



# Smart PRO-Line

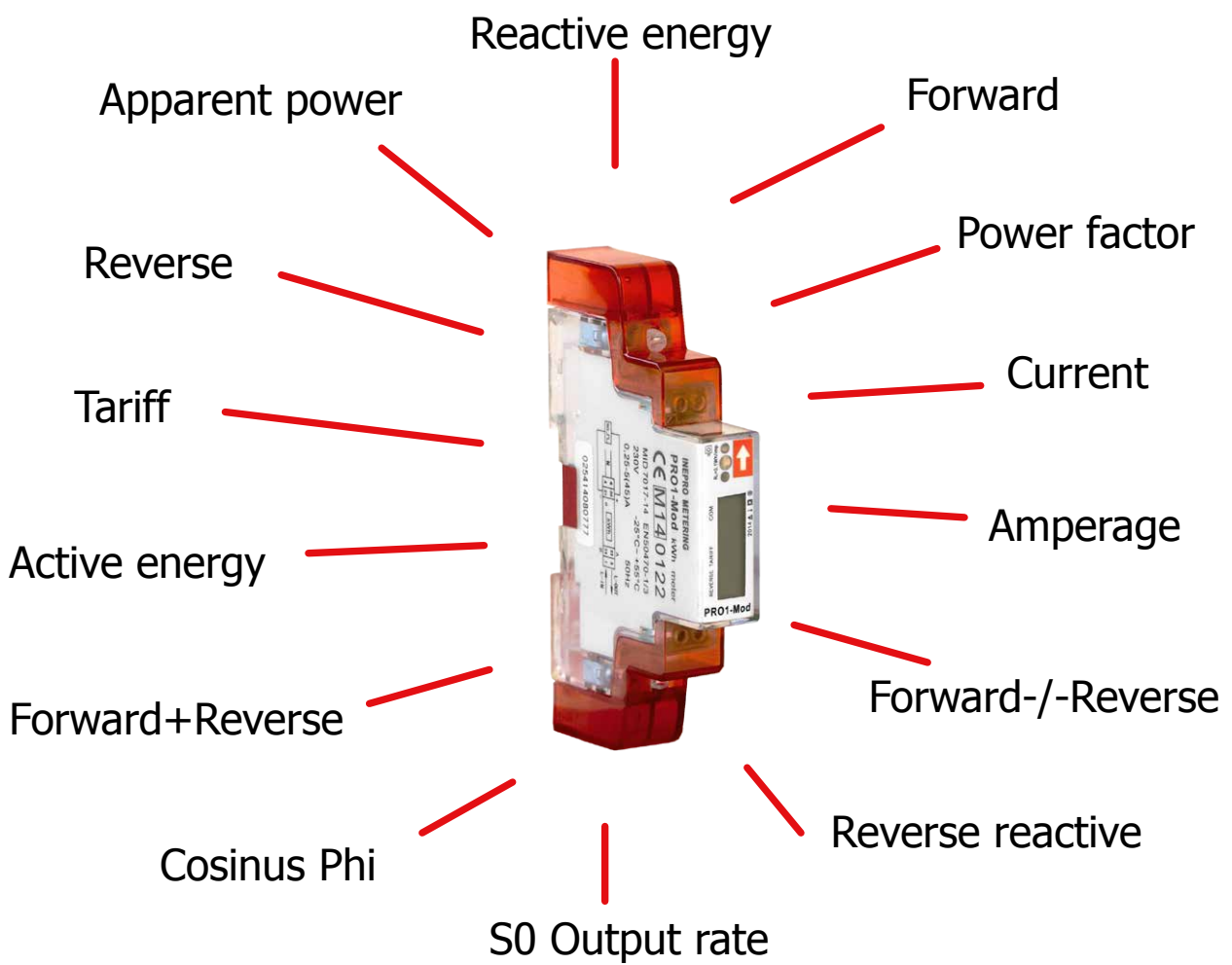
*Smart Energy Meters*



The roots of Inepro Industries stems back to as far as 1952 and the company changed to its present name in 1992. Since then Inepro Industries has been designing and developing a full range of high quality, smart, electricity meters that are distributed under the brand name Inepro Metering. With an extensive range of top quality, certified (MID, KEMA, NMI, SGS, CMi) Smart electricity meters, Inepro Metering is one of the fastest growing metering manufacturers in the market today. Top quality, a strong business focus, expertise and very competitive pricing makes Inepro Metering stand out from its competition.

