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Metering

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Metering



Energy meters

E-1/9



Multifunction meters

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Power monitoring systems

E-5...6/13...16



Panel-mount digital meters

E-8/19



Panel-mount analogue meters

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Current transformers

E-20...25



DMED110T1



DMED120T1



DMED330



DMECD

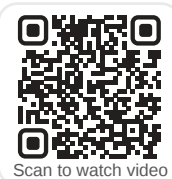
EXM1001

Digital meters with LCD screen

DMED series of energy meters are digital instruments for the measurement of electrical energy consumption in single and three-phase systems with direct connection or via a current transformer (CT).

Expandable versions of the DMED models are available including a range of expansion modules for communication and I/O etc.

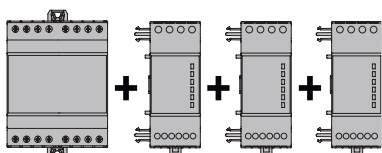
Typical applications include energy monitoring of individual units in shopping centres, apartments, marinas and factories.



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type	input current	description	static pulse output	width in 18 mm	price
Single-phase direct connection 40/63A (modular design DIN-rail mountable)					
		- Rated supply voltage: 220...240 VAC -20...+15% - Input current: 40/63A (direct connection) - Active energy: Class 1 (IEC/EN 62053-21) - Reactive energy: Class 2 (IEC/EN 62053-23)			
		Multi-measurements: Total and partial active, reactive energy, active, reactive power, voltage, current and power factor, hour counter (exclude DMED100T1)			
DMED100T1	40A	direct conn. pulse digital energy meter	1	1	1 370.00
DMED110T1	40A	direct conn. static digital energy meter	1	1	1 560.00
DMED111	40A	as above with RS-485 interface	—	1	1 800.00
DMED120T1	63A	direct connection digital energy meter	1	2	1 880.00
DMED121	63A	as above with RS-485 interface	—	2	2 940.00
DMED130LM	63A	includes EXM1001 module	—	4	5 860.00
Three-phase direct connection 80A (modular design DIN-rail mountable)					
		Multi-measurements: Total and partial active and reactive energy, voltage, current, active and reactive power, power factor, hour counter			
		- Graphic backlit LCD screen with 6+1 digits - Tariff selection (2 tariffs)			
DMED300T2	80A	3-ph+N digital energy meter	2	4	4 180.00
DMED311	80A	as above with RS-485 interface	—	4	4 540.00
Three-phase CT connection .../5A (modular design DIN-rail mountable)					
		Multi-measurements: Total and partial active and reactive energy, voltage, current, active and reactive power, power factor, hour counter			
		Backlit LCD screen (128 x 80 pixels)			
DMED310T2*	5A	3-phase digital energy meter	2	4	4 780.00
DMED330	1/5A	as above with RS-485 interface	—	4	4 940.00
* Accepts EXM... (up to 3) plug-in optic expansion modules					
Data concentrator (modular design DIN-rail mountable)					
		DMECD data concentrator designed in combination with energy meters, permitting connection to (up to 8) devices. The concentrator is able to count static pulse outputs from the connected energy meters, storing data for viewing on its display or directly on a PC through the built-in RS-485 port.			
		- Graphic backlit LCD screen (128 x 80 pixels) 8 inputs for pulse count, expandable up to 14 using EXM... type expansion modules 8 total and 8 partial energy meters - Built-in RS-485 interface (Modbus-RTU or ASCII) - Expandable with EXM... (up to 3) plug-in optic expansion modules (below)			
DMECD		data concentrator for up to 8 connected energy meters	—	4	7 940.00
Expansion modules for DMED310T2, DMECD, DMG300 (DIN-rail mountable)					
EXM8004		sealable terminal cover for DMG100/110/200/210/300	—		141.00
EXM1001		2 opto-isolated digital inputs and 2 relay outputs (5A 250 VAC)	2		4 080.00
EXM1002		4 opto-isolated digital inputs and 2 relay outputs (5A 250 VAC)	2		7 130.00
EXM1010		opto-isolated USB interface	2		4 080.00
EXM1012		opto-isolated RS-485 interface	2		3 930.00
EXM1013		opto-isolated Ethernet interface	2		6 590.00
EXM1020		opto-isolated RS-485 interface and 2 relay outputs (5A 250 VAC)	2		5 840.00
EXM1030		data storage, clock-calendar (RTC) with backup for data logging	2		9 520.00

→ Maximum combination for DMED310T2



Multifunction meters



DMG100



DMG200



DMG300



PMVF81

DMG series digital multifunction meters and power analysers are equipped with a digital LCD providing extremely clear, intuitive and flexible viewing of all electrical parameters in an installation.

- Modular DIN-rail mounting (*aligns with standard MCB 45 mm cut-out*)
- Accuracy:

Voltage/Current:	±0.5%	(True RMS measurements)
Power:	±1% f.s.	
Frequency:	±0.05%	
Active energy:	Class 1 (IEC/EN 62053-21)	
Reactive energy:	Class 2 (IEC/EN 62053-23)	

Main measurements:

- Voltage: phase, line and system values
- Current: phase values (*neutral current calculated*)
- Power: apparent, active and reactive phase and total values
- Power Factor (PF) per phase and total
- HIGH-LOW-AVERAGE value functions of all measurements
- Maximum demand of power and current values
- Asymmetric voltage and current
- Energy meters for active, reactive and apparent values
- Bidirectional (*import and export of active reactive energy*)

type	description	width in 18 mm	price
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DMG100 series - LCD multifunction meters *economical with icon LCD*

- Auxiliary power supply: 100...240 VAC / 120...250 VDC
- Input current: CT - 1A or 5A
- Voltage measurement: 50 - 720 VAC L-L
- Harmonic analysis of V and I up to the 15th order

DMG100	modular power analyser	4	4 190.00
DMG110	modular power analyser with RS-485 interface	4	4 890.00

DMG200 series - LCD multifunction meters *with graphic backlight LCD*

As above **DMG100** but with following additional features:

- Voltage measurement: 20...830 VAC L-L

DMG200	modular power analyser	4	6 990.00
DMG210	modular power analyser with RS-485 interface	4	9 080.00

DMG300 series (expandable) *with graphic backlight LCD*

As above **DMG200** but with following additional features:

- Voltage measurement: 20...830 VAC L-L / 10...480 VAC L-N
- Optional communication ports: USB, RS-485, Ethernet
- Harmonic analysis of voltage and current up to the 31st order
- Accuracy:

Voltage/current:	±0.2%
Power/power factor:	±0.5%
Frequency:	±0.05%
Active energy:	class 0.5S (IEC/EN 62053-22)

DMG300*	modular power analyser	4	10 500.00
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* Accepts EXM...(up to 3) plug-in optic expansion modules, see page E-1

Photovoltaic (PV) interface protection unit *(modular DIN-rail mount)*

Designed to ensure that the PV system operates within the required safety parameters and the system from the grid if any anomalies are detected.

These devices continuously monitor the voltage and frequency of the electrical utility and when either the voltage or the frequency are out of the admissible limits, they step in by de-energising a relay output so that an interface switch (IS) (e.g. *contactor*) opens, isolating the PV system from the grid.

- Programmable voltage rating, voltage thresholds, frequency and delays
- Supports EXM series expansion modules (USB, RS-232, RS-485 and Ethernet)
- Compliant standards: VDE-AR-N , VDE-AR-N 4110, VDE-AR-N 4120x, IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-4

type	aux. power supply	inputs	outputs	description	width in 18 mm	see Cat B for pricing.
PMVF81	24 - 240 VAC/DC	5	3	PV grid protection module	4	

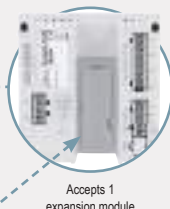
Multifunction meters



DMG620



DMG611...



Accepts 1 expansion module



EXP1004

Flush mounting digital metering instruments (96 x 96 mm)

DMG range of digital multifunction meters are capable of viewing electrical measurements with high accuracy, permitting complete monitoring of networks.

The meters feature an extended power supply voltage range, high measurement accuracy, expandability and a graphic interactive interface that is easy to use.

Main measurement functions include:

- Voltage: phase, line and system values
- Current: phase values (neutral current calculated) via CT 1/5A
- Power: apparent, active and reactive phase and total values
- Power Factor (PF) per phase and total
- Frequency of measured voltage value
- HIGH-LOW-AVERAGE value functions for all measurements
- Maximum demand of power and current values
- Voltage and current asymmetry
- Total harmonic distortion (THD): voltage and current
- Harmonic analysis of voltage and current up to the 15th order
- Energy meters for active, reactive, apparent partial and total values
- Hour counter for programmable total and partial hours

type	comm. port	optical port	description	expansion slots	price
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DMG500 series - "Basic" multi-measurement instrument with backlit LCD

Auxiliary power supply:	100...240 VAC
Voltage measurement range:	480 VAC (50/60 Hz)

DMG500	no	no	digital panel-mount power analyser	—	3 640.00
DMG510	RS-485	no	digital panel-mount power analyser	—	4 190.00

DMG600 series - Multi-measurement instrument with backlit LCD

As above **DMG 500** but with following additional features:

Auxiliary power supply:	100...440 VAC / 110...250 VDC
Voltage measurement:	50...720 VAC L-L
Rated input current:	By external CT 5A or 1A
Memory:	Non volatile memory for data storage
Display:	Wide graphic LCD
Expansion:	Accepts 1 plug-in expansion module
Measurement accuracy:	DMG600/610 - voltage/current +/- 0.5s - Active energy Class 1 DMG615/620 - voltage/current +/- 0.2s - Active energy Class 0.5

DMG600	no	yes	digital panel-mount power analyser	1	4 540.00
DMG610	RS-485	yes	digital panel-mount power analyser	1	5 240.00
DMG615	RS-485	yes	digital panel-mount power analyser	1	6 640.00
DMG620	Ethernet	yes	digital panel-mount power analyser	1	8 910.00

DMG611 series - Supplied with calibrated Rogowski coils

- Current reading: Through 3 Rogowski coils (*included*)
- Measurement range: 5...100% I_{max}

DMG611R0500	RS-485	yes	25...500A	power analyser with Rogowski coils	1	23 800.00
DMG611R3000	RS-485	yes	100...3000A	power analyser with Rogowski coils	1	25 500.00

Expansion modules and accessories for above DMG series**Inputs and outputs**

EXP1000	4 digital opto-isolated inputs				2 310.00
EXP1001	4 static opto-isolated outputs				2 310.00
EXP1002	2 digital inputs and 2 static outputs, opto-isolated				2 760.00
EXP1003	2 output relays (5A 250 VAC)				2 760.00
EXP1004	2 analog opto-isolated inputs	0/4 - 20mA or 0-5/10V	(for DMG75/8/9000)		8 280.00
EXP1005	2 analog opto-isolated outputs	0/4 - 20mA or 0-5/10V	(for DMG75/8/9000)		8 280.00

Communication ports

EXP1010	opto-isolated USB interface				4 140.00
EXP1011	opto-isolated RS-232 interface				4 140.00
EXP1012	opto-isolated RS-485 interface				2 090.00
EXP1013	opto-isolated Ethernet interface				5 130.00
EXP1014	opto-isolated Profibus-DP interface		(for DMG75/8/9000)		17 200.00

Communication devices

CX01	USB/optical communication device for programming, download and diagnostics				4 160.00
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DMG SERIES POWER ANALYSER



- **WIDESCREEN** COLOUR LCD
- HIGH ACCURACY LEVEL FOR **MEASUREMENTS**
- INTEGRATED COMMUNICATION
- NFC CONFIGURATION
- VOLTAGE AND CURRENT HARMONIC ANALYSIS UP TO THE **63rd ORDER**
- **STATISTICS** ACCORDING TO **EN 50160**
- INTEGRATED DATA **MEMORY**
- **WEB SERVER**
- **NFC CONFIGURATION**



Comparative table

	DMG7000	DMG7500	DMG8000	DMG9000
Built-in RS485 port	-	■	-	■
Built-in Ethernet port (with web-server)	-	-	■	■
Ethernet-RS485 gateway function	+ EXP1013 + EXP1012	+ EXP1013	+ EXP1012	■
Memory for data collection	-	-	■	■
Statistics of network quality according to EN50160	-	-	-	■
Neutral current measurement through dedicated CT	-	-	-	■
Neutral-Earth voltage measurement	-	-	-	■
Compatibility with EASY BRANCH power monitoring system	-	■	■	■

Digital power analysers



DMG...



