
	Limit current I_{max}	7 A
	Rated frequency	40-70 Hz
	Energy consumption	voltage circuit approx. 0,7 VA; current circuit approx. 0,1 VA
	Accuracy	active energy class B acc. to DIN EN 50470-3 reactive energy class 2 acc. to DIN EN 62053-23
	Backstop	Yes
Indicators	Display	LCD-Display, update 2 times per second active energy in kWh or MWh with 7.2 digits reactive energy in kvarh or Mvarh with 5.2 digits
	Function indicators	LED for active energy import and export, 10000 pulses/kWh both LED light up at current < I_{min}
	Reset	via buttons on front panel
Pulse outputs (S0)	Pulse output	npn-transistor, 24V DC (max. 30 V/50 mA), ON (activ) 10-27 mA OFF (inactiv) < 1 mA, switching status „open“ or „closed“ selectable
	Number of pulses	selectable via button (number of pulses depends on the setting of current and voltage transformers)
	Pulse length	60 - 100 ms, selectable via button
	Accuracy	class B acc. to DIN EN 50470-3
	Regulations	DIN EN 62053-31
Tariff control input	Tariff 1	0 V or open
	Tariff 2	30 - 260V AC/DC, 0,4 VA
	Separation	4 kV
Analogue output	Rated value	0-20 mA or 4-20 mA, 0-500 Ohm load
	Accuracy	+/- 0,5% of full scale (+/- 1% with spread < 50%)
	Einstellzeit	< 1 s
	Spread	30 - 120% from power U x I x √3
General data	Operation temperature	-15 to +20 to +30 to + 55 °C
	Storage temperature	-25 .. +85 °C
	Temperature influence	< 0,2 % at 10 K
	Ambient conditions	stationary application, indoor, rel. air humidity 5 .. 95 %, no condensation altitude up to 2000 m, water, rain, snow or hail excluded
	Test voltage	4 kV, 50 Hz input against analogue output against pulse outputs against tariff control input
	EMC	DIN EN 50470-1
	Fuse	The device is equipped with short-circuit proof transformers
	Ingress protection	DIN EN 60529, front IP51, terminals IP20
	Installation	snap-on mounting on top hat rail 35 mm (DIN EN 60715) The equipment is suitable for tight on tight assembly, however, with ambient temperatures of > 45°C a distance of 10 mm between devices is recommended The assembly location should be, if possible, free from vibration. screw
	Terminals	terminal max. 4 mm^2, tightening torque 0,5 Nm
	Housing material	PPO/Polyamid PA, self-extinguishing acc. to UL 94 V-0
	Weight	220 g

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Energy meter for three-phase current

for direct connection up to 80 A with S0 and analogue output

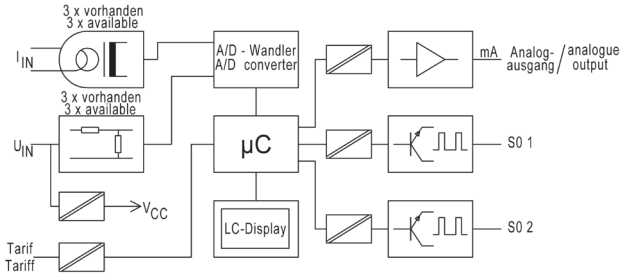
Type:
EGZ-S0 80

Application

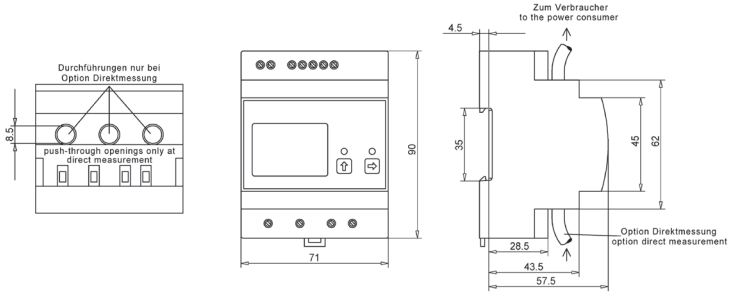
The electronic energy meter EZD-S0 is used to record the active and reactive energy during import and export in three-phase systems under any load. Their application covers for example industrial plants, workshops, machines and offices. The energy values are displayed, saved and made available as pulses for further processing. The current active or reactive power value can be output via an analogue output (20 mA). All values for current, voltage, frequency, power and energy can be read on an LCD display. The connection is made directly up to a maximum current of 80 amps.

