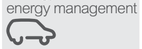
Schneider metering offers

With Schneider Electric's extensive product range, you can always find a competitive solution, whatever your requirements or type of building.

Using the car analogy to illustrate energy management



Odometer

Speedometer

Rev counter

Warning indicators

On-board computer

Your needs

Our solutions

Energy and cost management

Energy Management
IM X _ _
1: Measure (kWh)
2: Monitor (kWh, kVARh)
3: Record (kWh, kVARh)

Meters
Cost allocation and sub-metering

Building energy efficiency regulations

Network monitoring

Power Monitoring
IM _ X _
1: Monitoring of electrical values (U, V, I, P, Q, S, f, PF)
2: Min./max. values
+ under/overshoot alarms
+ feedback of value or alarm
3: Alarm recording and timestamping
+ min./max./average values
+ voltage unbalance (Unb)
+ Modbus communication

Power meters
Electrical installation monitoring (U, V, I, P, Q, S, energy, THD, etc.)

Network analysis

Power Quality
IM _ _ X
1: Total harmonic distortion (THDu, THDv, THDi)
2: Harmonic orders (I, V, U)
+ alarms and recordings
+ Modbus communication
3: Voltage events (dips, cuts, overvoltages)
+ min./max./average values
+ disturbances + alarms

Enhanced service continuity

Asset Management
- Status: O/C, SD, SDE
- Type of trip (corrective maintenance): short-circuit (short time Isd and instantaneous Li) or overload (long time Ir)
- Operating data (preventive maintenance): total loading, contact wear, number of operations, etc.
- Simple command (remote control of circuit breaker)
- Modbus communication

Circuit breakers equipped with Micrologic trip unit
Protection and collection of energy and maintenance data

Sustainable energy management

Monitoring System

Communication interfaces
Data transfer, processing, and display

Direct measurement (integrated sensors)

Single-phase energy meters

≤ 40 A

iEM2000

Part numbers (e.g. A9MEM2000)	A9MEM - - - -		
	2000T	2000	2010
IM code	IM 100		
Cost allocation (MID)	-	Yes	Yes
Energy Management – Active energy	Class 1		
Energy Management – Partial meter			
Energy Management – Multi-tariff			
Energy Management – Bi-directional			
Energy Management – Reactive energy			
Power Monitoring – I, U, V, P, PF			
Power Monitoring – f			
Power Monitoring – Q, S			
Power Monitoring – Neutral current (I)			
Power Monitoring – Min./max. values			
Power Quality – THD			
Power Quality – Harmonics			
Asset Management – Overload alarm			
Asset Management – Loss of voltage alarm			
Asset Management – States/Status			
Asset Management – Type of trip			
Asset Management – Operating data			
Asset Management – Simple command			
Communication – Pulse output			
Communication – Relay output			
Communication – 2.4 GHz radio frequency			
Communication – Modbus RS485			
Communication – M-bus, BACnet, LON			
Communication – Ethernet Modbus TCP			

≤ 45 A

iEM2050 (m)

Part numbers (e.g. A9MEM2000)	A9MEM - - - -	
	2050	2055
IM code	IM 100	
Cost allocation (MID)	-	Yes
Energy Management – Active energy	Class 1	
Energy Management – Partial meter		
Energy Management – Multi-tariff	2	2
Energy Management – Bi-directional		
Energy Management – Reactive energy		
Power Monitoring – I, U, V, P, PF		
Power Monitoring – f		
Power Monitoring – Q, S		
Power Monitoring – Neutral current (I)		
Power Monitoring – Min./max. values		
Power Quality – THD		
Power Quality – Harmonics		
Asset Management – Overload alarm		
Asset Management – Loss of voltage alarm		
Asset Management – States/Status		
Asset Management – Type of trip		
Asset Management – Operating data		
Asset Management – Simple command		
Communication – Pulse output		
Communication – Relay output		
Communication – 2.4 GHz radio frequency		
Communication – Modbus RS485		
Communication – M-bus, BACnet, LON		
Communication – Ethernet Modbus TCP		