Embedded Web-Server



DMG9000 + CX01

Power analysers with widescreen colour LCD (flush mounting: cut-out 92 x 92 mm)

DMG series of power analysers display electrical values on their large colour LCD with exceptional accuracy for the optimal view of measurements and parameters in a clear, simple and intuitive way.

- Wide colour screen LCD: 4.3" Widescreen (H) 96 x (W) 118 mm colour LCD permits optimal indication of measures and parameters
- Programmable LEDs: 3 programmable front LEDs provide device status at a glance
- NFC configuration: Programmable via NFC (Near Field Communication) or optical ports
- PLC logic: Perform simple automation with built-in PLC logic functionality via **Xpress**
- Communication: Availability of models with built-in RS485 and Ethernet communication ports
- Expandability: Expandable with up to 3 EXP... series expansion modules (*additional inputs, outputs and communication ports*)
- High accuracy level for measurements: Measurements are verified according to the recognised Intl. standards: IEC 62053-22 (class 0.5s), IEC 62053-24 (class 1) and IEC 61557-12

Measures and displays

- Frequency
- Voltage (*phase, phase-to-phase and system*)
- Measurements on 4 quadrants
- Power (*active, reactive and apparent phase and total power*)
- Power factor (*phase and total*)
- Maximum (HIGH), minimum (LOW) and average (AVERAGE) of all measured values
- Phase current (calculated neutral current and measured neutral current on the **DMG9000...**)
- Peak power/current (*max demand*)
- Voltage and current asymmetry and active power unbalance
- Total harmonic distortion (*voltage and current*)
- Voltage and current harmonic analysis up to the 63rd order
- Active, reactive and apparent energy metering (*partial and total*)
- Hour meter (*total and partial, programmable*)

Operational characteristics

- Auxiliary power: 100...240 VAC / 110...250 VDC
- Voltage measurement range: 40...830 VAC L-L / 5...480 VAC L-N
- Nominal input current: 5A or 1A with an external CT
- Frequency measurement range: 45...66Hz, 360...440Hz
- Protection rating: IP65 for front panel
- Communications protocols: Modbus-RTU, ASCII and TCP
- Integrated communications ports (RS485 or Ethernet)
- Integrated data memory (DMG8000, DMG9000)

Web server functional (DMG8000 and DMG9000)

In addition to having built-in data memory the **DMG8000** and **DMG9000** host an embedded web-server functionality, making it possible to access the devices remotely through a browser.

Setting of all parameters:

- Programming of all parameters can be done through the browser or front panel

Web server and data memory:

- Select measures to be recorded (*up to 128*)
- Set the sampling frequency of historical data
- Download reports (.CSV file) with the acquired information
- Sampling 20 measures within a minute, provides 10 days of historical data

Measurement view:

- Representation of the measured values by means of tables and charts



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type	comm. port	description	expansion slots	price
DMG7500 - Power analyser with built-in RS-485 ① IP65				
• Compatible with EASY BRANCH power monitoring system				
DMG7500	RS-485	digital panel-mount power analyser	3	8 600.00
DMG8000 - Power analyser with built-in Ethernet and Web Server ① IP65				
• Web Server and memory for data collection				
• Compatible with EASY BRANCH power monitoring system				
DMG8000	Ethernet / Web Server	digital panel-mount power analyser	3	14 800.00
DMG9000 - Power analyser with built-in Ethernet and RS-485 ① IP65				
As above DMG8000 but with following additional features:				
• Statistics of network quality according to EN50160				
• Neutral current measurement through dedicated CT				
• Neutral-Earth voltage measurement				
DMG9000	Ethernet + RS-485	digital panel-mount power analyser	3	20 300.00
Communication devices				
CX01	USB/optical communication device for programming, download and diagnostics			4 160.00

Digital power analysers

EASY BRANCH POWER MONITORING SYSTEM / PLUG & PLAY

When the parameters of several loads have to be monitored, **EASY BRANCH** power monitoring system is a more efficient and simpler alternative to install than traditional systems which requires an independent instrument for each measuring point.

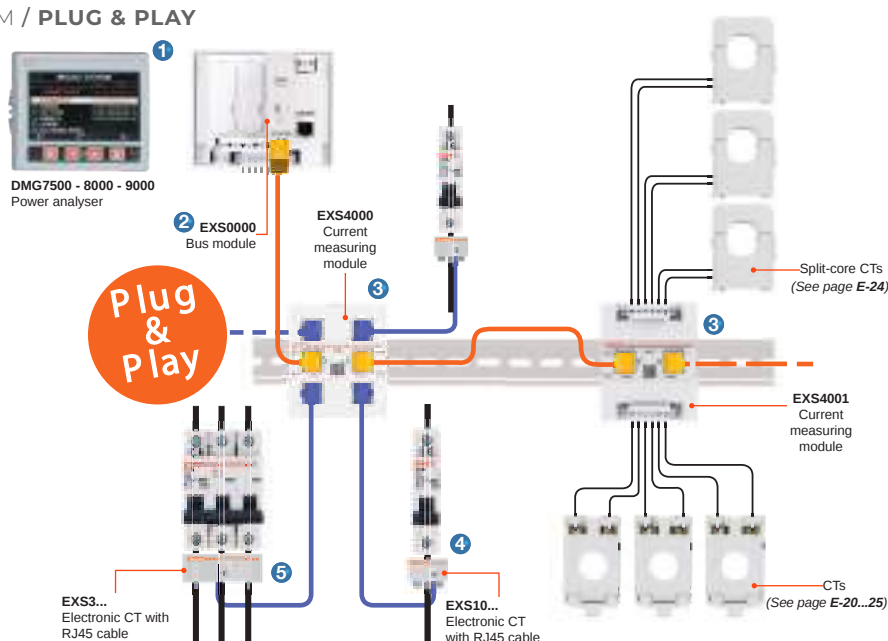
Distribution panels in shopping centres or in the departments of a production facility represent ideal applications for **EASY BRANCH** system.

Advantages:

- 4 components needed
- Reduction of wiring times
- Setting time reduction
- No special cables needed
- Measurement accuracy



Scan to watch video



EASY BRANCH - Power monitoring system

EASY BRANCH multi-circuit metering system is a modern solution to monitoring more than one load within a single electrical enclosure. Each DIN-rail mounting current metering unit can monitor 2 or 4 measurement points and display the values on the **DMG7500**, **DMG8000** or **DMG9000** power analysers to which it is connected, thus centralising the display of data.

- Up to 33 three-phase loads or 99 single-phase loads
- Current measuring modules are automatically recognized
- Uses standard ethernet cable (Cat6) - cable not supplied (for RJ45 cables refer to **E-15**)

type	inputs	description	price
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Bus module - Expansion module for **DMG7500 / 8000 / 9000** ②

Installed in one of the expansion slots of the power analyser, accepts up to 8 current measuring modules (**EXS4...**). When connecting 5 or more **EXS4...** current models. (bus module requires an additional 24 VDC - 200mA power supply)

EXS0000	bus module for EASY BRANCH power monitoring system	4 410.00
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Current measuring modules - Connects to bus module using ethernet cable (Cat6) ③

The module collects the measurements of loads monitored by either electronic (**EXS4000**) or traditional (**EXS4001**) current transformers.

EXS4000	4	current measuring module for electronic RJ45 CTs	10 900.00
EXS4001	6	current measuring module for traditional CTs	9 980.00

For traditional CTs, see *Current Transformers*

Electronic current transformers - For use with **EXS4000**

The Electronic current transformers are designed to be installed immediately downstream from the circuit breakers. The diameter and pitch of the pass through holes have been designed in line with MCBs.

- Integrated 2 meter RJ45 cable for fast and fail-safe installation

type	current	dia. Ø	pitch (mm)	description	cable length	price
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Single-phase ④

EXS1032	32A	7.8	7 mm	single-phase electronic CT	2m	2 060.00
EXS1063	63A	7.8	7 mm	single-phase electronic CT	2m	2 060.00
EXS1080	80A	12.2	12 mm	single-phase electronic CT	2m	2 060.00
EXS1125	125A	12.2	12 mm	single-phase electronic CT	2m	2 060.00

Three-phase ⑤

EXS3032	32A	7.6	18 mm	three-phase electronic CT	2m	3 610.00
EXS3063	63A	7.6	18 mm	three-phase electronic CT	2m	3 610.00
EXS3080	80A	12.2	27 mm	three-phase electronic CT	2m	3 610.00
EXS3125	125A	12.2	27 mm	three-phase electronic CT	2m	3 610.00

DIN-mount digital meters



DMK80R1



DMK81R1



DMK83R1



DMK75R1

DMK series - Modular digital monitoring devices**General features:**

- Modular DIN-rail mounting (3 modules – 54 mm wide)
- Auxiliary supply: 220 - 240 VAC
- Memorises minimum and maximum measured values (since last reset)
- Instantaneous or preset trip delays (0 - 900sec)

Additional features:

- One changeover relay output (8A 250 VAC)
- Degree of protection: IP40 on front; IP20 on terminals
- Relay output with control and protection functions DMKxxR1
- Measurements are True RMS values (reliable operation even in the presence of harmonics)
- Compliant with standards: IEC/EN/BS61010-1, IEC/EN/BS61000-6-2, IEC/EN/BS61000-6-3

type	description		monitored range	price
Voltage monitors		(measures and displays single and three-phase voltages)		
Overvoltage range:	Off / 102...120%	(delay 0 - 900sec)		
Undervoltage range:	Off / 70...98%	(delay 0 - 900sec)		
Voltage/phase loss or failure:	Off / 5...85%	(delay 0 - 900sec)		
Programmable VT ratio :	1.00...500.0 (accuracy: ±0.25% f.s. ±1digit)			
DMK80R1	1-phase	over/under voltage meter/monitor	15 - 660 VAC	2 880.00
DMK70R1	3-phase	over/under voltage meter/monitor	15 - 660 VAC	3 200.00
DMK70	3-phase	voltage meter/monitor	15 - 660 VAC	1 770.00
Current monitors		(measures and displays single and three-phase currents)		
Measurement range:	0.05...5.75A	(CT ratio: 5...10.000) ±0.5%		
Overcurrent range:	Off / 102...200%	(delay 0 - 900sec)		
Undercurrent range:	Off / 5...98%	(delay 0 - 900sec)		
Instantaneous tripping:	Off / 110...600%			
DMK81R1	1-phase	over/under current meter/monitor	0.05 - 5.75A	2 990.00
DMK71R1	3-phase	over/under current meter/monitor	0.05 - 5.75A	3 450.00
Frequency monitors		(measures and displays line frequency)		
Measurement range:	15...660V / 50...60 Hz (±10%)			
DMK83R1	frequency meter/monitor		45 - 65Hz	3 930.00
Three-phase multi-measurement instrument				
Measurement range:				
– Voltage	Phase loss or failure:	Off / 5...85%	35...660 VAC	
	Maximum voltage:	Off / 102...120%		
	Minimum voltage	Off / 70...98%		
	Asymmetry:	Off / 2...20%		
– Current	Phase sequence:	Off / L1-L2-L3 / L3-L2-L1	0.05...5.75A	
	Current loss:	Off / 2...100%		
	Maximum current:	Off / 102...200%		
	Minimum current:	Off / 5...98%		
– Power	Maximum current instantaneous trip:	Off / 110...600%		
	Rated power:	1...10 000 kW		
	Maximum power:	Off / 101...200%		
	Max power instantaneous trip:	Off / 110...600%		
– Frequency	Minimum power:	Off / 10...99%		
	Maximum frequency:	Off / 101...110%		
	Minimum frequency:	Off / 90...99%		
DMK75R1	3-phase	multi-measurement digital meter/monitor		4 860.00

