

Energy management

	Energy meter	Energy analyzer	Energy meters	
Types	EM10 DIN	EM11 DIN	EM21 72D/72V	EM21 72R
				
Dimensions HxWxD (mm)	90 x 18 x 67	90 x 18 x 67	72 x 72 x 65	72 x 72 x 65
Description	1-phase energy meter 1-DIN module	1-phase energy analyzer 1-DIN module	3-phase energy meter 4-DIN modules and 72 x 72 panel mounting	3-phase energy meter 4-DIN modules and 72 x 72 panel mounting
Function	kWh	V, A, Hz, W, Wdmd, var, PF, kWh, kvarh TRMS method	System: kWh, kvarh, W, var, PF, Hz, Phase sequence Single-phase: V _{LN} , V _{LL} , A, PF TRMS method	System: kWh, kvarh, W, var, PF, Hz, Phase sequence Single-phase: V _{LN} , V _{LL} , A, PF TRMS method
Input specifications				
Range code	120 VAC [AV7] 230 VAC [AV8] Ib: 5 A, Imax: 32 AAC	120 VAC [AV7] 230 VAC [AV8] Ib: 5 A, Imax: 32 AAC	120 / 230 VAC, 400 VAC In: 5 A; Imax: 6 A (72D) 3-phase by CTV current sensor (72V)	120 / 230 VAC, 400 VAC In: 5 A; Imax: 6 A 3-phase by included current sensor
Accuracy		±0.5% RDG (V, A)	±0.5% RDG (V, A)	±0.5% RDG (V) ±1% RDG (A)
Active energy	Class 1 (EN62053-21) Class B (EN50470-3)	Class 1 (EN62053-21) Class B (EN50470-3)	Class 1 (EN62053-21) Class B (EN50470-3)	Class 2 (EN62053-21) Class A (EN50470-3)
Reactive energy		Class 2 (EN62053-23)	Class 2 (EN62053-23)	
Display	LCD 5+1 DGT (energies)	LCD 4 DGT (inst. variables) 5+1 DGT (energies)	LCD 3 DGT (inst. variables) 6+1 DGT (energies)	LCD 3 DGT (inst. variables) 6+1 DGT (energies), LCD
Output specifications				
Pulse output	1-open collector	1-open collector	1 static opto-mosfet	1 static opto-mosfet
Alarm output		1-relay		
Communication			RS485 (2-wire, Modbus) M-BUS by means of VMU-B	RS485 (2-wire, Modbus) M-BUS by means of VMU-B
General specifications				
Power supply	Self power supply [X]	Self power supply [X]	Self power supply	Self power supply
Approvals / Marks	CE - cULus - MID (AV8)	CE - cULus - MID (AV8)	CE - cULus - MID (72D)	CE - cULus
References				
For ordering key details, please refer to www.productselection.net				