≤ 63 A

iEM2100

Part numbers (e.g. A9MEM2000)	A9MEM - - - -	
	2100	2105
IM code	IM 100	
Cost allocation (MID)	-	-
Energy Management – Active energy	Class 1	
Energy Management – Partial meter		
Energy Management – Multi-tariff		
Energy Management – Bi-directional		
Energy Management – Reactive energy		
Power Monitoring – I, U, V, P, PF		
Power Monitoring – f		
Power Monitoring – Q, S		
Power Monitoring – Neutral current (I)		
Power Monitoring – Min./max. values		
Power Quality – THD		
Power Quality – Harmonics		
Asset Management – Overload alarm		
Asset Management – Loss of voltage alarm		
Asset Management – States/Status		
Asset Management – Type of trip		
Asset Management – Operating data		
Asset Management – Simple command		
Communication – Pulse output		
Communication – Relay output		
Communication – 2.4 GHz radio frequency		
Communication – Modbus RS485		
Communication – M-bus, BACnet, LON		
Communication – Ethernet Modbus TCP		

iEM2110

Part numbers (e.g. A9MEM2000)	A9MEM - - - -		
	2110	2150	2155
IM code	IM 200		
Cost allocation (MID)	Yes	-	Yes
Energy Management – Active energy	Class 1		
Energy Management – Partial meter			
Energy Management – Multi-tariff	2		2
Energy Management – Bi-directional			
Energy Management – Reactive energy			
Power Monitoring – I, U, V, P, PF			
Power Monitoring – f			
Power Monitoring – Q, S			
Power Monitoring – Neutral current (I)			
Power Monitoring – Min./max. values			
Power Quality – THD			
Power Quality – Harmonics			
Asset Management – Overload alarm			
Asset Management – Loss of voltage alarm			
Asset Management – States/Status			
Asset Management – Type of trip			
Asset Management – Operating data			
Asset Management – Simple command			
Communication – Pulse output			
Communication – Relay output			
Communication – 2.4 GHz radio frequency			
Communication – Modbus RS485			
Communication – M-bus, BACnet, LON			(1)
Communication – Ethernet Modbus TCP			

Three-phase energy meters

≤ 63 A

iEM3100

Part numbers (e.g. A9MEM2000)	A9MEM - - - -				
	3100	3110	3115	3150	3155
IM code	IM 100				IM 210
Cost allocation (MID)	-	Yes	Yes	-	Yes
Energy Management – Active energy	Class 1				
Energy Management – Partial meter					
Energy Management – Multi-tariff			4		4
Energy Management – Bi-directional					
Energy Management – Reactive energy					
Power Monitoring – I, U, V, P, PF					
Power Monitoring – f					
Power Monitoring – Q, S					
Power Monitoring – Neutral current (I)					
Power Monitoring – Min./max. values					
Power Quality – THD					
Power Quality – Harmonics					
Asset Management – Overload alarm					
Asset Management – Loss of voltage alarm					
Asset Management – States/Status					
Asset Management – Type of trip					
Asset Management – Operating data					
Asset Management – Simple command					
Communication – Pulse output					
Communication – Relay output					
Communication – 2.4 GHz radio frequency					
Communication – Modbus RS485					
Communication – M-bus, BACnet, LON					(2)
Communication – Ethernet Modbus TCP					

≤ 125 A

iEM3300

Part numbers (e.g. A9MEM2000)	A9MEM - - - -			
	3300	3310	3350	3355
IM code	IM 100			IM 210
Cost allocation (MID)	-	Yes	Yes	Yes
Energy Management – Active energy	Class 1			
Energy Management – Partial meter				
Energy Management – Multi-tariff			4	4
Energy Management – Bi-directional				
Energy Management – Reactive energy				
Power Monitoring – I, U, V, P, PF				
Power Monitoring – f				
Power Monitoring – Q, S				
Power Monitoring – Neutral current (I)				
Power Monitoring – Min./max. values				
Power Quality – THD				
Power Quality – Harmonics				
Asset Management – Overload alarm				
Asset Management – Loss of voltage alarm				
Asset Management – States/Status				
Asset Management – Type of trip				
Asset Management – Operating data				
Asset Management – Simple command				
Communication – Pulse output				
Communication – Relay output				
Communication – 2.4 GHz radio frequency				
Communication – Modbus RS485				
Communication – M-bus, BACnet, LON			(2)	(2)
Communication – Ethernet Modbus TCP				

Wireless sensors

All circuit breakers and Acti 9 DT40 Vigi ≤ 63 A

PowerTag DT40 Vigi (m)

Part numbers (e.g. A9MEM2000)	A9MEM - - - -		
	1560 (1P+N top)	1570 (3P+N top)	
	1560 (1P+N bottom)	1570 (3P+N bottom)	
IM code	IM 100		IM 210
Cost allocation (MID)	-	-	-
Energy Management – Active energy	Class 1		
Energy Management – Partial meter			
Energy Management – Multi-tariff			
Energy Management – Bi-directional			
Energy Management – Reactive energy			
Power Monitoring – I, U, V, P, PF			
Power Monitoring – f			
Power Monitoring – Q, S			
Power Monitoring – Neutral current (I)			
Power Monitoring – Min./max. values			
Power Quality – THD			
Power Quality – Harmonics			
Asset Management – Overload alarm			
Asset Management – Loss of voltage alarm			
Asset Management – States/Status			
Asset Management – Type of trip			
Asset Management – Operating data			
Asset Management – Simple command			
Communication – Pulse output			
Communication – Relay output			
Communication – 2.4 GHz radio frequency			
Communication – Modbus RS485			
Communication – M-bus, BACnet, LON			
Communication – Ethernet Modbus TCP			