Panel-mount digital meters



DMK00R1



DMK10R1



DMK01R1



DMK11R1

DMK series - Panel-mount digital monitoring devices

General features:

- Panel-mount (H) 48 x (W) 96 mm
- Auxiliary supply: 220 - 240 VAC
- Memorises minimum and maximum measured values (*since last reset*)
- Instantaneous or preset trip delays (0 - 900sec)

Additional features:

- One changeover relay output (8A 250 VAC)
- Degree of protection: IP54 on front; IP20 on terminals
- Relay output with control and protection functions DMKxxR1
- Measurements are True RMS values (*provide for reliable operation even in the presence of harmonics*)
- Compliant with standards: IEC/EN/BS61010-1, IEC/EN/BS61000-6-2, IEC/EN/BS61000-6-3 and UL 508

type	description	output	monitored range	price
Voltage monitors (panel-mounting 48 x 96 mm)				
Voltage measurement range: 15...660 VAC Operating frequency range: 45...65Hz Programmable VT ratio: 1.00...500.0 Accuracy: $\pm 0.25\%$ f.s. ± 1 digit Output: 1 c/o relay output (8A - 250 VAC) time delay Settings: – Voltage loss or failure: 5...85% (0 - 900sec) – Maximum voltage: 102...120% (0 - 900sec) – Minimum voltage: 70...98% (0 - 900sec)				
DMK00R1	1-phase digital voltage monitor	relay out	15-660 VAC	3 240.00
DMK10R1	3-phase digital voltage monitor	relay out	15-660 VAC	3 500.00
Current monitors accuracy: $\pm 0.5\%$ full scale ± 1 digit				
Current measurement range: 0.05...5.75A Operating frequency range: 45...65Hz Programmable CT ratio: 5...10.000 Accuracy: $\pm 0.5\%$ f.s. ± 1 digit Output: 1 changeover relay output time delay Settings: – Current loss: Off / 2...100% (0 - 900sec) – Maximum current: Off / 102...200% (0 - 900sec) – Instantaneous trip: Off / 110...600% – Minimum current: Off / 5...98% (0 - 900sec)				
DMK01R1	1-phase digital current monitor	relay out	0.05 - 5.75A	3 240.00
DMK11R1	3-phase digital current monitor	relay out	0.05 - 5.75A	3 500.00
Three-phase multi-measurement instrument combination voltage, current, power factor				
Voltage measurement range: 35...660 VAC Current measurement range: 0.05...5.75A Operating frequency range: 45...65Hz Programmable VT ratio: 1.00...500.0 Programmable CT ratio: 5...10000 Settings: - Voltage - Voltage loss or failure: Off / 5...85% - Maximum voltage: Off / 102...120% - Minimum voltage: Off / 70...98% - Asymmetry: Off / 2...20% - Phase sequence: Off / L1-L2-L3 / L3-L2-L1 - Current - Current loss: Off / 2...100% - Maximum current: Off / 102...200% - Minimum current: Off / 5...98% - Max. current instantaneous trip: Off / 110...600% - Power factor - Maximum power factor: 0.10...1.00 - Minimum power factor: 0.10...1.00				
DMK16R1	3-phase multi-meter and monitor	relay out	multi-meter	5 700.00

Energy meters



New



4850 5004



4850 5014



4850 3054



4850 5044



4853 0000

COUNTIS series - Active energy meters (kWh meters)

COUNTIS range of active energy meters are digital instruments designed for the measurement of electrical energy consumption in single and three-phase systems with direct connection or via a current transformer (CT). Suitable for every type of integration, network and load (*direct readings up to 100A and up to 12000A via CT connections*).

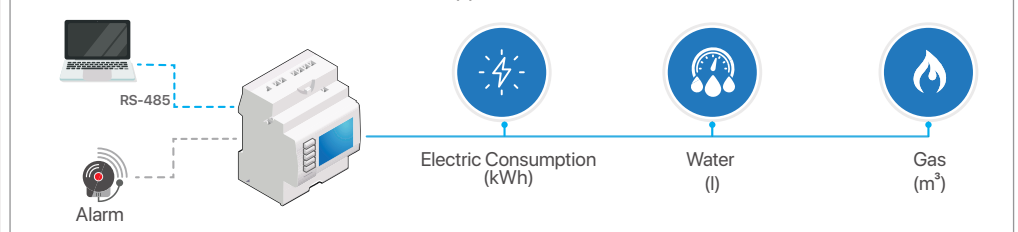
Operational features:

- Display: Backlit LCD
- Rated supply voltage: - 230 VAC (*single-phase*)
- 230...400 VAC (*three-phase*)
- Pulse outputs: Configurable 0.01 / 0.1 / 1 / 10 / 100 kWh/pulse
- Communication protocol: RS-485 / Ethernet
- Multi-tariffs: Manage up to 4 tariffs
- Bidirectional metering: Energy consumption and production
- Measurement accuracy: - voltage $\pm 0.5\%$
- Current $\pm 1\%$
- Frequency $\pm 0.2\%$
- Energy $\pm 1\%$

The COUNTIS range perfectly meets the needs and constraints of every electrical system:

- Industrial buildings
- Retail buildings
- Residential buildings
- Medical centres
- Data centres

type	model	connection	network	current	comms.	width in 18 mm	price
Single-phase direct connection kWh meters (<i>modular design DIN-rail mounting</i>)							
COUNTIS single-phase direct connect modular energy meters measure and display energy (kWh, kVAh and kVA) as well as other measurement values and are suitable for single-phase electrical systems up to 100A.							
4850 5004	P04	direct	1-phase	45A	RS-485	1	1 840.00
4850 3047*	E17	direct	1-phase	80A	Ethernet	2	13 300.00
4850 5014	P14	direct	1-phase	100A	RS-485	2	3 060.00
* Ethernet web server embedded							
Three-phase direct connection kWh meters (<i>modular design DIN-rail mounting</i>)							
COUNTIS three-phase direct connect modular energy meters measure and display energy (kWh, kVAh and kVA) as well as other measurement values and are suitable for three-phase electrical systems up to 100A.							
4850 3054*	E27	direct	3-phase	80A	Ethernet	4	15 900.00
4850 5034	P34	direct	3-phase	100A	RS-485	4	4 900.00
* Ethernet web server embedded							
CT operated single or three-phase kWh meters (<i>modular design DIN-rail mounting</i>)							
COUNTIS three-phase modular energy meters measure and display energy (kWh, kVAh and kVA) as well as other measurement values. They connect indirectly to the electrical system via 1/5A current transformers (CT).							
4850 5044	P44	CT (1/5A)	3-phase	12000A	RS-485	4	5 200.00
Pulse concentrator (<i>modular design DIN-rail mounting</i>)							
COUNTIS ECi2 multi-utility pulse concentrator allows for up to 7 pulse inputs from water, gas, compressed air and electricity meters to be registered and stored. All data can be centralised via RS-485 communication using Modbus protocol.							
• Load curves are available for each of the 7 logical inputs • Partial, total, daily, weekly or monthly kWh or other types of data (<i>litres, m³...</i>) • Customisation by selection of the measuring unit: kWh, m³, litres • Generate event alarms (<i>1 dedicated relay output</i>) • 230... 400 VAC supply							
4853 0000	ECi2	pulse concentrator for up to 7 inputs with RS-485				4	8 490.00

COUNTIS ECi2 - Pulse concentrator application

Multifunction meters



Model	A-10	A-14	A-20	A-30/41
Mounting	modular DIN-rail (4x 18mm)	modular DIN-rail (4x 18mm)	panel-mount (96 x 96mm)	panel-mount (96 x 96mm)
Display	backlit LCD	backlit LCD	backlit LCD	backlit LCD
Front degree of protection	IP52	IP51	IP52	IP52
Aux. power supply	110-277 VAC	50-460 VAC	110-400 VAC	110-400 VAC / 12-48 VAC
Current Input	CT (5A)	CT (5A)	CT (5A)	CT (1A or 5A)
Plug-in expansion modules	—	—	2	4
Inputs	1	—	up to 6	up to 6
Outputs	1	—	up to 2	up to 6
Alarms	yes	—	yes*	yes*
Communication	RS-485	RS-485	RS-485*	RS-485 / ETHERNET / PROFIBUS*
Multi-Tariff	2	4	—	—
Detects wiring errors	yes	yes	yes	yes

* with optional plug-in module

DIRIS series - Multifunction meters

DIRIS series of modular and panel-mounted single circuit multifunction meters are Power Monitoring Devices (PMD) designed to measure, monitor and display electrical values with in single-circuit Low Voltage (LV) networks.

	type	auxiliary power supply	width in 18.5 mm	description	price
DIRIS A-10 multifunction meter (modular design DIN-rail mounting)					
The DIRIS A-10 is a modular multifunction meter for measuring electrical values in low voltage networks. It allows all electrical parameters to be displayed and utilised for communication and/ or output functions. Multi-measurement - Current: I1 / I2 / I3 / In - Voltage: V1 / V2 / V3 / Vn / U12 / U23 / U31 - Frequency: 45...65Hz - Power: P1 / P2 / P3 / ΣP / Q1 / Q2 / Q3 / ΣQ / S1 / S2 / S3 / ΣS - Power Factor: PF1 / PF2 / PF3 / ΣPF - Energy: Active +/- kWh / Reactive +/- kVARh - Harmonics: THD for I / V (up to 51st) - Accuracy (Active Energy): Class 0.5 S - Accuracy (Reactive Energy): Class 2 - Hour Meter: Yes					
	4825 0401	110 - 277 VAC	4	A10 modular multifunction meter + RS-485	5 070.00
DIRIS A-14 multifunction meter (modular design DIN-rail mounting)					
The DIRIS A-14 is a modular multifunction meter for measuring electrical values in low voltage networks. It allows all electrical parameters to be displayed and utilised for communication and/ or output functions. Multi-measurement - Current: I1 / I2 / I3 / In - Voltage: V1 / V2 / V3 / Vn / U12 / U23 / U31 - Frequency: 50/60Hz - Power: ΣP / ΣQ / ΣS - Power Factor: ΣPF - Energy: Active +/- kWh / Reactive +/- kVARh - Harmonics: THD for I / V (up to 63rd) - Accuracy (Active Energy): Class 0.5 S - Accuracy (Reactive Energy): Class 2					
	4825 0020	50 to 460 VAC +/- 15%	4	A14 as above + MID	7 110.00

