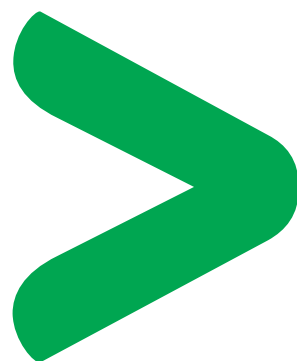


# VAF & kWh Meters



Quick and easy  
installation



Meter for all electrical  
panels



Power energy  
monitoring

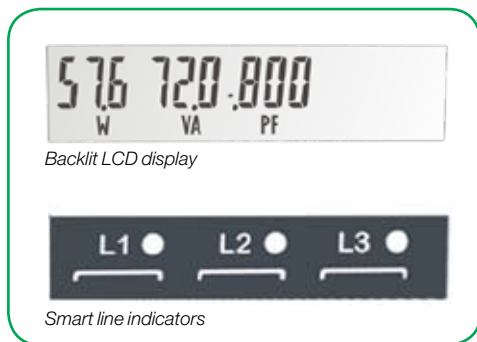
**Schneider**  
Electric™

# VAF & kWh Meters

## Functions and characteristics



DM 6XXX / EM 1XXX Series



Backlit LCD display

Smart line indicators



Rear view

The Conzerv™ DM6XXX & EM1XXX series meter offers all the basic measurement capabilities required to monitor an electrical installation in 96 x 96 mm units

Characterized by their rugged construction, compact size, and low installation costs, these state-of-the-art meters are ideal for control panels, motor control centers and genset panels

The DM6XXX & EM1XXX series are available in four different versions, each to best fit specific applications

DM6100	VAF, PF meter with 1.0% accuracy
DM6100	VAF, PF meter with 0.5% accuracy
DM6300	VAF, PF meter with port & 1.0% accuracy
DM6300	VAF, PF meter with port & 0.5% accuracy
EM1000	Energy meter with pulse output & 1.0% accuracy
EM1000	Energy meter with pulse output & 0.5% accuracy
EM1200	Energy meter with RS485 port & 1.0% accuracy
EM1200	Energy meter with RS485 port & 0.5% accuracy

### Applications

Energy billing  
Load balancing and optimization  
Electrical load monitoring  
Gensets, test benches, and laboratories

### Main characteristics

#### Fast in line view:

Elegant single row, backlit LCD display  
Three parameters, name and value at one glance  
Direct reading of primary values - no multiplication factor  
Kilo, mega and giga indications with autoscaling capability  
User selectable default display page and lock

#### High Resolution

RMS values: Three digit  
Integrated values: Energy values, nine digit (2 digits after decimal)

#### Intuitive function keys

Four smart keys for easy navigation, display pages expand vertically, much like the directory or explorer tree displayed on any computer

#### Auto-scrolling

Allows you to monitor a group of parameters sequentially without any manual key operation.

#### Secure settings

Unique password protection for the set-up parameters.

#### Smart line indicators

Helps to check the presence of input voltage (healthy phase)