Energy management				
	Energy meter Energy analyzer EM210	Quick-fit dual energy meter EM270	3-phase current transformer TCD X	Panel adapter for energy meter EM200-96 Adapter
Types				
Dimensions HxWxD (mm)	72 x 72 x 65	72 x 72 x 65	TCD1X: 72 x 75 x 66.8 TCD2X: 72 x 105 x 50 TCD3X: 78 x 135 x 50	96 x 96 x 41.4
Description	3-phase energy analyzer 4-DIN modules and 72 x 72 panel mounting	3-phase energy analyzer 4-DIN modules and 72 x 72 panel mounting	3-phase current transformers for EM270 quick fit meter. Connection to the meter by means of RJ11 connector (included).	Adapter frame from 72x72 mm to 96x96 mm panel mounting. Installation by fixing brackets included in the meter.
Function	System: $\pm$ kWh, kvarh, W, var, PF, An, h-meter, Phase- sequence Single-phase: V_{LL} , V_{LN} , A, PF, THD (V,A, up to 16th H.) TRMS method	System: kWh, kvarh, kW, kvar Single-phase: kWh, W, W_{dmd} , $W_{dmd\ max}$, A, V_{LL} , V_{LN} Virtual sum of the two 3-phase or six 1-phase loads TRMS method	Suitable to be installed downstream the circuit breakers (same width). Automatic setting of the CT ratio in the meter	Suitable for EM210, EM270, EM271, EM280, EM21-72D, EM21-72R, EM21-72V
Input specifications				
Range	120 / 230 VAC, 400 VAC In: 5 A; I _{max} : 6 A	120 / 230 VAC, 400 VAC In: from 160 to 630 A by TCD X	TCD1X: 160 A TCD2X: 250 A TCD3X: 630 A	
Accuracy	$\pm 0.5\%$ RDG (V, A)	$\pm 0.5\%$ RDG (V, A)	Equivalent to class 0.5 (EN60044-1)	
Active energy	Class 1 (EN62053-21) Class B (EN50470-3)	Equivalent to Class 1 (EN62053-21)		
Reactive energy	Class 2 (EN62053-23)	Equivalent to Class 2 (EN62053-23)		
Display	LCD 3 DGT (inst. variables) 6+1 DGT (energies)	LCD 3 DGT (inst. variables) 6+1 DGT (energies)		
Output specifications				
Pulse output	1 static opto-mosfet	2 static opto-mosfet		
Communication	RS485 (2-wire, Modbus) M-BUS by means of VMU-B	RS485 (2-wire, Modbus)		
General specifications				
Power supply	Self power supply [X] Universal power supply 90-260 VAC/DC [PF](MID version)	Self power supply	n.a.	
Approvals / Marks	CE - cULus	CE - cULus	CE - cULus	CE
References				
For ordering key details, please refer to www.productselection.net				

Energy management

	Quick fit dual energy meter	3-phase current transformer	Quick fit 6-channel energy meter	6-channel current transformer block
Types	EM271	TCD M	EM280	TCD06BX
				
Dimensions HxWxD (mm)	72 x 72 x 65	TCD0M: 3 by 26 x 40 x 26, hole 9.6 TCD1M: 3 by 31 x 46 x 31, hole 15.5 TCD2M: 3 by 41 x 66 x 38, hole 15.5 TCD3M: 3 by 50 x 78 x 39, hole 20.5	72 x 72 x 65	TCD06BX: 118 x 53x 54 mm, hole 7 mm, hole centre distance 17.5 mm
Description	Quick fit energy analyzer with daisy chaining of voltage and serial connections and fast RJ connection of TCD M 3-phase split-core current sensors, for retrofit applications. Managing of two 3-phase or six 1-phase loads. 4-DIN modules and 72 x 72 panel mounting	3-phase split core current sensors for EM271 quick fit meter. Connection to the meter by means of RJ11 connector (included)	Quick fit energy analyzer with daisy chaining of voltage and serial connections and fast RJ connection of TCD06BX 6-channel current transformer block. Managing of two 3-phase or six 1-phase loads. 4-DIN modules and 72 x 72 panel mounting	6-channel current transformer block with hole centre distance 17.5 mm (same of miniature circuit breakers) for EM280 quick fit meter. Connection to the meter by means of RJ11 connector (included)
Function	System: kWh, kvarh, kW, kvar Single-phase: kWh, W, W _{dmd} , W _{dmd max} , A, V _{LL} , V _{LN} Virtual sum of the two 3-phase or six 1-phase loads TRMS method	Suitable to be installed in any existing installation. Automatic setting of the CT ratio in the meter	System: kWh, kvarh, kW, kvar Single-phase: kWh, W, W _{dmd} , W _{dmd max} , A, V _{LL} , V _{LN} Virtual sum of the two 3-phase or six 1-phase loads TRMS method	Suitable to be installed in any new and existing installation. Automatic setting of the CT ratio in the meter
Input specifications				
Range	120 / 230 VAC, 400 VAC In: from 60 to 400 A by TCD M	TCD0M: 60 A TCD1M: 100 A TCD2M: 200 A TCD3M: 400 A	120 / 230 VAC, 400 VAC In: 32 A by TCD06BX	TCD06BX: 32 A
Accuracy	±0.5% RDG (V, A)	Equivalent to class 1 (EN60044-1)	±0.5% RDG (V, A)	Equivalent to class 0.5 (EN60044-1)
Active energy	Equivalent to Class 1 (EN62053-21)		Equivalent to Class 1 (EN62053-21)	
Reactive energy	Equivalent to Class 2 (EN62053-23)		Equivalent to Class 2 (EN62053-23)	
Display	LCD 3 DGT (inst. variables) 6+1 DGT (energies), LCD		LCD 3 DGT (inst. variables) 6+1 DGT (energies), LCD	
Output specifications				
Pulse output	2 static opto-mosfet		2 static opto-mosfet	
Communication	RS485 (2-wire, Modbus)		RS485 (2-wire, Modbus)	
General specifications				
Power supply	Self power supply		Self power supply	
Approvals / Marks	CE	CE	CE	CE
References				
For ordering key details, please refer to www.productselection.net				