Above ZAR prices do not include VAT. E&OE

E-10

Multifunction meters



4825 0402



4825 0403

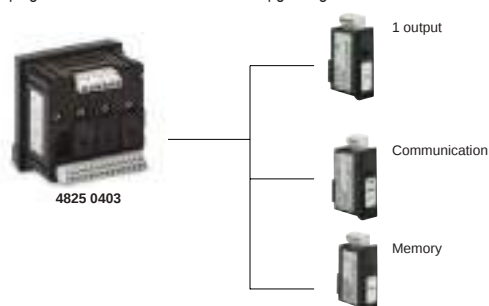


4825 0094

type	auxiliary power supply	number plug-in modules	description		price
DIRIS A-20 multifunction meter					
DIRIS A-20 is a panel-mount performance metering and monitoring device which ensures the user has access to all the measurements required for successfully carrying out energy efficiency projects and monitoring electrical distribution systems.					
Multi-measurement					
- Current:		I1 / I2 / I3 / In			
- Voltage:		V1 / V2 / V3 / Vn / U12 / U23 / U31			
- Frequency:		45...65Hz			
- Power:		P1 / P2 / P3 / ΣP / Q1 / Q2 / Q3 / ΣQ / S1 / S2 / S3 / ΣS			
- Power Factor:		PF1 / PF2 / PF3 / ΣPF			
- Energy:		Active +/- kWh / Reactive +/- kVARh			
- Harmonics:		THD for I / V (up to 51st)			
- Accuracy (Active Energy):		Class 0.5 S			
- Accuracy (Reactive Energy):		Class 2			
- Hour Meter:		Yes			
4825 0402	110 - 400 VAC	1	A20	96 x 96 mm panel-mount multifunction meter	5 350.00
DIRIS A-30/41 multifunction meter					
The DIRIS A-30 / A-41 ranges of panel-mount performance metering and monitoring devices provide users with all the measurements required for successfully completing energy efficiency projects and monitoring electrical distribution systems.					
Multi-measurement					
- Current:		I1 / I2 / I3 / In			
- Voltage:		V1 / V2 / V3 / Vn / U12 / U23 / U31			
- Frequency:		45...65Hz			
- Power:		P1 / P2 / P3 / ΣP / Q1 / Q2 / Q3 / ΣQ / S1 / S2 / S3 / ΣS			
- Power Factor:		PF1 / PF2 / PF3 / ΣPF			
- Energy:		Active +/- kWh / Reactive +/- kVARh / Apparent kVAh			
- Harmonics:		THD for I / V (up to 63rd)			
- Accuracy (Active Energy):		Class 0.5 S			
- Accuracy (Reactive Energy):		Class 2			
- Hour Meter:		Yes			
4825 0403	110 - 400 VAC	4	A30	96 x 96 mm panel-mount multifunction meter	9 450.00
4825 0404	110 - 400 VAC	4	A41	as above with neutral monitoring	13 700.00
4825 0405	12 - 48 VDC	4	A30	96 x 96 mm panel-mount multifunction meter	14 900.00
Accessories for DIRIS meters					
type	function	description		for model	price
Plug-modules					
(for customisation or upgrading of meters)					
4825 0080	1 x output	plug-in optional modules		A20	601.00
4825 0082	RS-485 Modbus comms	plug-in optional modules		A20	863.00
4825 0090	2 configurable pulse outputs	plug-in optional modules		A30/41	863.00
4825 0092	RS-485 Modbus comms	plug-in optional modules		A30/41	1 500.00
4825 0093	2 Analog outputs	plug-in optional modules		A30/41	2 430.00
4825 0094	2 inputs / 2 outputs	plug-in optional modules		A30/41	1 360.00
4825 0205	Sub D9 PROFIBUS DP comm	plug-in optional modules		A30/41	9 770.00
4825 0097	Memory	plug-in optional modules		A30/41	1 230.00
4825 0203	Ethernet comm. + Modbus TCP	plug-in optional modules		A30/41	5 980.00
4825 0204	Ethernet + RS-485 Modbus TCP	plug-in optional modules		A30/41	5 590.00
4825 0089	IP65 protection cover	for DIRIS meters		A30/41	405.00

DIRIS A... – Multifunction meters

Multifunction meter + optional plug-in modules for customisation or upgrading of meters.



Multifunction meters



A40 +TE+TR+TF



4825 ...



4829 0000



TE...



TR...



TF...

DIRIS A40 series of panel-mount Power Monitoring Devices (PMD) offers a range of metering options including Webview functionality. Designed to work with smart current sensors of different formats (*solid-core TE, split-core TR/iTR and Rogowski coil TF*).

Measurements and functions:

- Voltage: V1 / V2 / V3 / Vn and U12 / U23 / U31
- Current: I1 / I2 / I3 / In
- Frequency: 45...65Hz
- Power: P1 / P2 / P3 / ΣP / Q1 / Q2 / Q3 / ΣQ / S1 / S2 / S3 / ΣS
- Power factor: PF1 / PF2 / PF3 / ΣPF
- Energy: Active +/- kWh / Reactive +/- kVARh / Apparent kVAh
- Harmonic analysis: THD for current and voltage (up to 63rd)
- Communication: RS-485 / Ethernet / Profibus
- Inputs: 3 digital inputs (*pulse metering, status checking*)
- Outputs: 2 outputs (*alarms or pulses*)
- Alarms for all electrical values, events and input status changes

Measurement accuracy:

- Overall accuracy: Class 0.2 DIRIS A-40
- Accuracy of active energy: Class 0.5 with TE, TF/iTR and Class 1 with TR
- Accuracy of reactive energy: Class 0.5 with TE, TF/iTR and Class 1 with TR

type	Aux. power supply	inputs	outputs	description	price
DIRIS A40 - Multifunction meter		92 x 92 mm panel-mount 68 mm deep			
4825 0500	110 - 400 VAC	3	2	panel-mount meter with RS-485 Modbus	14 100.00
4825 0501*	110 - 400 VAC	3	2	as above with Ethernet Modbus	20 800.00
4825 0502	110 - 400 VAC	3	2	as above with Profibus	22 000.00

* Modbus TCP, Modbus RTU, BacNet, SMTP, SNTP

DIRIS B30 - Multifunction meter (modular design DIN-rail mounting)

The **DIRIS B30** is a modular format PMD that communicates via RS-485. 4 x RJ12 independent current inputs allow it to manage several types and number of circuits.

4829 0000	110 - 230VAC	2	—	modular multifunction meter with RS-485	10 600.00
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Accessories for DIRIS B30

4829 0200	D30 single point display for B30	(panel-mount)	96 x 96	4 180.00
4829 0280	RJ9 cable for above D30 display unit		1.5 m	145.00
4829 0281	RJ9 cable for above D-30 display unit		3.0 m	239.00

Current sensors for above A40 / B30 multifunctional meter

Various types of current sensors can be connected to the DIRIS A40 / B30: solid-core (TE), split-core (TR / iTR) or Rogowski (TF). A quick RJ12 connection makes wiring easy and reliable and prevents wiring errors.

type	model	actual range current (A)	description	pitch (mm)	hole size (mm)	price
TE - Solid current sensors		class 0.5				
4829 0500	TE-18	0.1...24	solid current sensor	18	Ø 8.6	676.00
4829 0501	TE-18	0.5...75	solid current sensor	18	Ø 8.6	694.00
4829 0502	TE-25	0.8...192	solid current sensor	25	13.5 ■	780.00
4829 0503	TE-35	1.26...300	solid current sensor	35	21 ■	869.00
4829 0504	TE-45	3.2...756	solid current sensor	45	31 ■	1 220.00
4829 0505	TE-55	8...1200	solid current sensor	55	41 ■	1 570.00
4829 0506	TE-90	12...2400	solid current sensor	90	64 ■	2 850.00
TR - Split-core current sensors		class 1				
4829 0555	TR-10	0.5...75	split-core current sensors	—	Ø 10	2 110.00
4829 0556	TR-14	0.8...192	split-core current sensors	—	Ø 14	2 520.00
4829 0557	TR-21	1.26...300	split-core current sensors	—	Ø 21	3 210.00
4829 0558	TR-32	3.2...720	split-core current sensors	—	Ø 32	3 650.00
iTR - Split-core current sensors		class 0.5 (intelligent)				
4829 0655	iTR-10	0.5...75	split-core current sensors	—	Ø 10	3 170.00
4829 0656	iTR-14	0.8...192	split-core current sensors	—	Ø 14	3 780.00
4829 0657	iTR-21	1.26...300	split-core current sensors	—	Ø 21	4 820.00
4829 0658	iTR-32	3.2...720	split-core current sensors	—	Ø 32	5 470.00
TF - Flexible current sensors (Rogowski coil)						
4829 0574	TF-80	3...720	flexible current sensor	—	Ø 80	7 440.00
4829 0575	TF-120	8...2400	flexible current sensor	—	Ø 120	7 980.00
4829 0577	TF-300	32...7200	flexible current sensor	—	Ø 300	8 840.00

For RJ12 cables to connect A40/B30 PMD to TE/TR/iTR/TF current sensors refer to pg E-15

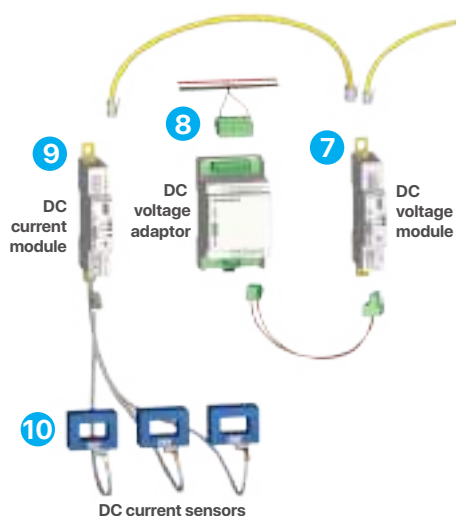
Power monitoring system

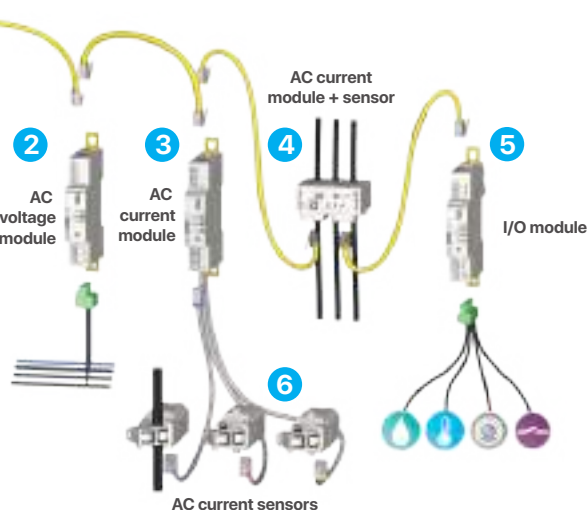
DIRIS Digiware system is a multi-circuit AC or DC power monitoring solution that is the most effective solution for monitoring multi-point electrical installation performance. With precise sensing, virtual monitoring and auto-correct technology. This system offers accurate and reliable metering, monitoring and reporting of electrical systems.