Acti 9 DT40 circuit breakers ≤ 63 A

PowerTag DT40 (m)

Part numbers (e.g. A9MEM2000)	A9MEM - - - -		
	1561 (1P+N top)	1571 (3P+N top)	
	1562 (1P+N bottom)	1572 (3P+N bottom)	
IM code	IM 100		
Cost allocation (MID)	-	-	
Energy Management – Active energy	Class 1		
Energy Management – Partial meter			
Energy Management – Multi-tariff			
Energy Management – Bi-directional			
Energy Management – Reactive energy			
Power Monitoring – I, U, V, P, PF			
Power Monitoring – f			
Power Monitoring – Q, S			
Power Monitoring – Neutral current (I)			
Power Monitoring – Min./max. values			
Power Quality – THD			
Power Quality – Harmonics			
Asset Management – Overload alarm			
Asset Management – Loss of voltage alarm			
Asset Management – States/Status			
Asset Management – Type of trip			
Asset Management – Operating data			
Asset Management – Simple command			
Communication – Pulse output			
Communication – Relay output			
Communication – 2.4 GHz radio frequency			
Communication – Modbus RS485			
Communication – M-bus, BACnet, LON			
Communication – Ethernet Modbus TCP			

Acti 9 iC60, Multi 9 C60, DT60, and iID circuit breakers ≤ 63 A

PowerTag iC60

Part numbers (e.g. A9MEM2000)	A9MEM - - - -			
	1521 (1P+N top)	1540 (3P top or bottom)	1541 (3P+N top)	
	1522 (1P+N bottom)		1542 (3P+N bottom)	
IM code	IM 100			
Cost allocation (MID)	-	-	-	
Energy Management – Active energy	Class 1			
Energy Management – Partial meter				
Energy Management – Multi-tariff				
Energy Management – Bi-directional				
Energy Management – Reactive energy				
Power Monitoring – I, U, V, P, PF				
Power Monitoring – f				
Power Monitoring – Q, S				
Power Monitoring – Neutral current (I)				
Power Monitoring – Min./max. values				
Power Quality – THD				
Power Quality – Harmonics				
Asset Management – Overload alarm				
Asset Management – Loss of voltage alarm				
Asset Management – States/Status				
Asset Management – Type of trip				
Asset Management – Operating data				
Asset Management – Simple command				
Communication – Pulse output				
Communication – Relay output				
Communication – 2.4 GHz radio frequency				
Communication – Modbus RS485				
Communication – M-bus, BACnet, LON				
Communication – Ethernet Modbus TCP				

Compact NSX circuit breakers ≤ 630 A

PowerTag NSX (m)

Part numbers (e.g. A9MEM2000)	A9MEM - - - -	
	LV434020 (3P ≤ 250 A)	LV434021 (3P+N ≤ 250 A)
	LV434022 (3P ≤ 630 A)	LV434023 (3P+N ≤ 630 A)
IM code	IM 210	
Cost allocation (MID)	-	-
Energy Management – Active energy	Class 1	
Energy Management – Partial meter		
Energy Management – Multi-tariff		
Energy Management – Bi-directional		
Energy Management – Reactive energy		
Power Monitoring – I, U, V, P, PF		
Power Monitoring – f		
Power Monitoring – Q, S		
Power Monitoring – Neutral current (I)		
Power Monitoring – Min./max. values		
Power Quality – THD		
Power Quality – Harmonics		
Asset Management – Overload alarm		
Asset Management – Loss of voltage alarm		
Asset Management – States/Status		
Asset Management – Type of trip		
Asset Management – Operating data		
Asset Management – Simple command		
Communication – Pulse output		
Communication – Relay output		
Communication – 2.4 GHz radio frequency		
Communication – Modbus RS485		
Communication – M-bus, BACnet, LON		
Communication – Ethernet Modbus TCP		