Energy management			
	Multifunction meter	Energy meter	Energy analyzer
Types	WM10 DIN	EM23 DIN	EM24 DIN
			
Dimensions HxWxD (mm)	90 x 72 x 67	90 x 72 x 67	90 x 72 x 67
Description	3-phase multifunction meter 4 DIN modules	3-phase energy meter 4 DIN modules	3-phase energy analyzer 4 DIN modules
Function	System: V_{LN} , V_{LL} , W, var, PF, Hz, phase sequence Single-phase: V_{LN} , V_{LL} , A, W, var TRMS method	System: kWh, kvarh, W, var, phase sequence Single-phase: A TRMS method	System: $\pm$ kWh, $\pm$ kvarh, V_{LL} , V_{LN} , var, VA, W_{dmd} , W, VA_{dmd} , Hz, hour counter, gas and water Max: A_{dmd} , W_{dmd} , VA_{dmd} Single-phase: V_{LL} , V_{LN} , A, W, var, VA, PF, kWh, kvarh TRMS method
Input specifications			
Range code	400 V_{LL} AC Ib: 10 A; I _{max} 65 A 3-phase	208 / 400 V_{LL} [AV2]; 400 V_{LL} [AV9] Ib: 10 A; I _{max} 65 A	120 / 208 V_{LL} [AV6]; 400 V_{LL} [AV5] In: 1 / 5 A, I _{max} : 10 AAC; 208/400 V_{LL} [AV2] 400 V_{LL} [AV9] Ib: 10 A, I _{max} : 65 AAC
Accuracy	$\pm 0.5\%$ RDG (V, A)	$\pm 0.5\%$ RDG (V, A)	$\pm 0.5\%$ RDG (V, A)
Active energy		Class 1 (EN62053-21) Class B (EN50470-3)	Class 1 (EN62053-21) Class B (EN50470-3)
Reactive energy		Class 2 (EN62053-23)	Class 2 (EN62053-23)
Display	LCD 3 x 3 DGT (inst. variables)	LCD 3 x 3 DGT (inst. variables) 6 +1 DGT (energies)	LCD 3x4 DGT (inst. variables) 8 DGT (energies)
Output specifications			
Pulse output		1-open collector	2-open collector / relay
Alarm output			2-relay / open collector
Communication		Modbus RTU (S1)	Modbus RTU (S1) / M-BUS (Mx) / Dupline (DP)
Inputs			3 digital input
General specifications			
Power supply	Self power supply	Self power supply	Self power supply [X]. Auxiliary power supply: 18 to 60 VAC / DC [L], 115 / 230 VAC [D], according to the model
Approvals / Marks	CE	CE - MID	CE - cULus (AV5 and AV6) - MID
References			
For ordering key details, please refer to www.productselection.net			