- Accuracy as per standard IEC 61557-12 (Class 0.5)
- Implementation in a quarter of the time vs existing metering technologies
- Installation of measurement modules and current sensors at the closest point to the load
- Can monitor several circuits via a single current measurement module thanks to independent current inputs
- Compact and flexible design: suitable for new and existing installations, including panels with space restrictions
- The system is composed of several modules: control interface, voltage acquisition module, current acquisition modules but also closed, split-core or flexible current sensors



Build your system :

DC SYSTEM


AC SYSTEM


type	model	description	width in 18mm	price
Data centralisation, system interface and display modules				
• Power supply 24 VDC (<i>required, see power supply</i>) • Communication via RS-485 Modbus and Digiware BUS				
C-31 Data centralisation ①			<i>(without local display)</i>	
• Centralises all of the Digiware systems data, accessible via RS-485				
4829 0101	C-31	modular centralisation unit without display + RS-485	1	3 260.00
D50/70 Data centralisation and display ①			<i>(panel-mount 96 x 96mm)</i>	
• High-resolution LCD • Local view of data from the Digiware Bus • Keys on the front face for direct access to measurement data,device configuration etc. • Can display electrical measurements from both AC and DC systems simultaneously via Webview				
4829 0204	D-50	centralisation unit with multi-point display + Modbus TCP		8 380.00
4829 0203	D-70	centralisation unit with multi-point display + Ethernet + webserver		40 700.00
4829 0222	M-70	as above without display and modular DIN-rail mount	5	29 900.00
C-32 Range extending repeater				
• Required when Digiware bus length exceeds 100m • Maximum bus length 300m (<i>2 repeaters</i>) • Power supply 24 VDC (<i>required, see power supply</i>)				
4829 0103	range extending repeater		1	3 900.00
<i>For RJ45 connecting cables for above see E-15</i>				
DATALOG H80 - Webview datalogger				
• Connect energy meters and multi-function measurement units to an Ethernet network • Real-time monitoring of all measurements and breakdown of energy consumption up to 100 devices				
4854 0020	datalogger with webview 4 Ethernet ports and up to 100 licences			87 800.00

Above ZAR prices do not include VAT. E&OE

Power monitoring system



4829 0106



4829 0112



4829 0160



4829 0161

AC voltage measurement modules ② – Single voltage measurement point for the entire system

- Three-phase voltage and frequency monitoring
- RJ45 bus allows you to measure voltage as well as supply power to all connected devices
- A complete, dedicated solution for metering, voltage monitoring and quality analysis of the AC voltage

type	description	width in 18 mm	price
U-10 Metering module			
4829 0105	modular AC voltage measurement metering module	1	3 650.00
U-20 Monitoring module (as above but with additional 3ph THDu monitoring)			
4829 0106	modular AC voltage measurement monitoring module	1	4 510.00
U-30 Analysis module (all electrical parameters including history of average values)			
4829 0102	modular AC voltage measurement analysis module	1	5 540.00

AC current measurement modules ③

Allocates the load to be measured or to monitor independent current inputs i.e three-phase load and 3 single-phase loads.

- Metering: $\pm$ kWh, $\pm$ kvarh, kVAh
- Multi-measurement: I1, I2, I3, In, ΣP , ΣQ , ΣS , ΣPF
- Wiring errors are also prevented and implementation is simplified
- **RJ45** and **RJ12** rapid connection and configure connected current sensors

type	description	current Inputs	width in 18mm	price
I-30/60 metering modules				
4829 0110	I-30 modular current measurement metering module	3	1	3 080.00
4829 0112	I-60 modular current measurement metering module	6	2	6 520.00
I-31/61 metering and load curve modules				
4829 0111	I-31 modular current measurement metering module	3	1	5 440.00
4829 0113	I-61 modular current measurement metering module	6	2	9 110.00
I-35/45 analysis module (all electrical parameters including history of average values)				
4829 0130	I-35 modular current measurement analysis module	3	1	5 930.00
4829 0131	I-45 modular current measurement analysis module	4	1.5	14 300.00

AC current measurement modules with built-in current sensors ④

DIRIS Digiware S is a power metering and monitoring service with 3 integrated current sensors enabling the measurement of one three-phase or three single-phase circuits up to 63 A.

- Metering: $\pm$ kWh, $\pm$ kvarh, kVAh
- Can be mounted upstream or downstream of the protective device
- Advanced monitoring via **VirtualMonitor** (position, trip etc. without using auxiliary)
- Matching the pitch of protective devices up to 63A, solving issues of space constraints

4829 0160	S-130 modular current measurement metering module	3	–	9 070.00
4829 0161	S-135 modular current measurement analysis module	3	–	11 600.00
4829 0162	S-Datacenter modular 3 x single-phase monitoring	3	–	8 390.00

Accessories for DIRIS Digiware S modules

4829 0195	Mounting clip for above Digiware S modules	pack	(x 10)	797.00
4829 0196	Holding clip for above Digiware S modules	pack	(x 10)	921.00
4829 0189	Flat RJ45 Digiware bus connection cable		0.06 m	182.00

For longer length connecting cables refer to **E-15**

Digital and analogue input / output modules ⑤

The **DIRIS Digiware I/O** (input/output) modules can be easily added anywhere within the measurement system thanks to a quick **RJ45** connection.

The **I/O-10** modules have 4 digital inputs and 2 digital outputs, which can be used:

- To monitor changes of status of an input or to collect pulses from multi-fluid meters (water, gas...)
- To remotely command devices by sending a digital output signal
- Inputs/Connection: 12 VDC 3mA, Outputs: 12 - 48 VDC, 12 - 24 VAC 50mA / screw terminal blocks

The **I/O-20** modules have 2 analogue inputs allowing:

- To collect data from analogue sensors, e.g. pressure, humidity, temperature, levels (fuel...)
- To monitor levels by setting up alarms on chosen thresholds
- Inputs/Connection: 0/4-20 mA, 200 ohm / screw terminal blocks

	DI	DO	AI			
4829 0140	4	2	–	IO-10 digital input/output module	1	5 120.00
4829 0145	–	–	2	IO-20 analogue input modules	1	6 720.00

Power monitoring system

AC sensors ⑥

Current sensors can be connected to the DIRIS Digiware system via a rapid RJ12 and various accessories are available, permitting installation in all panel configurations.

- Plug and play RJ12 connections (*for ease of wiring preventing wiring errors*)
- Automatic detection of sensor type and current rating
- Class 0.5 from 2% to 120% of nominal current (*as per standard IEC 61557-12*)

type	model	actual range current (A)	description	pitch (mm)	hole size (mm)	price
TE - Solid current sensors class 0.5						
4829 0500	TE-18	0.1...24	solid current sensor	18	Ø 8.6	676.00
4829 0501	TE-18	0.5...75	solid current sensor	18	Ø 8.6	694.00
4829 0502	TE-25	0.8...192	solid current sensor	25	13.5 ■	780.00
4829 0503	TE-35	1.26...300	solid current sensor	35	21 ■	869.00
4829 0504	TE-45	3.2...756	solid current sensor	45	31 ■	1 220.00
4829 0505	TE-55	8...1200	solid current sensor	55	41 ■	1 570.00
4829 0506	TE-90	12...2400	solid current sensor	90	64 ■	2 850.00
TR - Split-core current sensors class I						
4829 0555	TR-10	0.5...75	split-core current sensors	—	Ø 10	2 110.00
4829 0556	TR-14	0.8...192	split-core current sensors	—	Ø 14	2 520.00
4829 0557	TR-21	1.26...300	split-core current sensors	—	Ø 21	3 210.00
4829 0558	TR-32	3.2...720	split-core current sensors	—	Ø 32	3 650.00
iTR - Split-core current sensors class 0.5 (<i>intelligent</i>)						
4829 0655	iTR-10	0.5...75	split-core current sensors	—	Ø 10	3 170.00
4829 0656	iTR-14	0.8...192	split-core current sensors	—	Ø 14	3 780.00
4829 0657	iTR-21	1.26...300	split-core current sensors	—	Ø 21	4 820.00
4829 0658	iTR-32	3.2...720	split-core current sensors	—	Ø 32	5 470.00
TF - Flexible current sensors (Rogowski coil)						
4829 0574	TF-80	3...720	flexible current sensor	—	Ø 80	7 440.00
4829 0575	TF-120	8...2400	flexible current sensor	—	Ø 120	7 980.00
4829 0577	TF-300	32...7200	flexible current sensor	—	Ø 300	8 840.00

Cables and accessories for current sensors

type	model	description	cable length (mm)	pack size (mm)	price
RJ12 current sensor connection cables (<i>interconnection</i>)					
• Automatic detection of current sensor ratings • Disconnection of the current sensor secondary under load					
4829 0581	RJ12	AC current sensor connection cable	0.2 m	3 x cables	259.00
4829 0595	RJ12	AC current sensor connection cable	0.5 m	3 x cables	335.00
4829 0583	RJ12	AC current sensor connection cable	1.0 m	3 x cables	415.00
4829 0584	RJ12	AC current sensor connection cable	2.0 m	3 x cables	659.00
4829 0597	RJ12	AC current sensor connection cable	0.5 m	6 x cables	644.00
4829 0593	RJ12	AC current sensor connection cable	1.0 m	6 x cables	812.00
4829 0594	RJ12	AC current sensor connection cable	2.0 m	6 x cables	1 140.00
4829 0602	RJ12	AC current sensor connection cable	5.0 m	1 x cables	482.00
4829 0782	RJ12	DC molex current sensor conn. cable	0.3 m	3 x cables	488.00
4829 0783	RJ12	DC molex current sensor conn. cable	0.5 m	3 x cables	522.00
4829 0784	RJ12	DC molex current sensor conn. cable	1.0 m	3 x cables	634.00
4829 0785	RJ12	DC molex current sensor conn. cable	2.0 m	3 x cables	799.00
4829 0786	RJ12	DC molex current sensor conn. cable	5.0 m	1 x cable	497.00
RJ45 current sensor connection cables (<i>bus connection</i>)					
• Interconnection of I and U modules via Digiware Bus					
4829 0181	RJ45	Digiware bus AC connection cable	0.1 m	—	110.00
4829 0182	RJ45	Digiware bus AC connection cable	0.5 m	—	137.00
4829 0183	RJ45	Digiware bus AC connection cable	1.0 m	—	182.00
4829 0184	RJ45	Digiware bus AC connection cable	2.0 m	—	279.00
4829 0185*	RJ45	AC current sensor cable + 50 connectors	50 m	(cable roll)	10 100.00

* Maximum cable distance between current measurement modules and current sensors is 10 m

4829 0599	5A/CT adapter (<i>measurement >1000 A</i>) ⑥				1 220.00
4829 0598	coupling link for interconnecting sensors staggered or linear mounted	(30pcs)			899.00
4829 0600	sealable cover (<i>guarantees the immunity of sensor connection</i>)	(20pcs)			775.00



Power monitoring system



4829 0150



4829 0153



4829 0156



4829 0700



4829 0750

DC voltage measurement modules 7

DIRIS Digiware U-31/32dc module measures DC voltage for the entire system. It measures up to 180 VDC with a direct connection and is therefore compatible with typical nominal voltages (24 VDC, 48 VDC)

- Voltage measurement accuracy: Class 0.5
- 1 single voltage measurement point for the entire system
- Voltage adaptors makes the system compatible with all voltage levels up to 1650 VDC
- RJ45 bus allows you measurement of voltage as well as supply power to all connected devices

type	range	voltage	description	width in 18 mm	price
U-31dc Metering module					
4829 0150	19...60 VDC		modular voltage measurement metering module	1	6 460.00
U-32dc Metering module					
4829 0151	38...180 VDC		modular voltage measurement metering module	1	8 210.00
DC voltage adaptor 8					
4829 0153	200...600 VDC		U500DC modular voltage adaptor metering module	3	3 990.00
4829 0154	400...1200 VDC		U1000DC modular voltage adaptor metering module	3	5 980.00
4829 0155	1200...1650 VDC		U1500DC modular voltage adaptor metering module	3	7 970.00

DC current measurement modules 9

Allocates the load to be measured or to monitor independent current inputs. Measurement of up to 3 DC circuits per Idc modules.

General features:

- Metering: $\pm$ kWh
- Accuracy of current measurement: Class 0.5
- Multi-measurement: Idc, Udc, Iripple, Irms
- Quick RJ45 connection between modules and RJ12-Molex to current sensors

type	description	current Inputs	width in 18 mm	price
I-30dc metering modules				
4829 0156	I-30dc modular current measurement metering module	3	3	7 010.00
I-35dc metering and analysis module				
4829 0157	I-35dc modular current measurement analysis module	3	3	11 100.00

DC sensors 10

The DC current sensors measure the DC load currents of an electrical installation and transmit information to the Idc measurement modules via an RJ12 to molex cable on the sensor side.

The range comprises solid-core and split-core sensors (*Open-loop Hall effect*) ranging from 50 to 5000A in various sizes allowing them to be used in new or existing electrical installations.