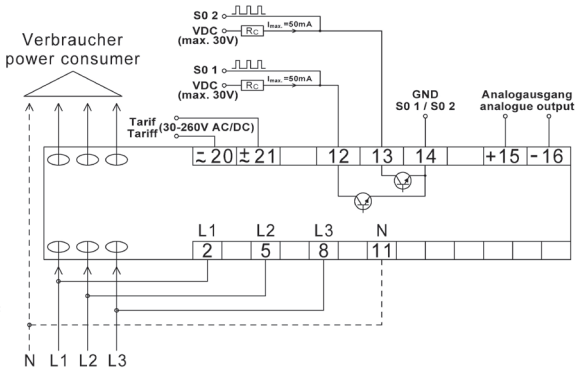
Function

The values to be measured are transferred to an integrated module via internal current transformers and voltage dividers. The instantaneous
values of current and voltage are recorded here. A microcontroller takes over the evaluation, the output of the impulses as well as the storage of the measured values. The values are shown on an LCD display.
The pulse output of active or reactive energy is realized via two open collector transistor outputs (S0 interfaces). An analogue output of 20 mA represents the current active or reactive power. A separate auxiliary voltage is not required, it is obtained from the measuring voltage. The meter readings and programming are saved in case of a power failure.



Dimensions / Connection





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Technical data

Input	Mains connection	three-phase four-wire power system, direct measurement, bidirectional meter, 2-tariff measurement
	Rated voltage	50-300 V / 87-520 V and 3 x 87-520 V
	Current information acc. to meter print	I_{min} - I_{ref} (I_{max} A
	Starting current I_{st}	0,02 A (symmetrical per phase
	Minimum current I_{min}	0,2 A
	Transition current I_{tr}	0,5 A
	Reference current I_{ref}	5 A
	Limit current I_{max}	80 A
	Rated frequency	40-70 Hz
	Energy consumption	voltage circuit approx. 0,7 VA; current circuit approx. 0,1 VA
	Accuracy	active energy class B acc. to DIN EN 50470-3 reactive energy class 2 acc. to DIN EN 62053-23
	Backstop	yes
Indicators	Display	LCD-Display, update 2 times per second active energy in kWh or MWh with 7.2 digits reactive energy in kvarh or Mvarh with 5.2 digits
	Function indicators	LED for active energy import and export, 10000 pulses/kWh both LED light up at current < I_{min}
	Reset	via buttons on front panel
Pulse outputs (S0)	Pulse output	npn-transistor, 24V DC (max. 30 V/50 mA, ON (activ 10-27 mA OFF (inactiv < 1 mA, switching status „open“ or „closed“ selectable
	Number of pulses	selectable via button (number of pulses depends on the setting of current and voltage transformers
	Pulse length	60 - 100 ms, selectable via button
	Accuracy	class B acc. to DIN EN 50470-3
	Regulations	DIN EN 62053-31
Tariff control input	Tariff 1	0 V or open
	Tariff 2	30 - 260V AC/DC, 0,4 VA
	Separation	4 kV
Analogue output	Rated value	0-20 mA or 4-20 mA, 0-500 Ohm load
	Accuracy	+/- 0,5% of full scale (+/- 1% with spread < 50%
	Einstellzeit	< 1 s
	Spread	30 - 120% from power U x I x √3
General data	Operation temperature	-15 to +20 to +30 to + 55 °C
	Storage temperature	-25 ... +85 °C
	Temperature influence	< 0,2 % at 10 K
	Ambient conditions	stationary application, indoor, rel. air humidity 5 .. 95 %, no condensation altitude up to 2000 m, water, rain, snow or hail excluded 4 kV, 50 Hz input
	Test voltage	against analogue output against pulse outputs against tariff control input
	EMC	DIN EN 50470-1
	Fuse	the device is equipped with short-circuit proof transformers
	Ingress protection	DIN EN 60529, front IP51, terminals IP20
	Installation	snap-on mounting on top hat rail 35 mm (DIN EN 60715) the equipment is suitable for tight on tight assembly, however, with ambient temperatures of > 45°C a distance of 10 mm between devices is recommended the assembly location should be, if possible, free from vibration. screw
	Terminals	terminal max. 4 mm^2, tightening torque 0,5 Nm
	Housing material	PPO/Polyamid PA, self-extinguishing acc. to UL 94 V-0
	Weight	220 g