Energy management

	Energy meter	Energy analyzer	
Types	EM110	EM111	EM112
			
Dimensions HxWxD (mm)	90 x 18 x 63	90 x 18 x 63	90 x 36 x 63
Description	1-phase energy meter kWh 1-DIN module	1-phase energy analyser with Touch Tech technology 1-DIN module	1-phase energy analyser with Touch Tech technology 2-DIN modules
Function	kWh	V _{LN} , A, Hz, $\pm W$, W _{dmd} , W _{dmd max} , $\pm var$, PF, $\pm kWh$, $\pm kvarh$, kWh+ by tariff (2) TRMS method	V _{LN} , A, Hz, $\pm W$, W _{dmd} , W _{dmd max} , $\pm var$, PF, $\pm kWh$, $\pm kvarh$, kWh+ by tariff (2) TRMS method
Input specifications			
Range code	120 VAC [AV7] 230 VAC [AV8] Ib: 5 A, I _{max} : 45 AAC; 1-phase	120 VAC [AV7] 230 VAC [AV8] Ib: 5 A, I _{max} : 45 AAC; 1-phase	120 VAC [AV1] 230 VAC [AV0] Ib: 5 A, I _{max} : 100 AAC; 1-phase
Accuracy	n.a.	$\pm 0.5\%$ RDG (V, A)	$\pm 0.5\%$ RDG (V, A)
Active energy	Class 1 (EN62053-21) Class B (EN50470-3)	Class 1 (EN62053-21) Class B (EN50470-3)	Class 1 (EN62053-21) Class B (EN50470-3)
Reactive energy	n.a.	Class 2 (EN62053-23)	Class 2 (EN62053-23)
Display	Electromechanical 6+1 DGT (energy)	Backlit LCD with touch keypad 4 DGT (inst. variables) 7 DGT (energies)	Backlit LCD with touch keypad and supercapacitor backup (up to 48h) up to 2 x 4 DGT (inst. variables) 8 DGT (energies)
Output specifications			
Pulse output	1-open collector (O1)	1-open collector (O1)	1-open collector (O1)
Communication		Modbus RTU (S1) M-bus (M1)	Modbus RTU (S1) M-bus (M1)
Inputs		1 (dual tariff management)	1 (dual tariff management)
General specifications			
Power supply	Self power supply [X]	Self power supply [X]	Self power supply [X]
Approvals / Marks	CE - MID	CE - MID	CE - MID
References			
For ordering key details, please refer to www.productselection.net			

Energy management			
	Multifunction indicator	Power analyzers	
Types	WM12-DIN	WM14 DIN	WM14 Advanced
			