#### Universal aux supply

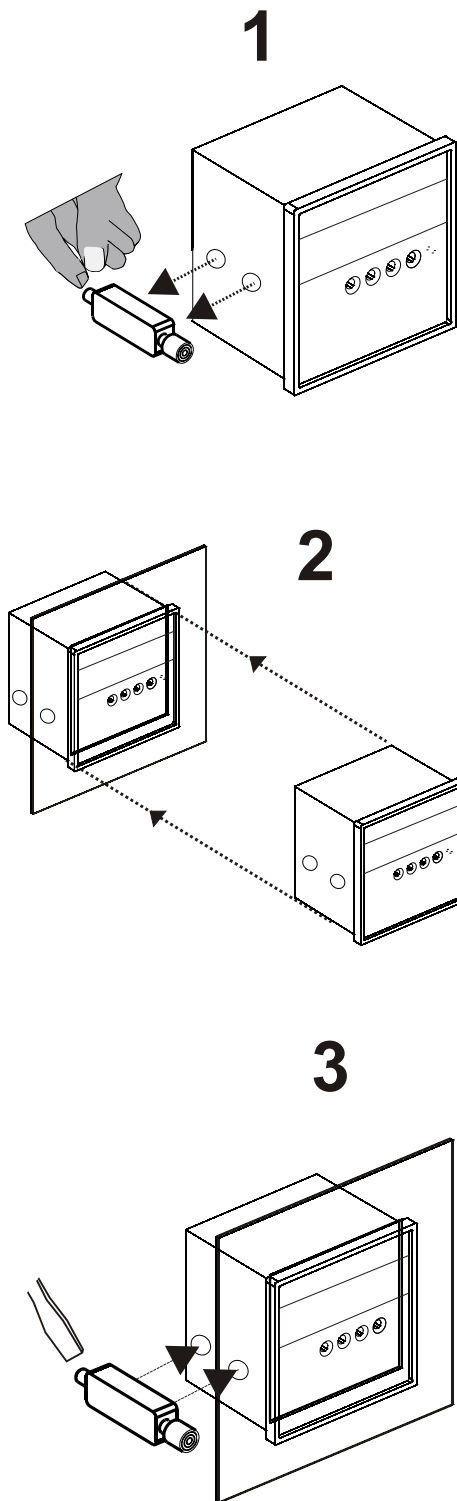
Wide aux range 44-277V ac/dc

#### Communication

Optional RS 485 communication port with Modbus RTU. Can be integrated with various Schneider SCADA softwares (ION™ Enterprise, Power Logic™ SCADA, Vijeo™ Citect and Vista) and also third party SCADA / BMS for Energy & Building management studies

# VAF & kWh Meters

## Functions and characteristics



Selection guide			
Selection Guide		DM6100 / DM6300	EM1000 / EM1200
<b>General</b>			
Use on LV and HV systems		•	•
Accuracy		Class 1.0/ 0.5	Class 1.0/ 0.5
<b>Instantaneous RMS values</b>			
Voltage - LL & LN	VLL V12 V23 V31 VLN V1 V2 V3	•	
Line current	A A1 A2 A3	•	
Frequency	F	•	
Power factor	PF PF1 PF2 PF3	•	•
Active, apparent, and reactive power (per phase and total)	W W1 W2 W3		•
	VA VA1 VA2 VA3		•
	VAr VAr1 VAr2 VAr3		•
<b>Integrated values</b>			
Active, apparent, and reactive energy	Wh VAh & VArh		•
Run hours	Run.h		•
On hours	On.h		•
Interrupts count	INTR		•
<b>Old integ values</b>			
Active, apparent, and reactive energy	Wh VAh & VArh		•
Run hours	Run.h		•
On hours	On.h		•
Interrupts count	INTR		•
<b>Communication</b>			
Pulse output			• (EM1000)
RS 485 (Modbus protocol)		• (DM 6300)	• (EM1200)

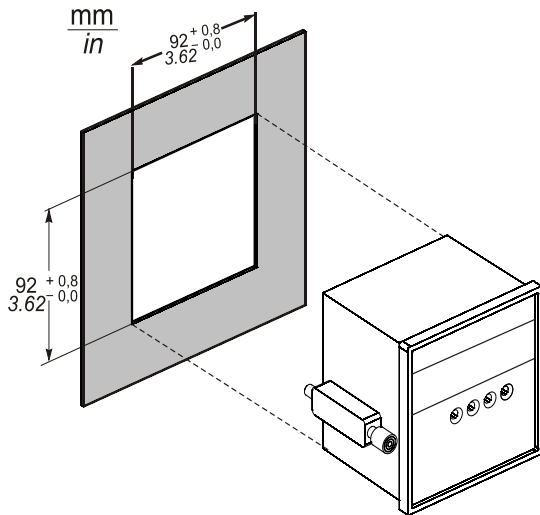
### Part Numbers

VAF meter	Part number
DM6100 Class 1.0 accuracy	30002567
DM6100 Class 0.5 accuracy	30002569
DM6300 Class 1.0 accuracy with RS485	30002566
DM6300 Class 0.5 accuracy with RS485	30002570
<b>kWh meter</b>	
EM1000 Class 1.0 accuracy with POP	30002568
EM1000 Class 0.5 accuracy with POP	30002571
EM1200 Class 1.0 accuracy with RS 485	30002565
EM1200 Class 0.5 accuracy with RS 485	30002572

1. Remove mounting clamps from the digital meter.
2. Gently slide the digital meter through the cut-out.
3. Put the mounting clamps back in the digital meter and tighten the mounting clamp screws.