Today Inepro Metering offers smart energy meters in different price ranges to suite any user, any application within any environment. The Smart PRO line is a high end range with all possible communication where accuracy and information is a must. The PRO1, single phase series of meters are equipped with 30 registers whereas the PRO380, three phase series has over 70 registers. With a choice for Modbus, M-bus, tariff, S0 output and further sophisticated specifications we cover every conceivable need in the market. And if this is not enough we offer the relevant models with 4 quadrant measuring, which is a feature that is very close to an analyzer.

The Smart PRO line offers Panel builders, Electrical installers, Domotica, E-mobility, Photo voltaic a versatile series of meters in which information is KEY to Save Energy and Cost. With a production facility of 300+ employees and 60 professionals in R&D we produce over 250 different products and "if we don't have it we can create it".



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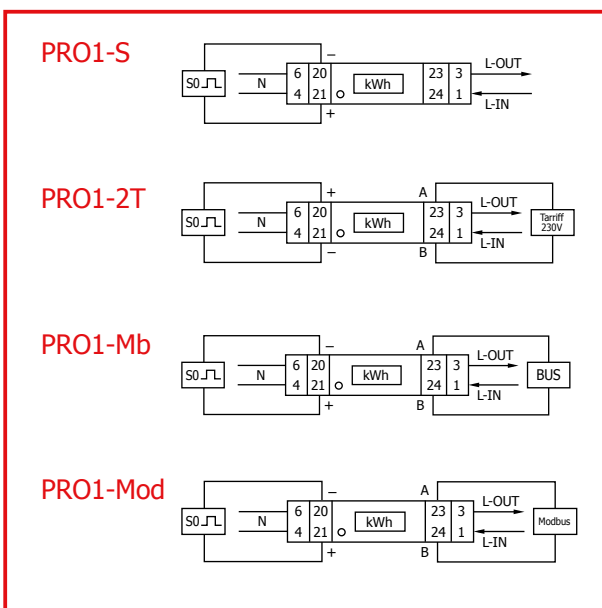
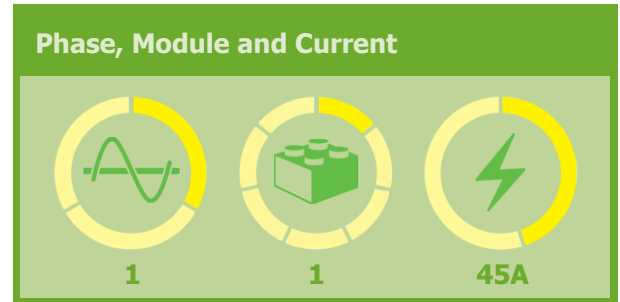


# Smart PRO1 - MID - Modbus/M-bus

The PRO1 series is a range of 1 module, single phase Smart Energy Meters consisting of 4 different types, each with their specific characteristics. They have an exceptional combination of a high accuracy class (1/B) and a broad temperature range of -25°C - +45°C. Another unique feature is the I<sub>max</sub> of 45A.

The PRO1 series is available as a standard version (with a selectable S0 output) and also as a Modbus, M-bus or 2-tariff version. It can communicate and be programmed via an infra-red input. The different communication modes have over 40 variables like kWh, active and reactive energy, forward and reverse energy as well as Cos phi.

The PRO1 smart energy meter is equipped with a resettable day counter and the total energy usage can be calculated via 5 different modes.