Dimensions HxWxD (mm)	90 x 108 x 64.5	90 x 108 x 64.5	90 x 108 x 64.5
Description	3-phase multifunction power indicator. 6-DIN modules	3-phase power analyzer. 6-DIN modules	3-phase power analyzer. 6-DIN modules
Function	System: V _{LL} , V _{LN} , An, VA, V _{Admd} , W _{dmd} , W, var, PF, Hz Max: A, W _{dmd} Single phase: V _{LL} , V _{LN} , A, VA, W, var, PF	System: kWh, kvarh, V _{LL} , An, PF, W, var, VA, W _{dmd} , V _{Admd} , Hz, hour meter Max: A, A _{dmd} , W _{dmd} Single phase: V _{LL} , V _{LN} , A, A _{dmd} , PF, W, var, VA	System: kWh, kvarh, V _{LL} , V _{LN} , An, PF, W, var, VA, W _{dmd} , V _{Admd} , Hz, hour meter; Max: W _{dmd} , V _{Admd} Single phase: V _{LL} , V _{LN} , A, A _{dmd} , PF, W, var, VA, THD (A, V) Max: V _{LN} , A, A _{dmd} , W Min: V _{LN} , A, PF
Input specifications			
Range code	400 / 660 V _{LL} / 5(6) AAC [AV5] 100 / 208 V _{LL} / 5(6) AAC [AV6]	400 / 660 V _{LL} / 5(6) AAC [AV5] 100 / 208 V _{LL} / 5(6) AAC [AV6]	400 / 660 V _{LL} / 5(6) AAC [AV5], 100 / 208 V _{LL} / 5(6) AAC [AV6]
Accuracy	±0.5% FS (V, A)	±0.5% FS (V, A)	±0.5% FS (V, A)
Active energy		class 1	class 1
Reactive energy		class 2	class 2
Display	LED 3x3-digit	LED 3x3-digit 8+1-digit (energies)	LED 3x3-digit 8+1-digit (energies)
Output specifications			
Pulse output			2 (open collector) [O]
Alarm output			2 (relays) with PLC-type control function on 16 variables (AND / OR) [R]
Communication	RS485 port (on request) [S]	RS485 port (on request) [S]	RS485 port (on request) [S]
General specifications			
Power supply	24 VAC [A], 48 VAC [B], 115 VAC [C], 230 VAC [D], 18 to 60 VDC [3]	24 VAC [A] 48 VAC [B] 115 VAC [C] 230 VAC [D] 18 to 60 VDC [3]	18 to 60 VAC / DC [L], 90 to 260 VAC / DC [H]
Approvals / Marks	CE - cURus	CE - cURus - cCSAus	CE - cURus - cCSAus
References			
For ordering key details, please refer to www.productselection.net			

Energy management

Multifunction meter

Power analyzers

Types

WM12 96



WM14 96 Basic/Profibus



WM14 96 Advanced



Dimensions HxWxD (mm)

96 x 96 x 46

96 x 96 x 46

96 x 96 x 46

Function

3-phase multifunction power indicator.
96 x 96 panel mounting

3-phase power analyzer
96 x 96 panel mounting

3-phase power analyzer.
96 x 96 panel mounting

Function

System: V_{LL} , V_{LN} , A, An, VA, V_{Admd} , W, W_{dmd} , var, PF, Hz
Max: A, W_{dmd}
Single phase: V_{LL} , V_{LN} , A, VA, W, var, PF

System: kWh, kvarh, V_{LL} , An, PF, W, var, VA, W_{dmd} , V_{Admd} , Hz, hour meter
Max: A, A_{dmd} , W_{dmd}
Single phase: V_{LL} , V_{LN} , A, A_{dmd} , PF, W, var, VA

System: kWh, kvarh, V_{LL} , V_{LN} , An, PF, W, var, VA, W_{dmd} , V_{Admd} , Hz, hour meter
Max: W_{dmd} , V_{Admd}
Single phase: V_{LL} , V_{LN} , A, A_{dmd} , PF, W, var, VA, THD
Max: V_{LN} , A, A_{dmd} , W
Min: V_{LN} , A, PF

Input specifications

Range code

400 / 660 V_{LL} / 5(6) AAC [AV5],
100 / 208 V_{LL} / 5(6) AAC [AV6]

400 / 660 V_{LL} / 5(6) AAC [AV5],
100 / 208 V_{LL} / 5(6) AAC [AV6]

400 / 660 V_{LL} / 5(6) AAC [AV5],
100 / 208 V_{LL} / 5(6) AAC [AV6]

Accuracy

$\pm 0.5\%$ FS (V, A)

$\pm 0.5\%$ FS (V, A)

$\pm 0.5\%$ FS (V, A)

Active energy

class 1

class 1

Reactive energy

class 2

class 2

Display

LED
3x3-digit

LED
3x3-digit
8+1-digit (energies)

LED
3x3-digit
8+1-digit (energies)

Output specifications

Pulse output

2 (open collector) [O]

Alarm output

2 (relays) with PLC-type control
function on 16 variables (AND / OR) [R]