Circuit breakers

Compact NSX 100-630A

Micrologic E

Compact NS 800-3200 A

Micrologic E

Micrologic P

Masterpact MTZ 630-6300A

Micrologic X

Refer to the online catalogs available at www.schneider-electric.com

Part numbers (e.g. A9MEM2000)	A9MEM - - - -			
	Compact NSX 100-630A	Compact NS 800-3200 A		Masterpact MTZ 630-6300A
IM code	IM 221	IM 200	IM 220	IM 221
Cost allocation (MID)	-	-	-	-
Energy Management – Active energy	Class 2	Class 2		Class 1
Energy Management – Partial meter				
Energy Management – Multi-tariff				
Energy Management – Bi-directional				
Energy Management – Reactive energy				
Power Monitoring – I, U, V, P, PF				
Power Monitoring – f				
Power Monitoring – Q, S				
Power Monitoring – Neutral current (I)				
Power Monitoring – Min./max. values				
Power Quality – THD				
Power Quality – Harmonics				Option
Asset Management – Overload alarm				
Asset Management – Loss of voltage alarm				
Asset Management – States/Status				
Asset Management – Type of trip				
Asset Management – Operating data				
Asset Management – Simple command				
Communication – Pulse output	Option	Option	Option	Option
Communication – Relay output				
Communication – 2.4 GHz radio frequency				
Communication – Modbus RS485	Option (IFM)	Option (IFM)	Option (IFM)	Option (IFM)
Communication – M-bus, BACnet, LON				
Communication – Ethernet Modbus TCP	Option (IFE)	Option (IFE)	Option (IFE)	Option (eIFE, IFE)

Measurement with external CTs

Meters with open CT

iEM3500

Rogowski flexible coils

Energy meters

iEM3200

Power meters

DIN rail mounted

PM3200

Part numbers (e.g. A9MEM3555)	METSEPM - - - -		
	3200	3250	3255
Accessories	CTs with 1A or 5A input		
IM code	IM 120	IM 221	IM 331
Cost allocation (MID)	-	-	Yes
Energy Management – Energy (4)	Class 0.5S		
Energy Management – Partial meter			
Energy Management – Multi-tariff	4	4	4
Energy Management – Bi-directional			
Energy Management – Reactive energy			
Energy Management – Load curves			
Power Monitoring – I, U, V, P, f, PF			
Power Monitoring – Q, S			
Power Monitoring – Neutral current (I)			
Power Monitoring – Min./max. values			
Power Monitoring – Logs, events			
Power Quality – THD		I/U to 15th	I/U to 15th
Power Quality – Harmonics			
Power Quality – Waveform capture			
Power Quality – Voltage dips/jumps			
Asset Management – Overload alarm			
Asset Management – Custom alarm		15	15
Communication – Pulse output		2DI/2DO	2DI/2DO
Communication – Relay/analog output			
Communication – Zigbee			
Communication – Modbus RS485			
Communication – M-bus, BACnet, LON			
Communication – Ethernet Modbus TCP			
Communication – Gateway/web pages			

Flush mounted

PM5100

Part numbers (e.g. A9MEM3555)	METSEPM - - - -		
	5100	5110	5111
Accessories	CTs with 1A or 5A input		
IM code	IM 221		
Cost allocation (MID)	-	-	Yes
Energy Management – Energy (4)	Class 0.5S		
Energy Management – Partial meter			
Energy Management – Multi-tariff			
Energy Management – Bi-directional			
Energy Management – Reactive energy			
Energy Management – Load curves			
Power Monitoring – I, U, V, P, f, PF			
Power Monitoring – Q, S			
Power Monitoring – Neutral current (I)			
Power Monitoring – Min./max. values			
Power Monitoring – Logs, events			
Power Quality – THD			
Power Quality – Harmonics	15th	15th	15th
Power Quality – Waveform capture			
Power Quality – Voltage dips/jumps			
Asset Management – Overload alarm			
Asset Management – Custom alarm	33	33	33
Communication – Pulse output			
Communication – Relay/analog output			
Communication – Zigbee			
Communication – Modbus RS485			
Communication – M-bus, BACnet, LON			
Communication – Ethernet Modbus TCP			
Communication – Gateway/web pages			