General features:

- Automatic detection of sensor type and current rating
- Up to 3 different DC sensors can be connected to the same Idc module
- Accuracy of current measurement <1%
- Plug and play RJ12 molex cables (*for ease of wiring - preventing wiring errors*) see page E-15

type	frame size	nominal current (A)	description	pitch (mm)	hole size (mm)	price
DC solid-core current sensors (frame size 1)						
4829 0700	1	50A	DC solid-core current sensor	18	■ 10.4 x 20.4	1 040.00
4829 0701	1	100A	DC solid-core current sensor	25	■ 10.4 x 20.4	1 040.00
4829 0702	1	200A	DC solid-core current sensor	35	■ 10.4 x 20.4	1 040.00
4829 0703	1	300A	DC solid-core current sensor	45	■ 10.4 x 20.4	1 040.00

Up to 5000A available on special request.

DC split-core current sensors (frame size 1)						
4829 0750	1	50A	DC split-core current sensor	0	Ø 21	8 050.00
4829 0751	1	100A	DC split-core current sensor	0	Ø 21	8 050.00
4829 0752	1	200A	DC split-core current sensor	0	Ø 21	8 050.00

Up to 2000A available on special request.

Panel-mount analogue meters



SF4-2010A



SF9-3MD5A



SF9-3CM5A



SF7-8/5A



SF7-3CM5A

Analog panel instruments

Designed to measure an extensive range of electrical and electronic parameters.

Benefits: Low cost, ease of installation, minimal training, low maintenance, reasonable accuracy.

Applications: Switchgear distribution systems, generator sets, control panels, energy and building management, utility power monitoring, process control and motor control.

type	range	supply	description	frame size mm²			price
				48 x 48	72 x 72	96 x 96	
Ammeters (AC) moving iron							
SF4-2001A	0 - 1A	AC	AC ammeter (direct reading)	•			283.00
SF4-2005A	0 - 5A	AC	AC ammeter (direct reading)	•			283.00
SF4-2010A	0 - 10A	AC	AC ammeter (direct reading)	•			283.00
SF4-2015A	0 - 15A	AC	AC ammeter (direct reading)	•			283.00
SF4-2030A	0 - 30A	AC	AC ammeter (direct reading)	•			301.00
SF4-2/5A*	.../5A	AC	AC ammeter (CT operated)	•			283.00
SF7-8001A	0 - 1A	AC	AC ammeter (direct reading)		•		303.00
SF7-8005A	0 - 5A	AC	AC ammeter (direct reading)		•		303.00
SF7-8010A	0 - 10A	AC	AC ammeter (direct reading)		•		303.00
SF7-8015A	0 - 15A	AC	AC ammeter (direct reading)		•		303.00
SF7-8030A	0 - 30A	AC	AC ammeter (direct reading)		•		321.00
SF7-8/5A*	.../5A	AC	AC ammeter (CT operated)		•		303.00
SF9-8001A	0 - 1A	AC	AC ammeter (direct reading)			•	320.00
SF9-8005A	0 - 5A	AC	AC ammeter (direct reading)			•	320.00
SF9-8010A	0 - 10A	AC	AC ammeter (direct reading)			•	320.00
SF9-8015A	0 - 15A	AC	AC ammeter (direct reading)			•	320.00
SF9-8030A	0 - 30A	AC	AC ammeter (direct reading)			•	339.00
SF9-8/5A*	.../5A	AC	AC ammeter (CT operated)			•	320.00
Maximum demand ammeters			(90° movement) delay time: 15 min (standard)				
SF7-3MD5A*	.../5A	AC	max. demand ammeter - CT		•		754.00
SF9-3MD5A*	.../5A	AC	max. demand ammeter - CT			•	754.00
Maximum Demand + Instantaneous Ammeters							
SF7-3CM5A*	.../5A	AC	combined MD ammeter - CT		•		1 230.00
SF9-3CM5A*	.../5A	AC	combined MD ammeter - CT			•	1 230.00

Voltsmeters (AC) moving iron (90° movement)

SF4-2015V	150V	AC	AC voltmeter (direct reading)	•			303.00
SF4-2030V	300V	AC	AC voltmeter (direct reading)	•			303.00
SF4-2050V	500V	AC	AC voltmeter (direct reading)	•			303.00
SF4-2060V	600V	AC	AC voltmeter (direct reading)	•			303.00
SF7-8015V	150V	AC	AC voltmeter (direct reading)		•		321.00
SF7-8030V	300V	AC	AC voltmeter (direct reading)		•		321.00
SF7-8050V	500V	AC	AC voltmeter (direct reading)		•		321.00
SF7-8060V	600V	AC	AC voltmeter (direct reading)		•		321.00
SF9-8015V	150V	AC	AC voltmeter (direct reading)			•	339.00
SF9-8030V	300V	AC	AC voltmeter (direct reading)			•	339.00
SF9-8050V	500V	AC	AC voltmeter (direct reading)			•	339.00
SF9-8060V	600V	AC	AC voltmeter (direct reading)			•	339.00

* Replace with code in chart (below) for desired amperage

Standard amperages - add code to end of part number e.g SF4-2/5A005 (50A)

Code	003	004	005	006	007	010	015	020	025	030	040	050	060	075	100	125	160	200
A	30	40	50	60	75	100	150	200	250	300	400	500	600	750	1000	1250	1600	2000

Frame sizes



Panel-mount analogue meters



SF4-2022Z



SF4-2HA25



SF7-8025DA



SF4-203DV

Analog panel instruments

type	range	supply	description	frame size mm²			price
				48 x 48	72 x 72	96 x 96	
Frequency meters (90° movement)							
SF4-2022Z	45 - 55Hz	220V	frequency meter (pointer type)	•			510.00
SF4-2038Z	45 - 55Hz	380V	frequency meter (pointer type)	•			510.00
SF7-8022Z	45 - 55Hz	220V	frequency meter (pointer type)		•		547.00
SF7-8038Z	45 - 55Hz	380V	frequency meter (pointer type)		•		547.00
SF9-8022Z	45 - 55Hz	220V	frequency meter (pointer type)			•	565.00
SF9-8038Z	45 - 55Hz	380V	frequency meter (pointer type)			•	565.00
Running hour meters							
SF4-2HA25	100 - 250V	AC	running hour meter	•			378.00
SF4-2HA45	250 - 450V	AC	running hour meter	•			378.00
SF7-3HA25	100 - 250V	AC	running hour meter		•		900.00
SF7-3HA45	250 - 450V	AC	running hour meter		•		900.00
SF9-3HA25	100 - 250V	AC	running hour meter			•	900.00
SF9-3HA45	250 - 450V	AC	running hour meter			•	900.00
Ammeters (DC) moving coil (90° movement)							
SF4-2000DA	0 - 1mA	DC	ammeter (direct reading)	•			321.00
SF4-2420DA	4 - 20mA	DC	ammeter (direct reading)	•			359.00
SF4-2001DA	0 - 1A	DC	ammeter (direct reading)	•			321.00
SF4-2005DA	0 - 5A	DC	ammeter (direct reading)	•			321.00
SF4-2010DA	0 - 10A	DC	ammeter (direct reading)	•			321.00
SF4-2015DA	0 - 15A	DC	ammeter (direct reading)	•			321.00
SF4-2030DA	0 - 30A	DC	ammeter (direct reading)	•			321.00
SF4-2/7DA*	.../75mV	DC	ammeter (shunt operated)		•		321.00
SF7-8000DA	0 - 1mA	DC	ammeter (direct reading)		•		339.00
SF7-8420DA	4 - 20mA	DC	ammeter (direct reading)		•		378.00
SF7-8001DA	0 - 1A	DC	ammeter (direct reading)		•		339.00
SF7-8005DA	0 - 5A	DC	ammeter (direct reading)		•		339.00
SF7-8010DA	0 - 10A	DC	ammeter (direct reading)		•		339.00
SF7-8015DA	0 - 15A	DC	ammeter (direct reading)		•		339.00
SF7-8030DA	0 - 30A	DC	ammeter (direct reading)		•		339.00
SF7-8/7DA*	.../75mV	DC	ammeter (shunt operated)		•		339.00
SF9-8000DA	0 - 1mA	DC	ammeter (direct reading)			•	358.00
SF9-8420DA	4 - 20mA	DC	ammeter (direct reading)			•	358.00
SF9-8001DA	0 - 1A	DC	ammeter (direct reading)			•	358.00
SF9-8005DA	0 - 5A	DC	ammeter (direct reading)			•	358.00
SF9-8010DA	0 - 10A	DC	ammeter (direct reading)			•	358.00
SF9-8015DA	0 - 15A	DC	ammeter (direct reading)			•	358.00
SF9-8030DA	0 - 30A	DC	ammeter (direct reading)			•	358.00
SF9-8/7DA*	.../75mV	DC	ammeter (shunt operated)			•	358.00
Voltmeter (DC) (90° movement)							
SF4-2007DV	75mV	DC	voltmeter (direct reading)	•			321.00
SF4-203DV	30V	DC	voltmeter (direct reading)	•			321.00
SF4-215DV	150V	DC	voltmeter (direct reading)	•			321.00
SF4-250DV	500V	DC	voltmeter (direct reading)	•			321.00
SF7-8007DV	75mV	DC	voltmeter (direct reading)		•		339.00
SF7-803DV	30V	DC	voltmeter (direct reading)		•		339.00
SF7-815DV	150V	DC	voltmeter (direct reading)		•		339.00
SF7-850DV	500V	DC	voltmeter (direct reading)		•		339.00
SF9-8007DV	75mV	DC	voltmeter (direct reading)			•	358.00
SF9-803DV	30V	DC	voltmeter (direct reading)			•	358.00
SF9-815DV	150V	DC	voltmeter (direct reading)			•	358.00
SF9-850DV	500V	DC	voltmeter (direct reading)			•	358.00

* - Replace with code in chart (below) for desired amperage

Standard amperages - add code to end of part number for desired amperage

Code	003	004	005	006	007	010	015	020	025	030	040	050	060	075	100	125	160	200
A	30	40	50	60	75	100	150	200	250	300	400	500	600	750	1000	1250	1600	2000

Panel-mount digital meters



SFN-4K1-I



SFN-7K3-3I



SFN-9K3-3U



SFN-7K1-F



SFN-9K3-UIF



SFN-7K1-DCU

Digital panel meters

Measuring accuracy: $\pm 0.5\% \text{ FS } \pm 1 \text{ digit}$
 Measuring display mode: RMS measurement, four-digit LED
 Auxiliary power supply: AC220V, 50/60Hz (*others on request*)
 Operating temperature: $-10 \dots 50^\circ\text{C}$
 Overload voltage and current: Continuous: 1.2 times. Instantaneous: 2 times (*30s-Voltage*) (*1s-Current*)
 Available frame sizes: 4 = 48 x 48 mm / 5 = 48 x 96 mm / 7 = 72 x 72 mm / 9 = 96 x 96 mm

type	range	range		description	phase	frame size mm ²				price
		using CT	/5A			48 x 48	48 x 96	72 x 72	96 x 96	

Ammeters (AC)

Direct measure: AC 0...5A (with CT .../5A: AC 0...9999A)

Single-phase

SFN-4K1-I	0...5A	0...9999A	digital AC ammeter	1ph	•					792.00
SFN-5K1-I	0...5A	0...9999A	digital AC ammeter	1ph		•				792.00
SFN-7K1-I	0...5A	0...9999A	digital AC ammeter	1ph			•			792.00
SFN-9K1-I	0...5A	0...9999A	digital AC ammeter	1ph				•		792.00

Three-phase - (3 displays - one for each phase)

