

# Three-phase energy meter for transformer connection with S0 pulse output

The S0 interface is a hardware interface for the transmission of measured values via pulses.

## Main features

- ▶ 3-phase energy meter, 3 × 230 / 400 VAC 50 Hz
- ▶ For CT measurement to 6000 A
- ▶ Indication of instantaneous power, voltage and current
- ▶ 7-digit display for 1 tariff
- ▶ Lead seal possible with cap as accessory
- ▶ S0 pulse output
- ▶ Precision class B according to EN50470-3, Precision class 1 according to IEC62053-21

## Order Number

Standard Version: AWD3D5W10MC2A00  
 MID Version: AWD3D5W10MC3A00  
 High Current: AWD3D5W10ND3A00  
 Sealing caps: 4 104 7485 0



## Technical data

Precision class	B according to EN50470-3 1 according to IEC62053-21
Operating voltage	3 × 230 / 400 VAC, 50 Hz Tolerance -20% / +15%
Power consumption	Active 0.4W per phase
Counting range	000'000.0 ... 999'999.9 1'000'000 ... 9'999'999
Display	LCD backlit, digits 6 mm high
Display without mains power	Capacitor based LCD max. 2 times over 10 days
S0 output (interface)	Optocoupler max. 30V / 20 mA and 5V min. impedance 100Ω, pulse width 30 ms
Transmission distance, S0 output	max.1000 m (at 30 V / 20 mA)

## Mounting

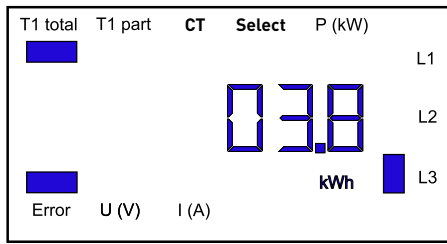
Mounting	On 35 mm rail, according to EN60715TH35
Terminal connections main circuits	Conductor cross-section 1.5 – 16 mm <sup>2</sup> , screwdriver Pozidrive no. 1, slot no.2, torque 1.5 – 2 Nm
Terminal connections control circuit	Conductor cross-section max. 2.5 mm <sup>2</sup> , screwdriver Pozidrive no. 0, slot no.2, torque 0.8 Nm
Insulation characteristics	- 4 kV/50 Hz test according to VDE0435 - 6 kV 1.2/50 μs surge voltage according to IEC255-4 - Device protection class II
Ambient temperature	-25°...+55 °C
Storage temperature	-30°...+85 °C
Environment	Mechanical M2 Electromagnetic E2
Relative humidity	75% without condensation
EMC / Interference immunity	- Surge voltage according to IEC61000-4-5 at main circuit, 4 kV - Surge voltage according to IEC61000-4-5 at pulse outputs S0, 1 kV - Burst voltage according to IEC61000-4-4, 4 kV - ESD according to IEC61000-4-2, contact 8 kV, air 15 kV

## CT measurement

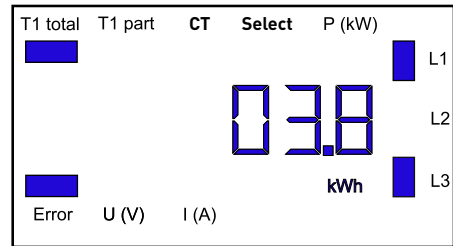
	5...1500 A				1000...6000 A		
Reference / maximum current	I <sub>ref</sub> = 5 A, I <sub>max</sub> = 6 A				I <sub>ref</sub> = 5 A, I <sub>max</sub> = 6 A		
Starting / minimum current	I <sub>st</sub> = 10 mA, I <sub>min</sub> = 0.05 A				I <sub>st</sub> = 10 mA, I <sub>min</sub> = 0.05 A		
Converter ratio	5:5	50:5	100:5	150:5	1000:5	1250:5	1500:5
	200:5	250:5	300:5	400:5	2000:5	2500:5	3000:5
	500:5	600:5	750:5	1000:5	4000:5	5000:5	6000:5
	1250:5	1500:5					
Pulses per kWh	LED	10 pulses / kWh				1 pulse / kWh	
	S0 output	10 pulses / kWh				1 pulse / kWh	