Communication

RS485 port (on request) [S]

RS485 port (on request) [S]
Profibus DP port (on request) [DG]

RS485 port (on request) [S]

General specifications

Power supply

24 VAC [A],
48 VAC [B],
115 VAC [C],
230 VAC [D],
18 to 60 VDC [3]

24 VAC [A],
48 VAC [B],
115 VAC [C],
230 VAC [D],
18 to 60 VDC [3],
90 to 260 AC/DC [H]
DG version only

18 to 60 VAC/DC [L],
90 to 260 VAC/DC [H]

Approvals/Marks

CE - cURus

CE - cURus - cCSAus

CE - cURus - cCSAus
Advanced version [AX]

References

For ordering key details, please refer to www.productselection.net

Energy management

Energy analyzer

Modular power quality analyzers

Types	EM26 96	WM30 96	WM40 96
			
Dimensions HxWxD (mm)	96 x 96 x 61	96 x 96 x 50	96 x 96 x 50
Description	3-phase energy analyzer 96 x 96 panel mounting	3-phase modular power quality analyzer 96 x 96 panel mounting	3-phase modular power quality analyzer 96 x 96 panel mounting
Function	System: $\pm$ kWh, $\pm$ kvarh, V_{LL} , V_{LN} , var, VA, W, W_{dmd} , VA_{dmd} , VA, PF, Hz, THD, hour counter, gas and water Max: A_{dmd} , W_{dmd} , VA_{dmd} Single-phase: V_{LL} , V_{LN} , A, W, var, VA, PF, A_{dmd} , kWh, kvarh TRMS method	System: total/partial $\pm$ kWh and $\pm$ kvarh, V_{LN} , V_{LL} , VA, W, var, PF, Hz, THD (VA) Single phase: V_{LN} , V_{LL} , VA, A, An, W, var, PF, THD Phase-sequence-asymmetry loss	System: Total/partial $\pm$ kWh and $\pm$ kvarh (multi-tariff), V_{LN} , V_{LL} , VA, W, var, PF, Hz, THD, K-factor Single phase: V_{LN} , V_{LL} , VA, A, An (calculated or measured), W, var, PF, THD, TDD; Phase sequence-asymmetry-loss Load profile, event stamping, data logger, utility and hour counters
Input specifications			
Range code	120 / 208 V_{LL} [AV6], 400 / 660 V_{LL} [AV5] In: 1 / 5A, I _{max} : 10AAC	400 / 690 V_{LL} AC1(2)A [AV4] 400 / 690 V_{LL} AC5(6)A [AV5] 100 / 208 V_{LL} AC5(6)A [AV6] 100 / 208 V_{LL} AC1(2)A [AV7]	400 / 690 V_{LL} AC1(2)A [AV4] 400 / 690 V_{LL} AC5(6)A [AV5] 100 / 208 V_{LL} AC5(6)A [AV6] 100 / 208 V_{LL} AC1(2)A [AV7]
Accuracy	$\pm 0.5\%$ RDG (V, A)	$\pm 0.2\%$ RDG (V, A)	$\pm 0.2\%$ RDG (V, A)
Active energy	Class 1 (EN62053-21) Class B (EN50470-3)	Class 0.5 according to EN62053-21 Class C according to EN50470-3	Class 0.5 according to EN62053-21 Class C according to EN50470-3
Reactive energy	Classe 2 (EN62053-23)	class 2 according to EN62053-23	class 2 according to EN62053-23
Display	LCD 3x4-digit (inst. variables) 8-digit (energies)	LCD 4x4-digit backligh 9+1-digit (energies)	LCD 4x4-digit backligh 9+1-digit (energies)
Output specifications			
Pulse output	3-open collector [O3] / relay [B2]	Up to 2 digital output modules	Up to 8 digital outputs
Alarm output	2-relay [R2] / open collector [O3]	Up to 4 freely configuration virtual alarms	Up to 16 freely configuration virtual alarms
Communication	RS485 (2-wire) [S1] M-BUS by means of VMU-B	Modbus RS485/232 port + RTC [S1], BACnet SMTP [B3] Modbus TCP Ethernet port [E2], BACNet-IP [B1], Ethernet/IP [E6]	Modbus RS485/232 port + RTC [S1], BACnet SMTP [B3] Optical port (ANSI type 2) Modbus TCP Ethernet port [E2], BACNet-IP [B1], Ethernet/IP [E6]
Analogue output		up to 2	up to 8
Inputs	3 digital inputs [I3]		up to 6 digital inputs
General specifications			
Power supply	18 to 60 VAC/DC [L] 90 to 260 VAC/DC [H]	18 to 60 VAC/DC [L] 90 to 260 VAC/DC [H]	18 to 60 VAC/DC [L] 90 to 260 VAC/DC [H]
Approvals / Marks	CE - cULus - MID (only H)	CE - cULus	CE - cULus
References			
For ordering key details, please refer to www.productselection.net			