SFN-4K3-3I	0...5A	0...9999A	digital AC ammeter	3ph	•					1 230.00
SFN-7K3-3I	0...5A	0...9999A	digital AC ammeter	3ph			•			1 230.00
SFN-9K3-3I	0...5A	0...9999A	digital AC ammeter	3ph				•		1 230.00

Voltsmeters (AC)

Direct measure: AC 0...600V (with PT .../100V: AC 0...9999V)

Single-phase

SFN-4K1-U	0...600V	0...9999V	digital AC voltmeter	1ph	•					792.00
SFN-5K1-U	0...600V	0...9999V	digital AC voltmeter	1ph		•				792.00
SFN-7K1-U	0...600V	0...9999V	digital AC voltmeter	1ph			•			792.00
SFN-9K1-U	0...600V	0...9999V	digital AC voltmeter	1ph				•		792.00

Three-phase - (3 displays - one for each phase)

SFN-4K3-3U	0...600V	0...9999V	digital AC voltmeter	3ph	•					1 230.00
SFN-7K3-3U	0...600V	0...9999V	digital AC voltmeter	3ph			•			1 230.00
SFN-9K3-3U	0...600V	0...9999V	digital AC voltmeter	3ph				•		1 230.00

Frequency meter

SFN-4K1-F	30...99Hz	30...500V	digital frequency meter	1ph	•					847.00
SFN-5K1-F	30...99Hz	30...500V	digital frequency meter	1ph		•				847.00
SFN-7K1-F	30...99Hz	30...500V	digital frequency meter	1ph			•			847.00
SFN-9K1-F	30...99Hz	30...500V	digital frequency meter	1ph				•		847.00

Combination - Amp, Volt and Frequency meter (on one panel meter)

SFN-4K3-UIF	0...500V	0...5kV	digital A, V, Hz meter	3ph	•					1 230.00
SFN-7K3-UIF	0...5A	0...5000A	digital A, V, Hz meter	3ph			•			1 230.00
SFN-9K3-UIF	45...65Hz	45...65Hz	digital A, V, Hz meter	3ph				•		1 230.00

DC panel meters

Ammeters (DC)

Direct measure: DC 0...5A (with shunt ... / 75mV: DC 0...9999A)

SFN-4K1DC-I	0...5A	0...9999A	digital DC ammeter	1ph	•					792.00
SFN-5K1DC-I	0...5A	0...9999A	digital DC ammeter	1ph		•				792.00
SFN-7K1DC-I	0...5A	0...9999A	digital DC ammeter	1ph			•			792.00
SFN-9K1DC-I	0...5A	0...9999A	digital DC ammeter	1ph				•		792.00

Voltsmeters (DC)

SFN-4K1-DCU	0...600V	—	digital DC voltmeter	1ph	•					792.00
SFN-5K1-DCU	0...600V	—	digital DC voltmeter	1ph		•				792.00
SFN-7K1-DCU	0...600V	—	digital DC voltmeter	1ph			•			792.00
SFN-9K1-DCU	0...600V	—	digital DC voltmeter	1ph				•		792.00

Current transformers



ASR 20.3



ASK 41.4



ASK 51.4



ASK 61.4

Current transformers

Class 1

General specifications:

- Nominal frequency: 50Hz (others on request)
- Isolation class: E
- Nominal thermal short-time current: $I_{th} = 60 \times I_n$
- Maximum operating voltage: $U_m \leq 0.72 \text{ kV}$
- Over-current limiting factor: FS 5 up to 1500 A nominal current

MBS AG current transformers conform fully to: DIN VDE 0414/1 - DIN 42600 - IEC 61869/1+2 - VBG 4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round B/bar 1 B/bar 2	price
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Tube/ring type current transformers 5A secondary - class 1

ASR 20.3	tube current transformers	(H) 65 x (W) 45 x (D) 30 mm				
26027	50/5A	1	1	tube current transformer	Ø21 — —	476.00
26029	60/5A	1	1.25	tube current transformer		476.00
26031	75/5A	1	1.5	tube current transformer		476.00
26035	100/5A	1	2.5	tube current transformer		476.00
26041	150/5A	1	3.75	tube current transformer		476.00
26051	200/5A	1	3.75	tube current transformer		476.00
26046	250/5A	1	5	tube current transformer		476.00

Busbar mounted current transformers 5A secondary - class 1

ASK 31.3	current transformers	(H) 76 x (W) 61 x (D) 48 mm				
7038	50/5A	1	1	std current transformer	Ø26 30x10 20x20	476.00
7039	60/5A	1	1	std current transformer		476.00
7041	75/5A	1	1.5	std current transformer		476.00
7045	100/5A	1	2.5	std current transformer		476.00
7047	150/5A	1	2.5	std current transformer		476.00
7050	200/5A	1	5	std current transformer		476.00
7053	250/5A	1	5	std current transformer		476.00
ASK 41.4	current transformers	(H) 85.5 x (W) 71 x (D) 58 mm				
13044	100/5A	1	2.5	std current transformer	Ø32 40x10 30x15	406.00
13048	150/5A	1	5	std current transformer		406.00
13050	200/5A	1	5	std current transformer		406.00
13054	250/5A	1	10	std current transformer		406.00
13057	300/5A	1	10	std current transformer		406.00
13062	400/5A	1	15	std current transformer		406.00
13066	500/5A	1	15	std current transformer		406.00
13070	600/5A	1	15	std current transformer		406.00
13073	750/5A	1	15	std current transformer		406.00
13077	800/5A	1	15	std current transformer		406.00
ASK 51.4	current transformers	(H) 98.5 x (W) 86 x (D) 58 mm				
16055	400/5A	1	10	std current transformer	Ø44 50x10 40x20	515.00
16060	500/5A	1	15	std current transformer		515.00
16064	600/5A	1	15	std current transformer		515.00
16068	750/5A	1	15	std current transformer		515.00
16071	800/5A	1	15	std current transformer		515.00
16075	1000/5A	1	15	std current transformer		515.00
ASK 61.4	current transformers	(H) 105.5 x (W) 96 x (D) 58 mm				
19065	600/5A	1	15	std current transformer	Ø44 60x10 50x30	523.00
19069	750/5A	1	15	std current transformer		523.00
19073	800/5A	1	15	std current transformer		523.00
19076	1000/5A	1	15	std current transformer		523.00
19085	1250/5A	1	30	std current transformer		523.00
ASK 81.4	current transformers	(H) 123.5 x (W) 120 x (D) 58 mm				
21045	600/5A	1	10	std current transformer	Ø55 80x10 60x30	849.00
21049	750/5A	1	15	std current transformer		849.00
21053	800/5A	1	15	std current transformer		849.00
21056	1000/5A	1	15	std current transformer		849.00
21064	1250/5A	1	15	std current transformer		849.00
21072	1600/5A	1	30	std current transformer		849.00

Current transformers



ASK 103.3



ASK 103.41



121-1000...



121-10106

Current transformers

Class 1

General specifications:

- Nominal frequency: 50Hz (*others on request*)
- Isolation class: E
- Nominal thermal short-time current: $I_{th} = 60 \times I_n$
- Maximum operating voltage: $U_m \leq 0.72 \text{ kV}$
- Over-current limiting factor: FS 5 up to 1500 A nominal current

MBS AG current transformers conform fully to: DIN VDE 0414/1 - DIN 42600 - IEC 61869/1+2 - VBG 4

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round B/bar 1 B/bar 2	price
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Busbar mounted current transformers 5A secondary - class 1

ASK 101.4	current transformers	(H) 144 x (W) 130 x (D) 58 mm				
22055	1250/5A	1	30	std current transformer	Ø70 100x10 80x30	959.00
22062	1600/5A	1	30	std current transformer		959.00
22070	2000/5A	1	30	std current transformer		959.00

ASK 103.3	current transformers	(H) 187.5 x (W) 172 x (D) 52 mm				
23058	1600/5A	1	30	std current transformer	Ø85 100x30 80x50	1 100.00
23062	2000/5A	1	30	std current transformer		1 100.00
23066	2500/5A	1	30	std current transformer		1 100.00
23070	3000/5A	1	30	std current transformer		1 100.00

Rectangular hole for vertically mounted busbars

ASK 103.41	current transformers	(H) 150 x (W) 98.5 x (D) 58 mm				
97054	500/5A	1	5	std current transformer	Ø40 100x40 -	2 020.00
97056	600/5A	1	5	std current transformer		2 020.00
97058	750/5A	1	5	std current transformer		2 020.00
97060	800/5A	1	10	std current transformer		2 020.00
97062	1000/5A	1	15	std current transformer		2 020.00
97066	1250/5A	1	15	std current transformer		2 020.00
ASK 128.4	current transformers	(H) 150 x (W) 98.5 x (D) 58 mm				
94056	1250/5A	1	15	std current transformer	Ø38 128x38 -	2 840.00
94058	1500/5A	1	30	std current transformer		3 170.00
94060	2000/5A	1	30	std current transformer		3 310.00
94062	2500/5A	1	30	std current transformer		3 310.00

Accessories for current transformers

55013	DIN clip	DIN-rail mounting clip for current transformers	ASR 20.3	141.00
55011	DIN clip	DIN-rail mounting clip for current transformers	ASK 30.3	141.00
55012	DIN clip	DIN-rail mounting clip for current transformers	ASK 41.4	141.00

Rogowski coils and integrator

FASK series - Rogowski coils

As well as conventional CTs, Rogowski coils can be used for measuring current and are easy to attach and removed without disconnecting the power circuit.

- Certification: Complies with EMC EN 61326-1:2006
- Insulation voltage: Coil - 3000V / Supply cable: 1000V
- Transmission ratio: 100 mV/kA @ 50 Hz
- Operating temperature: -30 to +80°C

type	coil length (mm)	coil window size (mm)	description	cable length	price
121-10004	665	200	1 x Rogowski coil	3 m	4 340.00
121-10005	965	300	1 x Rogowski coil	3 m	4 340.00

Other sizes on request

ROI-3 integrator for above Rogowski coil

- Accuracy: 0.5% at 1% to 110% of the primary rated current
- Supply voltage: 24 VDC
- Dimensions: 114 x 100 x 22.5 mm

type	ratio	no of phases	description	module width	price
121-10106	2000/1A	3	integrator for Rogowski coil	22.5 mm	8 430.00
121-10107	4000/1A	3	integrator for Rogowski coil	22.5 mm	8 430.00
121-10108	6000/1A	3	integrator for Rogowski coil	22.5 mm	8 430.00

Current transformers

Current transformers .../5A Class 0.2 and 0.5

Modern meters and network analysers provide higher accuracy levels, requiring more accurate current transformers. We introduce a range of high accuracy and reliability Class 0.2s and 0.5 Current Transformers.