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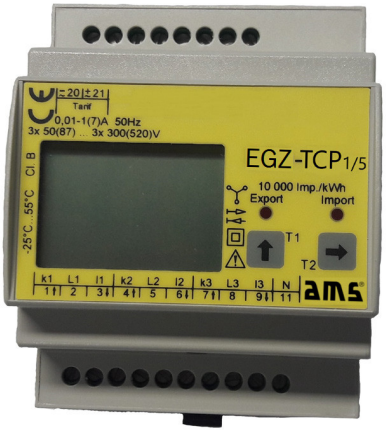


Energy meter for three-phase current

for current transformer connection, secondary 1 / 5 A

with Ethernet interface

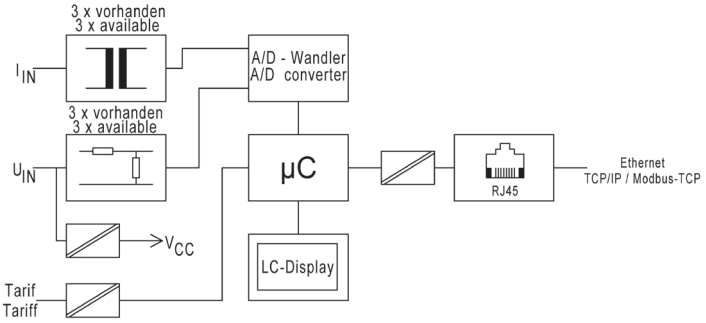
Type:
EGZ-TCP 1/5

Application

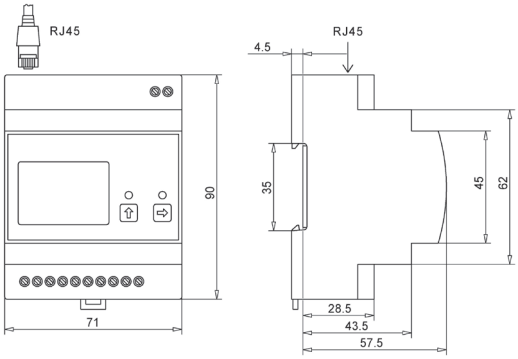
The electronic energy meter EZD-TCP is used to record the active and reactive energy during import and export in three-phase systems under any load. Their application covers for example industrial plants, workshops, machines and offices. The energy values are displayed, stored and provided on an Ethernet interface for further processing. All values for current, voltage, frequency, power and energy can be read on an LCD display. The connection is made via current transformers with a nominal secondary current of 1 or 5 amps.

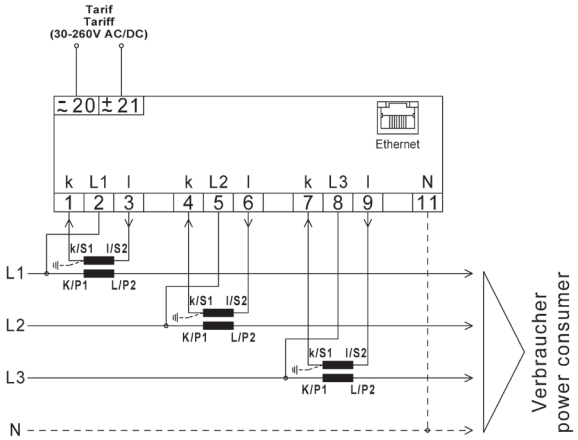
Function

The values to be measured are transferred to an integrated module via external and internal current transformers and voltage dividers. The instantaneous values of current and voltage are recorded here. A microcontroller takes over the evaluation and the storage of the measured values. The values are shown on an LCD display.
A separate auxiliary voltage is not required, it is obtained from the measuring voltage. The meter readings and programming are saved in case of a power failure..