PM5300

Part numbers (e.g. A9MEM3555)	METSEPM - - - -					
	5310	5320	5330	5331	5340	5341
Accessories	CTs with 1A or 5A input					
IM code	IM 221					
Cost allocation (MID)	-	-	-	Yes	-	Yes
Energy Management – Energy (4)	Class 0.5S					
Energy Management – Partial meter						
Energy Management – Multi-tariff	4	4	4	4	4	4
Energy Management – Bi-directional						
Energy Management – Reactive energy						
Energy Management – Load curves						
Power Monitoring – I, U, V, P, f, PF						
Power Monitoring – Q, S						
Power Monitoring – Neutral current (I)						
Power Monitoring – Min./max. values						
Power Monitoring – Logs, events						
Power Quality – THD						
Power Quality – Harmonics	31st	31st	31st	31st	31st	31st
Power Quality – Waveform capture						
Power Quality – Voltage dips/jumps						
Asset Management – Overload alarm						
Asset Management – Custom alarm	35	35	35	35	35	35
Communication – Pulse output						
Communication – Relay/analog output			2	2	2	2
Communication – Zigbee						
Communication – Modbus RS485						
Communication – M-bus, BACnet, LON						
Communication – Ethernet Modbus TCP		1 port			1 port	1 port
Communication – Gateway/web pages	Web only	Web only	Web only	Web only	Web only	Web only

Flush mounted and/or DIN rail mounted

PM5500

PM8000 (3)

Part numbers (e.g. A9MEM3555)	METSEPM - - - -					
	5560	5561	5563 (DIN rail mounted with remote display (not supplied) (5))	8240	8243 (DIN rail mounted with remote display (not supplied) (5))	8244 (DIN rail mounted with remote display (supplied))
Accessories	CTs with 1A or 5A input			CTs with 1A or 5A input		
IM code	IM 332			IM 333		
Cost allocation (MID)	-	Yes	-	-	-	-
Energy Management – Energy (4)	Class 0.2S			Class 0.2S		
Energy Management – Partial meter						
Energy Management – Multi-tariff	8	8	8	4	4	4
Energy Management – Bi-directional						
Energy Management – Reactive energy						
Energy Management – Load curves						
Power Monitoring – I, U, V, P, f, PF						
Power Monitoring – Q, S						
Power Monitoring – Neutral current (I)						
Power Monitoring – Min./max. values						
Power Monitoring – Logs, events						
Power Quality – THD						
Power Quality – Harmonics	63rd	63rd	63rd	63rd	63rd	63rd
Power Quality – Waveform capture						
Power Quality – Voltage dips/jumps						
Asset Management – Overload alarm						
Asset Management – Custom alarm	52	52	52	255	255	255
Communication – Pulse output						
Communication – Relay/analog output				8	8	8
Communication – Zigbee						
Communication – Modbus RS485						
Communication – M-bus, BACnet, LON						
Communication – Ethernet Modbus TCP	2 ports	2 ports	2 ports	2 ports	2 ports	2 ports
Communication – Gateway/web pages						

Data communication

Web interfaces
Alarm monitoring, control, and display via smartphone

Acti 9 PowerTag Link C

Advanced Web interfaces
Alarm monitoring, control, display, and energy dashboard via smartphone or PC

Acti 9 Smartlink SI B

Acti 9 Smartlink SI D

Acti 9 Smartlink Modbus RS485

Communication gateway

Link 150

Energy server

Com'X 510

Part numbers	A9XELC10	A9XMZA08	A9XMWA20	A9XMSB11	EGX150	EBX510
Functions	Alarm monitoring/energy measurement	Alarm monitoring/energy consumption/control	Alarm monitoring/energy measurement	Alarm monitoring/energy consumption/control	Data collection/display	Data collection/compilation/display
Ethernet TCP/IP port	1 port	1 port	1 port		2 ports	2 ports
Ti24 port		7 channels		11 channels		
Digital/analog inputs		2 analog inputs				6 digital inputs, 2 analog inputs
Modbus RS485 port		8 slaves max.		1 port	32 slaves connected directly (or 247 indirectly)	32 slaves max.
Radio frequency link for PowerTag	20 PowerTag sensors max.	20 PowerTag sensors max.	20 PowerTag sensors max.			
Application – Configuration	eSetup (smartphone)	Ecoreach (PC)	Ecoreach (PC)	Ecoreach (PC)		
Application – Use	Facility Expert SB (smartphone)	Facility Expert, embedded Web pages and/or BMS	Facility Expert, embedded Web pages and/or BMS	Facility Expert, embedded Web pages and/or BMS		Embedded Web pages and/or BMS

(1) Other communication protocol: Replace the last two digits of the part number with "35" for M-bus (e.g. A9MEM2135). (2) Other communication protocols: Replace the last two digits of the part number with "35" for M-bus (e.g. A9MEM3235), "65" for BACnet (e.g. A9MEM3265), or "75" for LON (e.g. A9MEM3275).
(3) Power meters with embedded Web server. (4) If the measuring equipment is used with a current transformer (CT), the accuracy class depends on both the measuring device and the CT connection. (5) Remote display for PM5500 and PM8000 power meters: METSEPM89RD96

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