# VAF & kWh Meters

## Functions and characteristics



DM6XXX/EM1XXX series meter panel cut-out

### Electrical characteristics

Type of measurement		True rms	
Measurement accuracy*	Voltage	± 1.0% of reading for DM6XXX CI 1.0 meter ± 0.5% of reading for DM6XXX CI 0.5 meter	
	Current	± 1.0% of reading for DM6XXX CI 1.0 meter ± 0.5% of reading for DM6XXX CI 0.5 meter	
Power	Active	± 1.0% of reading for EM1XXX CI 1.0 meter ± 0.5% of reading for EM1XXX CI 0.5 meter	
	Apparent	± 1.0% of reading for EM1XXX CI 1.0 meter ± 0.5% of reading for EM1XXX CI 0.5 meter	
	Reactive	± 2.0% of reading for EM1XXX CI 1.0 meter ± 1.0% of reading for EM1XXX CI 0.5 meter	
Power factor		± 1.0% of reading for DM6XXX & EM1XXX CI 1.0 meter ± 0.5% of reading for DM6XXX & EM1XXX CI 0.5 meter	
	Energy		
Energy	Active	Class 1.0 as per IEC 62052-11 and 62053-21 for EM1XXX CI 1.0 meter Class 0.5S as per IEC 62052-11 and 62053-22 for EM1XXX CI 0.5 meter	
	Apparent	± 1.0% of reading for EM1XXX CI 1.0 meter ± 0.5% of reading for EM1XXX CI 0.5 meter	
	Reactive	Class 2.0 as per IEC 62053-23 for EM1XXX CI 1.0 meter Class 1.0 as per IEC 62052-11 and 62053-21 for EM1XXX CI 0.5 meter	
Data update rate		One second	
Input-voltage characteristics	Inputs	V1, V2, V3, VN	
	Measured voltage	80 to 480 VAC LL without PTs Up to 999 kV with external PTs	
	Permissible overload	480VLL with full accuracy, 750VLL max	
	Burden	0.2 VA per phase max	
	Frequency	45 to 65 Hz	
	Input-current	CT ratings	Primary
Secondary			1A / 5A
Measurement range		50 mA to 6A	
Permissible overload		5A: 6A continuous 1A: 1.2 A continuous	
Impedance		< 0.1 ohm	
Burden		0.2 VA per phase max	
Auxiliary supply (control power)		44 to 277 Vac/dc	
	Burden	3 VA max	
Comm.	Pulse output (EM 1000)	24Vdc, Pulse width programmable from 50 to 500ms	
	RS 485	2 terminals, Modbus RTU, baudrate up to 19200 bps	

### Mechanical characteristics

Weight	0.500 kg (shipping), 0.400 kg (unpacked)
IP degree of protection	Front: IP 51; Rear: IP 40
Dimensions	Bezel: 96 x 96 mm Depth: 80 mm behind bezel Panel cutout: 92 x 92 mm

### Environmental characteristics

Operating temperature	-10 to +60° C (14 to 140° F)
Storage temperature	-25 to +70° C (-13 to 158° F)
Humidity	5 to 95 % RH non-condensing
Altitude	2000 m
Measurement category	III
Pollution degree	2
Protection class	2

### Electromagnetic compatibility

Electrostatic discharge	15 kV Air discharge, 8 kV contact discharge IEC 61000-4-2
Fast transient	4 kV IEC 61000-4-4
Immunity to surge waves	4 kV IEC 61000-4-5
Impulse voltage	6 kV, 1.2/50 µsecond IEC 60060
Conducted and radiated emissions	CISPR22