Dimensions / Connection





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Input	Mains connection	three-phase four-wire power system, CT measurement, bidirectional meter, 2-tariff measurement
	Rated voltage	50-300 V / 87-520 V and 3 x 87-520 V
	Current information acc. to meter print	I_{min} - I_{ref} (I_{max} A
	Starting current I_{st}	0,002 A (symmetrical per phase
	Minimum current I_{min}	0,01 A
	Transition current I_{tr}	0,05 A
	Reference current I_{ref}	1 / 5 A
	Limit current I_{max}	7 A
	Rated frequency	40-70 Hz
	Energy consumption	voltage circuit approx. 0,7 VA; current circuit approx. 0,1 VA
	Accuracy	active energy class B acc. to DIN EN 50470-3 reactive energy class 2 acc. to DIN EN 62053-23
	Backstop	yes
Indicators	Display	LCD-Display, update 2 times per second active energy in kWh or MWh with 7.2 digits reactive energy in kvarh or Mvarh with 5.2 digits
	Function indicators	LED for active energy import and export, 10000 pulses/kWh both LED light up at current < I_{min}
	Reset	via buttons on front panel
Interface	Interface	10 Mbit/s Ethernet LAN-interface
	Protocol	TCP/IP protocol MODBUS-TCP protocol
Tariff control input	Tariff 1	0 V or open
	Tariff 2	30 - 260V AC/DC, 0,4 VA
	Separation	4 kV
General data	Operation temperature	-15 to +20 to +30 to + 55 °C
	Storage temperature	-25 .. +85 °C
	Temperature influence	< 0,2 % at 10 K
	Ambient conditions	stationary application, indoor, rel. air humidity 5 .. 95 %, no condensation altitude up to 2000 m, water, rain, snow or hail excluded
	Test voltage	4 kV, 50 Hz input against Ethernet interface against tariff control input
	EMC	DIN EN 50470-1
	Fuse	The device is equipped with short-circuit proof transformers
	Ingress protection	DIN EN 60529, front IP51, terminals IP20
	Installation	snap-on mounting on top hat rail 35 mm (DIN EN 60715) the equipment is suitable for tight on tight assembly, however, with ambient temperatures of > 45°C a distance of 10 mm between devices is recommended the assembly location should be, if possible, free from vibration
	Terminals	screw terminal max. 4 mm^2, tightening torque 0,5 Nm
	Housing material	PPO/Polyamid PA, self-extinguishing acc. to UL 94 V-0
	Weight	220 g

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Energy meter for three-phase current

for direct connection up to 80 A

with Ethernet interface

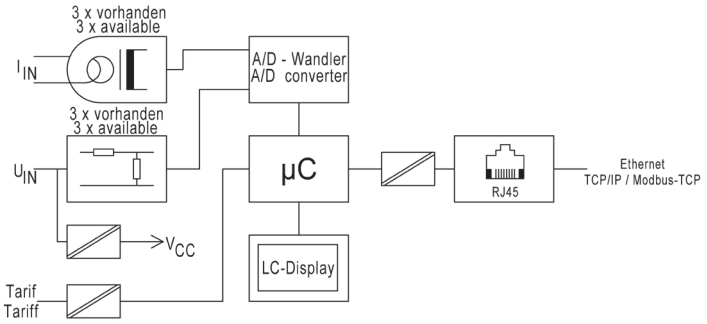
Type:
EGZ-TCP 80

Application

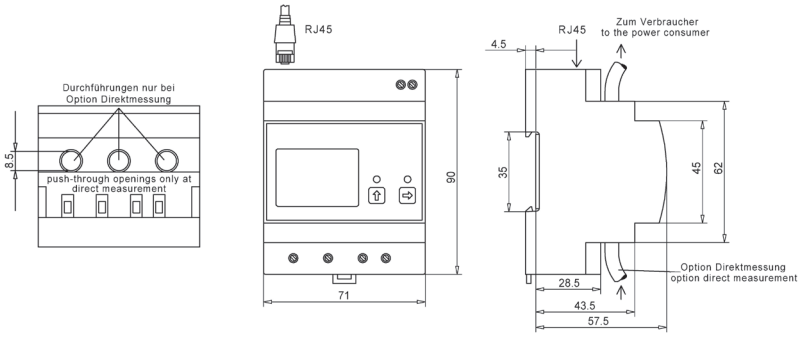
The electronic energy meter EZD-TCP is used to record the active and reactive energy during import and export in three-phase systems under any load. Its application covers for example industrial plants, workshops, machines and offices. The energy values are displayed, stored and provided on an Ethernet interface for further processing. All values for current, voltage, frequency, power and energy can be read on an LCD display. The connection is made directly up to a maximum current of 80 amps.