**“The single phase smart meter for every metering need.”**

# Specifications

Smart PRO1

## Technical specifications

- Height with protection cover : 116mm
- Height without protection cover : 90mm
- Width : 17,5mm
- Depth : 63mm
- Mounting : DIN rail
- Active energy :  $\pm 1\%$
- Starting current : 0,05Ib
- Impulse S0 duration : T-on: 45ms T-off: 270ms T-t: 140us
- Operating humidity :  $\leq 75\%$
- Storage humidity :  $\leq 95\%$
- Operating temperature :  $-25^{\circ} \sim +55^{\circ}\text{C}$
- Storage temperature :  $-30^{\circ} \sim +70^{\circ}\text{C}$
- Nominal Voltage (Un) : 230V AC
- Operational Voltage : 100/173V  $\sim$  270/468V
- AC Voltage withstand for 1 min : 4KV
- Impulse voltage 1.2uS Waveform : 6KV
- Basic current (Ib) : 5A
- Max current (Imax) : 45A
- Operational current range : 0,4%Ib~Imax
- Over current withstand : 30Imax for 0.01s
- Operational frequency range : 45-60Hz
- Int. power consumption :  $\leq 2\text{W/Phase} - \leq 10\text{VA/Phase}$
- Basic error : standard
- International standard : EN50470-3
- IP protection : 51
- Protective class : II
- Connection mode : U
- Calculation of total energy : Forward, Forward+Reverse, Forward-Reverse, Reverse-Forward, Reverse
- Warranty : 60 months - Year 1-2 100%, Year 3 75%, Year 4 50%, Year 5 25%

## Different models

Article number	MID	Phase	Mod.	Cur.	Com.	Display	Digits	Con. mode	S0	Back-light	Acc. Class	Tarriffs	S0 pulse output
0251 PRO1-S	Yes	1	1	45A	x	LCD	5+2	direct	1	Yes	B	x	Selectable <sup>1</sup>
0252 PRO1-2T	Yes	1	1	45A	x	LCD	5+2	direct	1	Yes	B	2	Selectable <sup>1</sup>
0253 PRO1-Mb	Yes	1	1	45A	x	LCD	5+2	direct	1	Yes	B	2	Selectable <sup>1</sup>
0254 PRO1-Mod	Yes	1	1	45A	x	LCD	5+2	direct	1	Yes	B	2	Selectable <sup>1</sup>
0265 PRO1-S	x	1	1	45A	x	LCD	5+2	direct	1	Yes	B	x	Selectable <sup>1</sup>
0266 PRO1-2T	x	1	1	45A	x	LCD	5+2	direct	1	Yes	B	2	Selectable <sup>1</sup>
0267 PRO1-Mb	x	1	1	45A	x	LCD	5+2	direct	1	Yes	B	2	Selectable <sup>1</sup>
0268 PRO1-Mod	x	1	1	45A	x	LCD	5+2	direct	1	Yes	B	2	Selectable <sup>1</sup>

<sup>1</sup> selectable options: 10.000-1.000-100-10-1-0.1-0.01



# Specifications

Smart PRO380

## Technical specifications

- Height with protection cover : 140mm
- Height without protection cover : 92,4mm
- Width : 70mm
- Depth : 63mm
- Mounting : DIN rail
- Active energy :  $\pm 1\%$
- Starting current : 0,05I<sub>b</sub>
- Impulse S0 duration : T-on: 45ms T-off: 270ms T-t: 140us
- Operating humidity :  $\leq 75\%$
- Storage humidity :  $\leq 95\%$
- Operating temperature :  $-40^{\circ} \sim +70^{\circ}\text{C}$
- Storage temperature :  $-40^{\circ} \sim +70^{\circ}\text{C}$
- Nominal Voltage (Un) : 230/400V AC
- Operational Voltage : 100/173V  $\sim$  270/468V
- AC Voltage withstand for 1 min : 4KV
- Impulse voltage 1.2uS Waveform : 6KV
- Basic current (I<sub>b</sub>) : 5A
- Max current (I<sub>max</sub>) : 100A
- Operational current range : 0,4%I<sub>b</sub>~I<sub>max</sub>
- Over current withstand : 30I<sub>max</sub> for 0.01s
- Operational frequency range : 45-60Hz
- Int. power consumption :  $\leq 2\text{W/Phase} - \leq 10\text{VA/Phase}$
- Basic error : standard
- International standard / protocol : EN50470-3
- IP protection : 51
- Protective class : II
- Calculation of total energy : Forward, Forward+Reverse, Forward-Reverse, Reverse-Forward, Reverse
- Warranty : 60 months - Year 1-2 100%, Year 3 75%, Year 4 50%, Year 5 25%