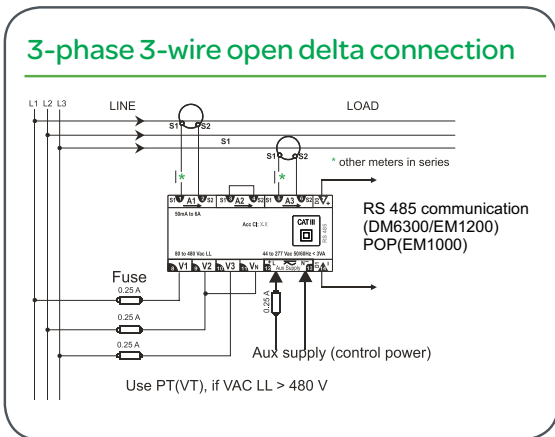
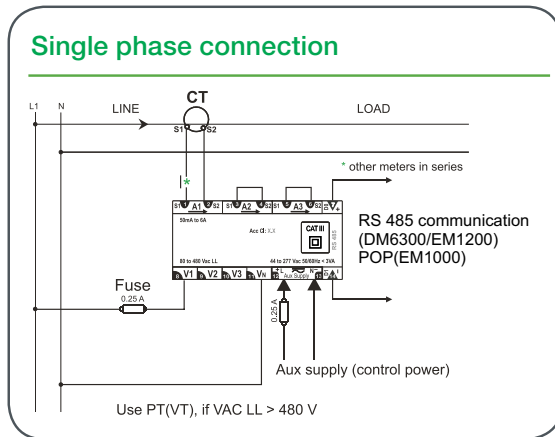
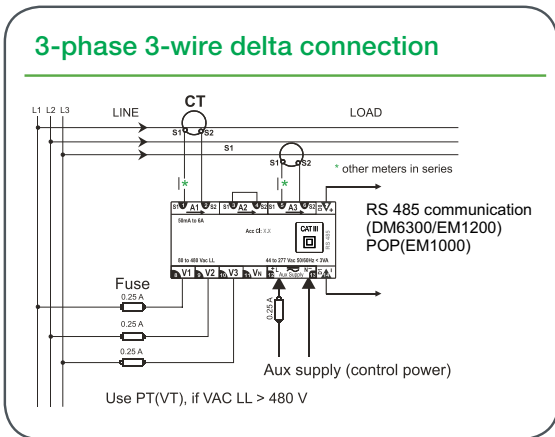
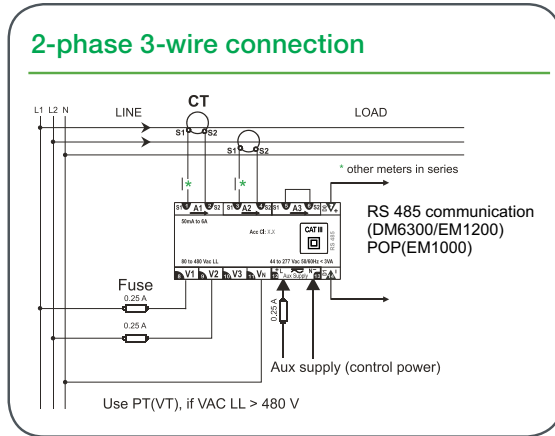
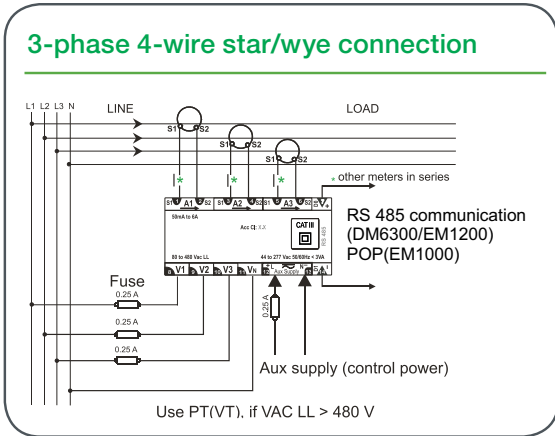
### Safety and standards

Construction	Self extinguishable V0 plastics; Double insulation at user accessible area
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\* Refer user manual for more details on accuracy

# VAF & kWh Meters

## Functions and characteristics



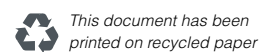
# Make the most of your energy<sup>SM</sup>

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