Energy management

	Modular power quality analyzers		Modular power quality transducer
Types	WM3 96	WM5 96	PQT H
			
Dimensions HxWxD (mm)	96 x 96 x 124	96 x 96 x 124	90 x 90 x 140
Description	3-phase modular power quality analyzer 96 x 96 panel mounting	3-phase modular smart power quality analyzer 96 x 96 panel mounting	3-phase modular smart power quality transducer 96 x 96 panel mounting
Function	System: total/partial $\pm$ kWh, $\pm$ kvarh (4 tariff), V_{LN} , V_{LL} , An, VA, VA_{dmd} , W, W_{dmd} , var, PF, Hz, THD Single phase: V_{LN} , V_{LL} , A, W, var, PF, THD	System: kWh, kvarh, V_{LN} , V_{LL} , An, W, var, VA, PF, Hz Single-phase: V_{LN} , V_{LL} , A, W, var, VA, PF, THD THD and single H up to the 63rd H (V, A)	System: kWh, kvarh, V_{LN} , V_{LL} , An, W, var, VA, PF, Hz Single-phase: V_{LN} , V_{LL} , A, W, var, VA, PF, THD THD and single H up to the 63rd H (V, A)
Input specifications			
Range code	400 VAC-1/5 AAC [AV5] 690 VAC-1/5 AAC [AV7]	120/208 V_{LL} [AV6], 400/690 V_{LL} [AV5] In: 1/5A, I _{max} : 10 AAC	120/208 V_{LL} [AV6], 400/690 V_{LL} [AV5] In: 1/5A, I _{max} : 10 AAC
Accuracy	$\pm 0.5\%$ RDG (V, A)	$\pm 0.2\%$ RDG (V, A)	$\pm 0.2\%$ RDG (V, A)
Active energy	1 (kWh)	Class 0.5 (EN62053-22)	Class 0.5 (EN62053-22)
Reactive energy	2 (kvarh)	Class 2 (EN62053-23)	Class 2 (EN62053-23)
Display	Matrix LCD 4x4-digit (instantaneous variables) 4x9-digit (energies)	Matrix LCD 4x4-digit (instantaneous variables) 4x9-digit (energies)	
Output specifications			
Pulse output	Up to 2 single / dual open collector or relay modules	Up to 16, by: single / dual or quadruple open collector or relay modules	Up to 16, by: single / dual or quadruple open collector or relay modules
Alarm output	Up to 2 single / dual open collector or relay modules	Up to 16, by: single / dual or quadruple open collector or relay modules	Up to 16, by: single / dual or quadruple open collector or relay modules
Communication	RS 422 / 485 port RS232 port + RTC	RS422 / 485, RS232+RTC modules. Optical port (ANSI C12.18/Modbus) Internet / Ethernet comm. with WEB server capability [E2]	RS422 / 485, RS232+RTC modules. Optical port (ANSI C12.18/Modbus) Internet / Ethernet comm. with WEB server capability [E2]
Analogue output	Up to 2 single / dual analog output modules	Up to 8, by single / dual (mA/V) output modules	Up to 8, by single / dual (mA/V) output modules
Inputs	Up to 3 digital inputs	Up to 12 (W_{dmd} , VA_{dmd} sync.; tariff, contact status reading)	Up to 12 (W_{dmd} , VA_{dmd} sync.; tariff, contact status reading)
General specifications			
Power supply	18 to 60 VAC/DC [L] 90 to 260 VAC/DC [H]	18 to 60 VAC/DC [L], 90 to 260 VAC/DC [H]	18 to 60 VAC/DC [L], 90 to 260 VAC/DC [H]
Approvals / Marks	CE - cURus - CSA	CE - cURus - CSA	CE - cURus - CSA
References			
For ordering key details, please refer to www.productselection.net			