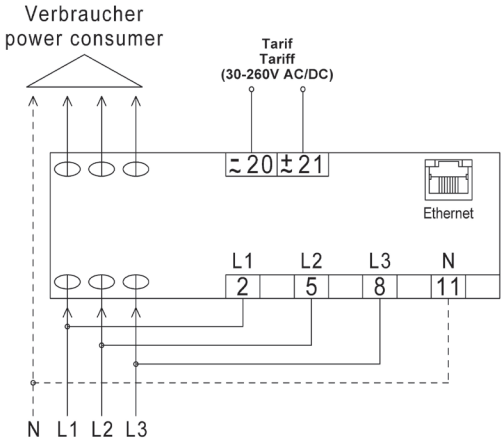
Function

The values to be measured are transferred to an integrated module via internal current transformers and voltage dividers. The instantaneous values of current and voltage are recorded here. A microcontroller takes over the evaluation and the storage of the measured values. The values are shown on an LCD display.
A separate auxiliary voltage is not required, it is obtained from the measuring voltage. The meter readings and programming are saved in case of a power failure..



Dimensions / Connection





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Input	Mains connection	three-phase four-wire power system, direct measurement, bidirectional meter, 2-tariff measurement
	Rated voltage	50-300 V / 87-520 V and 3 x 87-520 V
	Current information acc. to meter print	I_{min} - I_{ref} (I_{max}) A
	Starting current I_{st}	0,02 A (symmetrical per phase)
	Minimum current I_{min}	0,2 A
	Transition current I_{tr}	0,5 A
	Reference current I_{ref}	5 A
	Limit current I_{max}	80 A
	Rated frequency	40-70 Hz
	Energy consumption	voltage circuit approx. 0,7 VA; current circuit approx. 0,1 VA
	Accuracy	active energy class B acc. to DIN EN 50470-3 reactive energy class 2 acc. to DIN EN 62053-23
	Backstop	yes
Indicators	Display	LCD-Display, update 2 times per second active energy in kWh or MWh with 7.2 digits reactive energy in kvarh or Mvarh with 5.2 digits
	Function indicators	LED for active energy import and export, 10000 pulses/kWh both LED light up at current < I_{min}
	Reset	via buttons on front panel
Interface	Interface	10 Mbit/s Ethernet LAN-interface
	Protocol	TCP/IP protocol MODBUS-TCP protocol
Tariff control input	Tariff 1	0 V or open
	Tariff 2	30 - 260V AC/DC, 0,4 VA
	Separation	4 kV
General data	Operation temperature	-15 to +20 to +30 to + 55 °C
	Storage temperature	-25 .. +85 °C
	Temperature influence	< 0,2 % at 10 K
	Ambient conditions	stationary application, indoor, rel. air humidity 5 .. 95 %, no condensation altitude up to 2000 m, water, rain, snow or hail excluded
	Test voltage	4 kV, 50 Hz input against Ethernet interface against tariff control input
	EMC	DIN EN 50470-1
	Fuse	the device is equipped with short-circuit proof transformers
	Ingress protection	DIN EN 60529, front IP51, terminals IP20
	Installation	snap-on mounting on top hat rail 35 mm (DIN EN 60715) the equipment is suitable for tight on tight assembly, however, with ambient temperatures of > 45°C a distance of 10 mm between devices is recommended the assembly location should be, if possible, free from vibration.
	Terminals	screw terminal max. 4 mm^2, tightening torque 0,5 Nm
	Housing material	PPO/Polyamid PA, self-extinguishing acc. to UL 94 V-0
	Weight	220 g

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