## Error indication

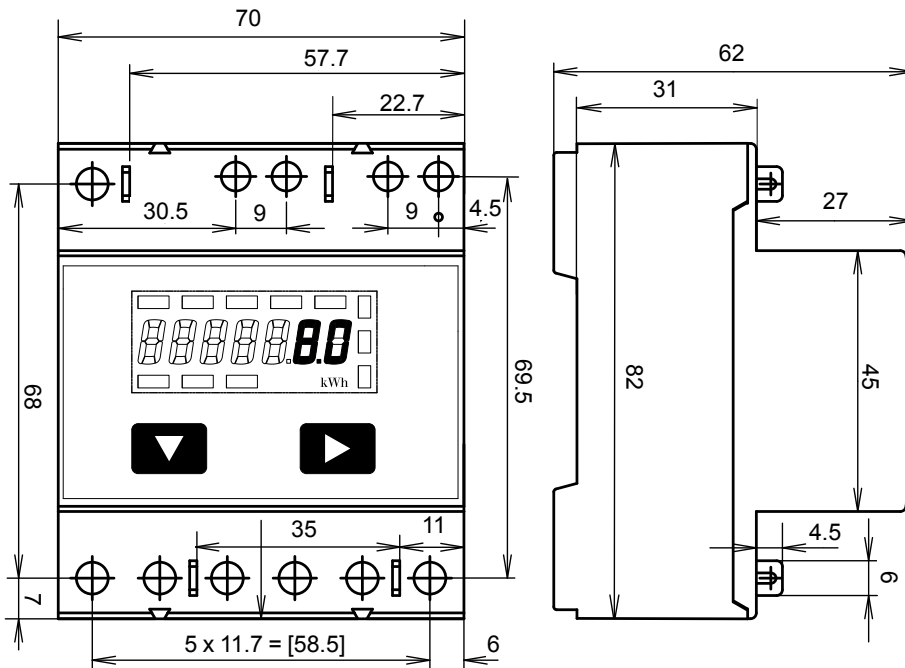
Example: connection error at L3



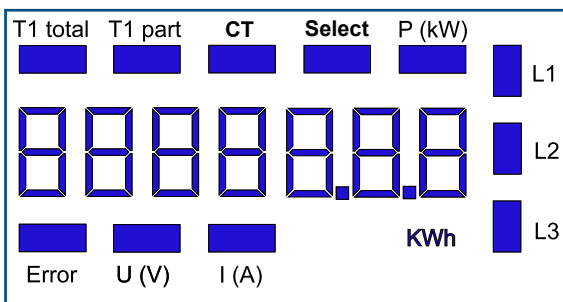
Example: connection error at L1 and L3



## Dimensioned drawings

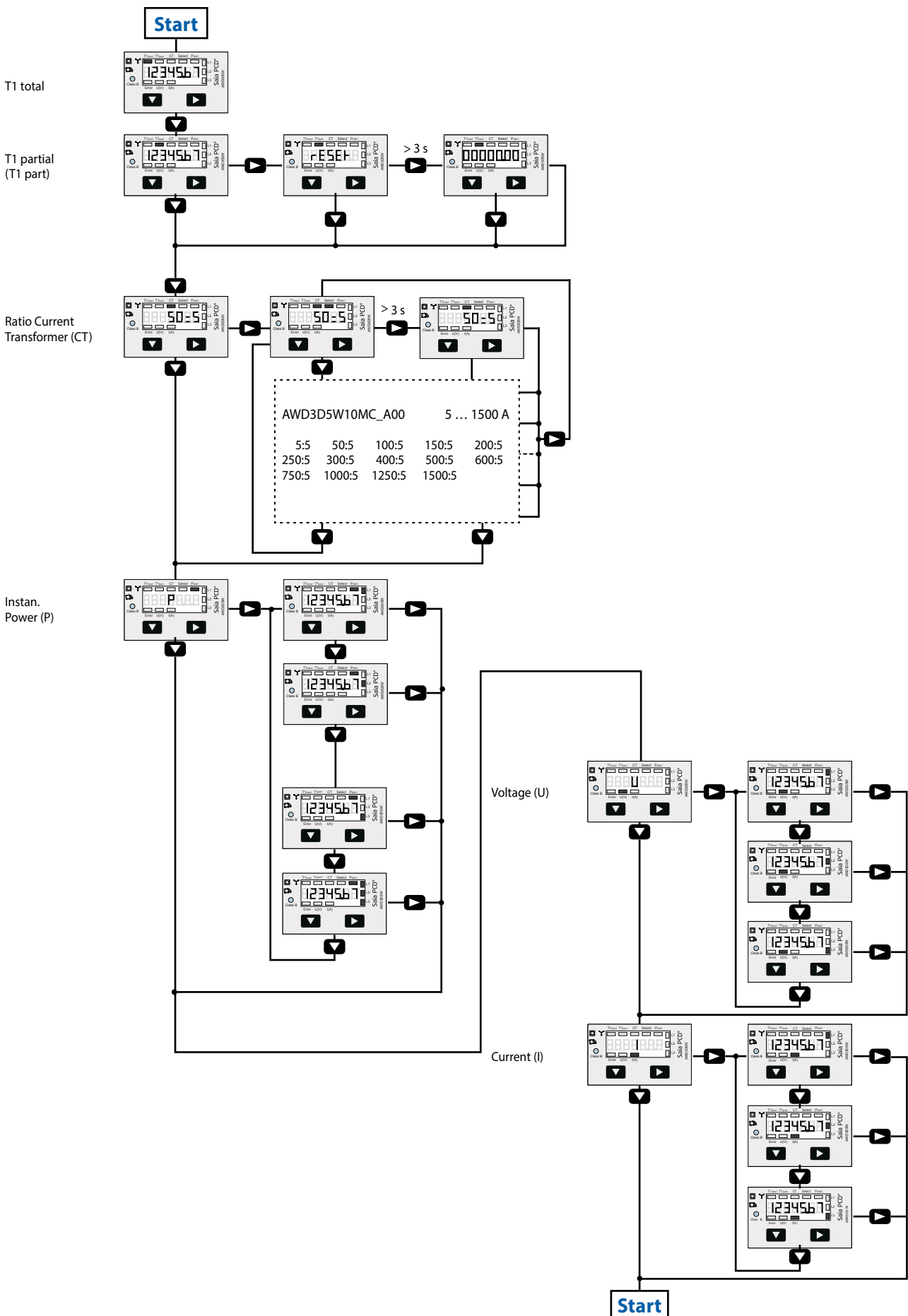


## Display elements, converter measurement



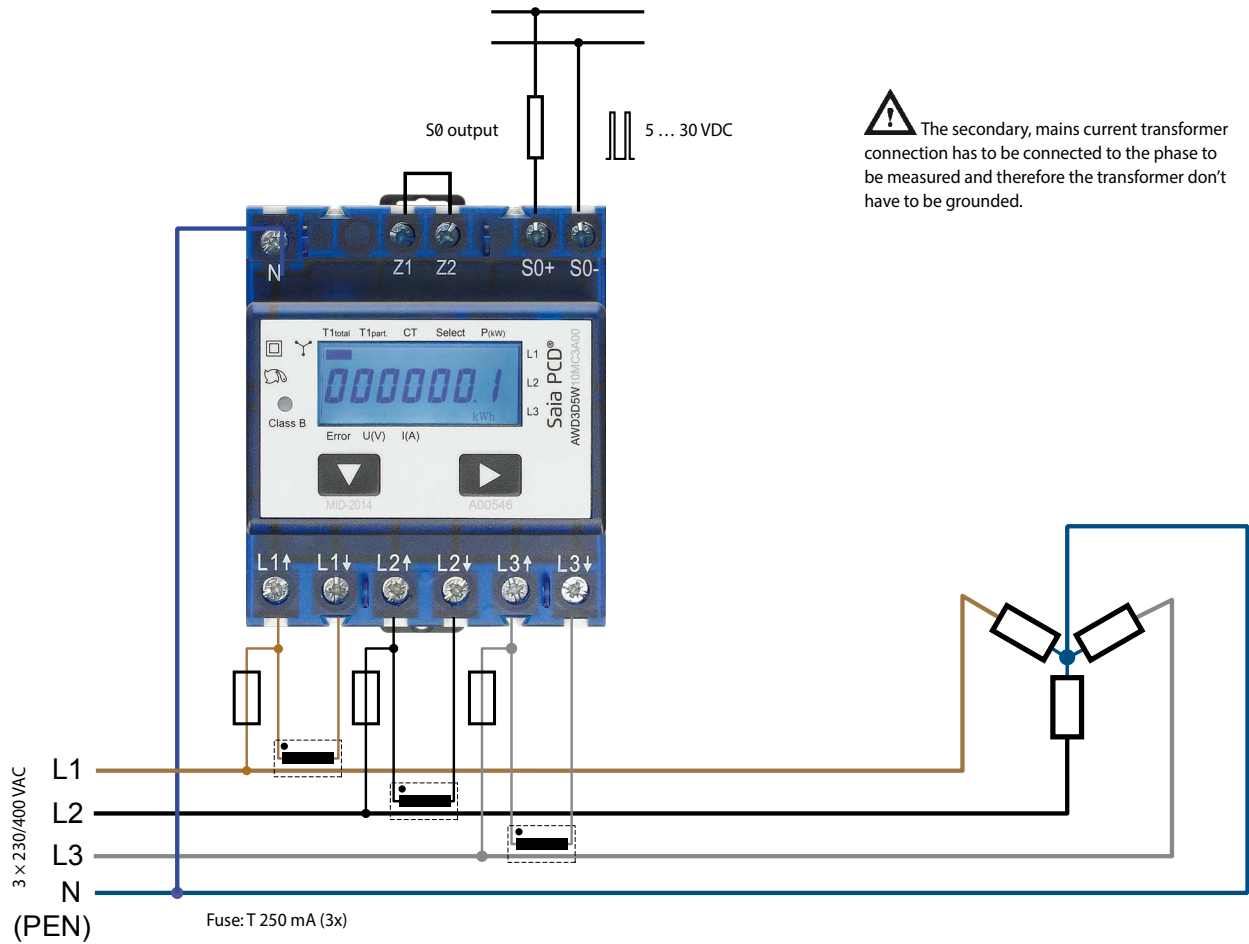
- ▶ T1 total Indicates total consumption
- ▶ T1 part Indicates partial consumption  
This value can be reset
- ▶ CT Indicates the setting for the current transformer ratio
- ▶ Select When bridge Z1-Z2 is open, the transformer ratio can be adjusted under menu item: Select
- ▶ P (kW) Indicates the instantaneous output per phase or for all phases
- ▶ U (V) Indicates voltage per phase
- ▶ I (A) Indicates current per phase
- ▶ kWh Indicates the unit kWh for display of consumption
- ▶ L1/L2/L3 Whenever the display shows P, U, I or Error, the corresponding phase will be indicated
- ▶ Error When phase is absent or current direction is wrong. The corresponding phase will also be indicated.

## Menu to display the value on LCD



## Wiring diagram

AWD3 with CT measurement





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