Energy management				
	Compact transducers		DC energy analyzers	
Types	CPT DIN	CPT DIN Advanced	VMU-E	VMU-X
				
Dimensions HxWxD (mm)	83.5 x 45 x 98.5	83.5 x 45 x 98.5	1-DIN module	1-DIN module
Description	3-phase compact power transducer	3-phase compact power transducer	DC energy analyzer: V, A, W, kWh	Power supply module for VMU-E unit
Function	4-digit data format instantaneous variable, 8+1-digit format energy variables, 5+2-digit data format hours TRMS method System: kWh, kvarh, V _{LL} , A _n , PF, W, var, VA, W _{dmd} , VA _{dmd} , Hz, hour meter Max: W _{dmd} Single-phase: V _{LL} , V _{LN} , A, A _{dmd} , PF, W, var, VA	4-digit data format instantaneous variable, 8+1-digit format energies, 5+2-digit format hours TRMS method System: kWh, kvarh, V _{LL} , V _{LN} , A _n , PF, W, var, VA, W _{dmd} , VA _{dmd} , Hz, hour Max: W _{dmd} , VA _{dmd} Single-phase: V _{LL} , V _{LN} , A, A _{dmd} , PF, W, var, VA, THD, (A, V) Max: V _{LN} , A, A _{dmd} , W Min: V _{LN} , A, PF		
Input specifications				
Range code	120 / 208 VAC [AV6], 400 / 690 VAC [AV5], 1 AAC and 5 AAC	120 / 208 VAC [AV6], 400 / 690 VAC [AV5], 1 AAC and 5 AAC	400 VDC 20 A [AV00] (up 1000 A with external shunt) 400 VDC 1000 A [AV10] (by 10 V current sensor)	
Accuracy	±0.5% RDG (A,V)	±0.5% RDG (A,V)	±0.5% RDG (V, A)	
Active energy	kWh: class 1	kWh: class 1 (EN62053-21)	Class 1	
Reactive energy	kvarh: class 2	kvarh: class 2 (EN62053-23)		
Display			LCD 6 digits	
Output specifications				
Pulse output		2 (open collector) [O2]		1 opto-mosfet
Alarm output		2 (relays) with PLC-type control function on 16 variables (AND / OR) [R2]		1 opto-mosfet
Communication	RS422/485 [S1], RS232 [S2]	RS422/485 [S1], RS232 [S2]		RS485 Modbus RTU
Analogue output		Up to 3: 20 mA [A1-3], 10 VDC [V1-3]		
General specifications				
Power supply	18 to 60 VAC/DC [L], 90 to 260 VAC/DC [H]	18 to 60 VAC/DC [L], 90 to 260 VAC/DC [H]	Self power supply through VMU-X unit [X]	38 to 265 VAC/DC [X]
Approvals / Marks	CE - cURus - CSA	CE - cURus - CSA	CE	CE
References				
For ordering key details, please refer to www.productselection.net				