## Different models

Article number	MID	Phase	Mod.	Cur.	Com.	Display	Digits	Con. mode	S0	Back-light	Acc. Class	Tarriff	S0 pulse output
0255 PRO380-S	Yes	3	4	100A	x	LCD	6+2	direct	2	yes	B	x	Selectable <sup>1</sup>
0256 PRO380-Mb	Yes	3	4	100A	M-bus	LCD	6+2	direct	2	yes	B	2	Selectable <sup>1</sup>
0257 PRO380-Mod	Yes	3	4	100A	Modbus	LCD	6+2	direct	2	yes	B	2	Selectable <sup>1</sup>
0269 PRO380-S	x	3	4	100A	x	LCD	6+2	direct	2	yes	B	x	Selectable <sup>1</sup>
0270 PRO380-Mb	x	3	4	100A	M-bus	LCD	6+2	direct	2	yes	B	2	Selectable <sup>1</sup>
0271 PRO380-Mod	x	3	4	100A	Modbus	LCD	6+2	direct	2	yes	B	2	Selectable <sup>1</sup>

<sup>1</sup> selectable options: 10.000-1.000-100-10-1-0.1-0.01

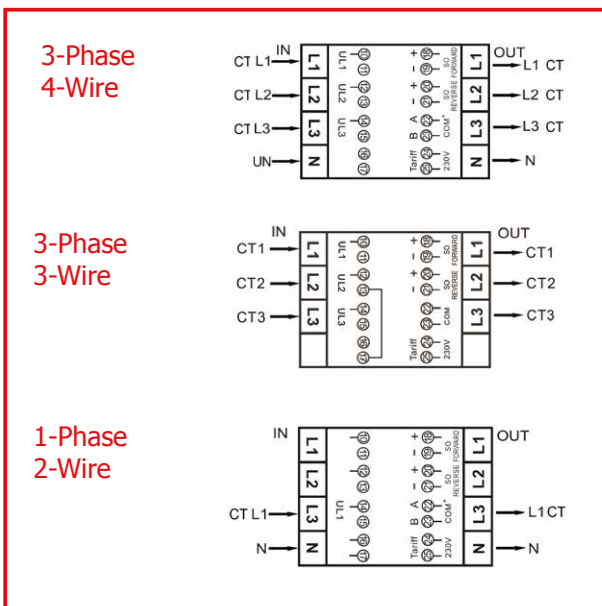
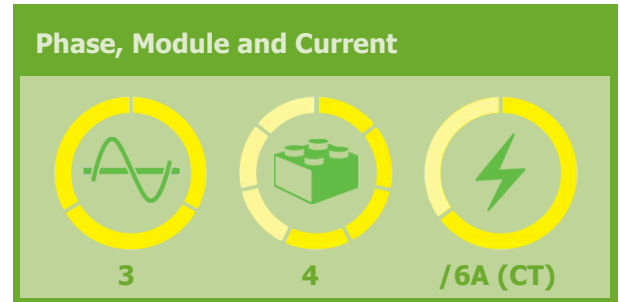


# Smart PRO380 CT - MID - Modbus/M-bus

The PRO380 CT series is a range of 4 module, three phase CT smart Energy Meters consisting of 3 different types each with their specific characteristics. They have an exceptional combination of a high accuracy class (1/B) and a broad temperature range of -25°C - +45°C.

The PRO380 series is available as a standard version (with a selectable S0 output) and also as a Modbus or M-bus version. It can communicate and be programmed via an infra-red input. The different communication modes have over 60 variables like kWh, active and reactive energy, forward and reverse energy as well as Cos phi.

The PRO380 smart energy meter is equipped with a resettable day counter and the total energy usage can be calculated via 5 different modes. You can program the CT ratio at your convenience.



\* No communication on the PRO380-S CT



**“Suitable for industrial applications and complex analytics”**

# Specifications

Smart PRO380 CT

## Technical specifications

- Height with protection cover : 140mm
- Height without protection cover : 92,4mm
- Width : 70mm
- Depth : 63mm
- Mounting : DIN rail
- Active energy :  $\pm 1\%$
- Starting current : 0,05I<sub>b</sub>
- Impulse SO duration : T-on: 45ms T-off: 270ms T-t: 140us
- Operating humidity :  $\leq 75\%$
- Storage humidity :  $\leq 95\%$
- Operating temperature :  $-25^{\circ} \sim +55^{\circ}\text{C}$
- Storage temperature :  $-30^{\circ} \sim +70^{\circ}\text{C}$
- Nominal Voltage (U<sub>n</sub>) : 230/400V AC
- Operational Voltage : 100/173V  $\sim$  270/468V
- AC Voltage withstand for 1 min : 4KV
- Impulse voltage 1.2uS Waveform : 6KV
- Basic current (I<sub>b</sub>) : 1.5A
- Max current (I<sub>max</sub>) : 6A
- Operational current range : 0,4%I<sub>b</sub>~I<sub>max</sub>
- Over current withstand : 30I<sub>max</sub> for 0.01s
- Operational frequency range : 45-60Hz
- Int. power consumption :  $\leq 2\text{W/Phase} - \leq 10\text{VA/Phase}$
- Basic error : standard
- International standard / protocol : EN50470-3
- IP protection : 51
- Protective class : II
- Calculation of total energy : Forward, Forward+Reverse, Forward-Reverse, Reverse-Forward, Reverse
- Warranty : 60 months - Year 1-2 100%, Year 3 75%, Year 4 50%, Year 5 25%

## Different models

Article number	MID	Phase	Mod.	Cur.	Com.	Display	Digits	Con. mode	SO	Back-light	Acc. Class	Tarriff	SO pulse output
0258 PRO380-S	Yes	3	4	/6A	x	LCD	Var. <sup>2</sup>	CT	2	yes	B	x	Selectable <sup>1</sup>
0259 PRO380-Mb	Yes	3	4	/6A	M-bus	LCD	Var. <sup>2</sup>	CT	2	yes	B	2	Selectable <sup>1</sup>
0260 PRO380-Mod	Yes	3	4	/6A	Modbus	LCD	Var. <sup>2</sup>	CT	2	yes	B	2	Selectable <sup>1</sup>
0272 PRO380-S	x	3	4	/6A	x	LCD	Var. <sup>2</sup>	CT	2	yes	B	x	Selectable <sup>1</sup>
0273 PRO380-Mb	x	3	4	/6A	M-bus	LCD	Var. <sup>2</sup>	CT	2	yes	B	2	Selectable <sup>1</sup>
0274 PRO380-Mod	x	3	4	/6A	Modbus	LCD	Var. <sup>2</sup>	CT	2	yes	B	2	Selectable <sup>1</sup>

<sup>1</sup> selectable options: 10.000-1.000-100-10-1-0.1-0.01

<sup>2</sup> variable; depending on the CT-ratio: 5+3 / 6+2 / 7+1 / 8+0

# MID Certified Meter Overview

Below an overview of all our MID certified (smart) meters:

Article code	Phase	Mod.	Cur.	Com.	Digits	Con. mode	S0	Back-light	Acc. Class	SO pulse output
0251 PRO1-S	1	1	45A	x	5+2	direct	1	Yes	B	Selectable <sup>1</sup>
0252 PRO1-2T	1	1	45A	x	5+2	direct	1	Yes	B	Selectable <sup>1</sup>
0253 PRO1-Mb	1	1	45A	M-bus	5+2	direct	1	Yes	B	Selectable <sup>1</sup>
0254 PRO1-Mod	1	1	45A	Modbus	5+2	direct	1	Yes	B	Selectable <sup>1</sup>
0255 PRO380-S	3	4	100A	x	Variable <sup>2</sup>	direct	2	Yes	B	Selectable <sup>1</sup>
0256 PRO380-Mb	3	4	100A	M-bus	Variable <sup>2</sup>	direct	2	Yes	B	Selectable <sup>1</sup>
0257 PRO380-Mod	3	4	100A	Modbus	Variable <sup>2</sup>	direct	2	Yes	B	Selectable <sup>1</sup>
0258 PRO380-S	3	4	/6A	x	Variable <sup>2</sup>	CT	2	Yes	B	Selectable <sup>1</sup>
0259 PRO380-Mb	3	4	/6A	M-bus	Variable <sup>2</sup>	CT	2	Yes	B	Selectable <sup>1</sup>
0260 PRO380-Mod	3	4	/6A	Modbus	Variable <sup>2</sup>	CT	2	Yes	B	Selectable <sup>1</sup>

<sup>1</sup> selectable options: 10.000-1.000-100-10-1-0.1-00.1

<sup>2</sup> variable; depending on the CT-ratio: 6+1 (5:5 to 200:5) - 7+0 (200:5 to 3000:5)