MBS AG current transformers conform fully to: IEC 60044 / DIN VDE 0414/1 - DIN 42600-2

type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round B/bar 1 B/bar 2	price
Busbar mounted current transformers				5A secondary - Class 0.5		
ASK 41.4 current transformers				(H) 85.5 x (W) 71 x (D) 58 mm		
13085	200/5A	0.5	5	std current transformer	Ø32 40x10 30x15	888.00
13086	250/5A	0.5	5	std current transformer		888.00
13087	300/5A	0.5	10	std current transformer		888.00
13088	400/5A	0.5	10	std current transformer		888.00
13089	500/5A	0.5	15	std current transformer		888.00
13090	600/5A	0.5	15	std current transformer		888.00
13031	800/5A	0.5	10	std current transformer		888.00
ASK 51.4 current transformers				(H) 101.5 x (W) 86 x (D) 58 mm		
16154	600/5A	0.5	15	std current transformer	Ø44 50x12 40x20	1 100.00
16203	750/5A	0.5	15	std current transformer		1 100.00
16033	800/5A	0.5	15	std current transformer		1 100.00
16036	1000/5A	0.5	15	std current transformer		1 100.00
ASK 61.4 current transformers				(H) 108.5 x (W) 96 x (D) 58 mm		
19031	800/5A	0.5	15	std current transformer	Ø44 63x10 50x20	1 210.00
19034	1000/5A	0.5	15	std current transformer		1 210.00
19101	1250/5A	0.5	30	std current transformer		1 210.00
ASK 81.4 current transformers				(H) 126.5 x (W) 120 x (D) 58 mm		
21023	1000/5A	0.5	15	std current transformer	Ø55 80x10 50x30	1 630.00
21029	1250/5A	0.5	15	std current transformer		1 630.00
21035	1600/5A	0.5	15	std current transformer		1 630.00
ASK 103.3 current transformers				(H) 187.5 x (W) 172 x (D) 52 mm		
23026	1600/5A	0.5	15	std current transformer	Ø85 100x30 80x50	2 580.00
23029	2000/5A	0.5	30	std current transformer		2 580.00
23032	2500/5A	0.5	30	std current transformer		2 580.00
23035	3000/5A	0.5	30	std current transformer		2 580.00
Busbar mounted current transformers				5A secondary - Class 0.2s		
ASK 41.4 current transformers				(H) 85.5 x (W) 71 x (D) 58 mm		
V24-1704D	200/5A	0.2s	2.5	std current transformer	Ø32 40x10 30x15	3 690.00
V24-1804F	250/5A	0.2s	5	std current transformer		3 690.00
V24-1904F	300/5A	0.2s	5	std current transformer		3 690.00
V24-2004H	400/5A	0.2s	10	std current transformer		3 690.00
V24-2104H	500/5A	0.2s	10	std current transformer		3 410.00
V24-2204F	600/5A	0.2s	5	std current transformer		3 690.00
ASK 51.4 current transformers				(H) 98.5 x (W) 86 x (D) 58 mm		
V34-2404H	800/5A	0.2s	10	std current transformer	Ø44 50x12 40x20	3 000.00
V34-2504J	1000/5A	0.2s	15	std current transformer		3 000.00
ASK 61.4 current transformers				(H) 105.5 x (W) 96 x (D) 58 mm		
V41-2704J	1250/5A	0.2s	15	std current transformer	Ø44 60x10 50x20	3 710.00
V41-2804J	1600/5A	0.2s	15	std current transformer		3 710.00
ASK 123.3 current transformers				(H) 184.8 x (W) 172 x (D) 52 mm		
V56-2704F	1250/5A	0.2s	5	std current transformer	Ø100 120x30 100x50	5 870.00
V56-2904J	1600/5A	0.2s	15	std current transformer		4 510.00
V56-3004J	2000/5A	0.2s	15	std current transformer		4 510.00
V56-3204J	2500/5A	0.2s	15	std current transformer		4 510.00
V56-3304J	3000/5A	0.2s	15	std current transformer		4 510.00



ASK 41.4



ASK 61.4



ASK 103.3



ASK 51.4

Current transformers

 WSK 40	type	ratio	class	Burden (VA)	description	dimensions (mm) (H) (W) (D)			price
	Primary wound current transformers					5A secondary - class 1			
	WSK 30	primary wound current transformers							
	30022	5/5A	1	5	wound current transformer	79	61	35	1 330.00
	30024	10/5A	1	5	wound current transformer	79	61	35	1 330.00
	30026	15/5A	1	5	wound current transformer	79	61	35	1 330.00
	30028	20/5A	1	5	wound current transformer	79	61	35	1 330.00
	WSK 40	primary wound current transformers							
	31070	25/5A	1	10	wound current transformer	89	71	45	1 550.00
	31074	30/5A	1	10	wound current transformer	89	71	45	1 550.00
 SUSK 4	Summation current transformers					5A secondary - class 1			
	KSU 2/3	summation current transformers							
	41015	5+5/5A	1	10	summation transformer	94	127	57	2 190.00
	41031	5+5+5/5A	1	10	summation transformer	94	127	57	3 040.00
	SUSK 4	summation current transformers							
 ASK 41.4	1A secondary - class 1 Busbar mounted current transformers								
	type	ratio	class	Burden (VA)	description	max. hole diameter (mm) round B/bar 1 B/bar 2			price
	ASK 41.4	current transformers				(H) 85.5 x (W) 71 x (D) 58 mm			
	13239	75/1A	1	1.5	std current transformer	Ø32	40x10	30x15	624.00
	13244	100/1A	1	2.5	std current transformer				624.00
	13248	150/1A	1	5	std current transformer				624.00
	13250	200/1A	1	5	std current transformer				624.00
	13254	250/1A	1	10	std current transformer				624.00
	13257	300/1A	1	10	std current transformer				624.00
	13262	400/1A	1	15	std current transformer				624.00
	13266	500/1A	1	15	std current transformer				624.00
	13270	600/1A	1	15	std current transformer				624.00
	13273	750/1A	1	15	std current transformer				624.00
	13277	800/1A	1	15	std current transformer				624.00
	ASK 51.4	current transformers				(H) 85.5 x (W) 71 x (D) 58 mm			
	16260	500/1A	1	15	std current transformer	Ø44	50x10	40x30	834.00
	16264	600/1A	1	15	std current transformer				834.00
	16268	750/1A	1	15	std current transformer				834.00
	16271	800/1A	1	15	std current transformer				834.00
	16275	1000/1A	1	15	std current transformer				834.00
	ASK 61.4	current transformers				(H) 105.5 x (W) 96 x (D) 58 mm			
	19265	600/1A	1	15	std current transformer	Ø44	60x10	50x30	819.00
	19269	750/1A	1	15	std current transformer				819.00
	19273	800/1A	1	15	std current transformer				819.00
	19285	1250/1A	1	30	std current transformer				819.00
	ASK 81.4	current transformers				(H) 123.5 x (W) 120 x (D) 58 mm			
	21253	800/1A	1	15	std current transformer	Ø55	80x10	60x30	1 440.00
	21256	1000/1A	1	15	std current transformer				1 440.00
	21264	1250/1A	1	15	std current transformer				1 440.00
	21272	1600/1A	1	30	std current transformer				1 440.00
	ASK 103.3	current transformers				(H) 185 x (W) 172 x (D) 52 mm			
	23251	1250/1A	1	30	std current transformer	Ø85	100x30	80x50	1 220.00
	23258	1600/1A	1	30	std current transformer				1 220.00
	23262	2000/1A	1	30	std current transformer				1 220.00
	23266	2500/1A	1	30	std current transformer				1 220.00
	23270	3000/1A	1	30	std current transformer				1 220.00
	 ASK 61.4								
 ASK 103.3									

Split-core current transformers

Split-core current transformers

The split measuring system facilitates simple installation into existing panel boards without additional mounting requirements. Simply open the locking mechanism of the current transformer place, around the primary conductor and lock ensuring that the circuit is closed. Once secondary conductors are connected and the unit is ready for operation.

MBS AG current transformers conform fully to: DIN VDE 0414/1 - DIN 42600 - IEC 61869/1+2 - VBG 4

type	ratio	class	Burden (VA)	description	hole diameter (mm) round	B/bar	price
KBR series - Split-core CTs				5A secondary - class 1			
• Delivered with 0.5m connection cable 2 x 1.5 mm ²							
KBR 18L	split-core current transformers			(H) 80.1 x (W) 49 x (D) 59 mm			
18L-5001	150/5A	1	1	split-core current transformer	Ø18.4	—	1 920.00
18L-5002	200/5A	1	1.5	split-core current transformer			1 920.00
18L-5004	250/5A	1	2	split-core current transformer			1 920.00
KBR 28	split-core current transformers			(H) 79.5 x (W) 49 x (D) 59 mm			
28-5002	300/5A	1	1.5	split-core current transformer	Ø26	—	2 100.00
28-5003	400/5A	1	2.5	split-core current transformer			2 100.00
28-5005	500/5A	1	3.0	split-core current transformer			2 100.00
KBR 42	split-core current transformers			(H) 96 x (W) 67 x (D) 69 mm			
42-5003	500/5A	1	5	split-core current transformer	Ø42.4	—	2 270.00
42-5005	600/5A	1	5	split-core current transformer			2 270.00
42-5009	800/5A	1	5	split-core current transformer			2 270.00
42-5011	1000/5A	1	5	split-core current transformer			2 270.00
KBU series - Split-core CTs				5A secondary - class 3 / 1 / 0.5			
KBU 23	split-core current transformers			(H) 106 x (W) 93 x (D) 58 mm			
80048	100/5A	3	1.25	split-core current transformer	Ø20	20x30	2 340.00
80030	150/5A	3	1.50	split-core current transformer			2 340.00
80031	200/5A	3	2.50	split-core current transformer			2 340.00
80044	250/5A	1	3.75	split-core current transformer			2 340.00
KBU 58	split-core current transformers			(H) 158 x (W) 125 x (D) 58 mm			
80061	250/5A	1	1.5	split-core current transformer	Ø 50	50x80	2 720.00
80062	300/5A	1	2.5	split-core current transformer			2 720.00
80063	400/5A	1	2.5	split-core current transformer			2 720.00
80038	400/5A	0.5	2.5	split-core current transformer			3 410.00
80064	500/5A	1	5.0	split-core current transformer			2 720.00
80054	500/5A	0.5	2.5	split-core current transformer			3 410.00
80065	600/5A	1	5.0	split-core current transformer			2 720.00
80055	600/5A	0.5	2.5	split-core current transformer			3 410.00
80067	800/5A	1	7.5	split-core current transformer			2 720.00
80057	800/5A	0.5	2.5	split-core current transformer			3 410.00
80068	1000/5A	1	10	split-core current transformer			2 720.00
80058	1000/5A	0.5	5	split-core current transformer			3 410.00
KBU 812	split-core current transformers			(H) 198 x (W) 155 x (D) 58 mm			
80098	1000/5A	1	10	split-core current transformer	Ø80	120x80	3 230.00
80100	1250/5A	1	15	split-core current transformer			3 230.00
80080	1250/5A	0.5	7.5	split-core current transformer			3 810.00
KBU 816	split-core current transformers			(H) 243 x (W) 195 x (D) 79 mm			
80147	1600/5A	1	15	split-core current transformer	Ø 80	160 x 80	3 800.00
80115	1600/5A	0.5	15	split-core current transformer			4 390.00
80149	2000/5A	1	15	split-core current transformer			3 800.00
80117	2000/5A	0.5	15	split-core current transformer			4 390.00
80151	2500/5A	1	15	split-core current transformer			3 800.00
80120	2500/5A	0.5	15	split-core current transformer			4 390.00
80153	3000/5A	1	30	split-core current transformer			3 800.00
80122	3000/5A	0.5	15	split-core current transformer			4 390.00
80155	4000/5A	1	30	split-core current transformer			3 800.00
80157	5000/5A	1	30	split-core current transformer			3 800.00

Available with 1A secondary on request



KBR 28



KBU 23



KBU 816

Current transformers



IMN1...



IBR1...



IBR3...



FL-2/001-7



FL-2/060-7



type	ratio	description	class	VA	dimensions (mm) (H) (W) (D)			price	
IMN1 ring type transformers									
Ø round conductor: 32 mm									
IMN1/05	50/5A	ring current transformer	3	1.25	87	64	42	235.00	
IMN1/06	60/5A	ring current transformer	3	1.25	87	64	42	236.00	
IMN1/07	75/5A	ring current transformer	3	1.25	87	64	42	238.00	
IMN1/10	100/5A	ring current transformer	1	2.5	87	64	42	238.00	
IMN1/12	125/5A	ring current transformer	1	2.5	87	64	42	239.00	
IMN1/15	150/5A	ring current transformer	1	3.75	87	64	42	240.00	
IMN1/16	160/5A	ring current transformer	1	3.75	87	64	42	242.00	
IMN1/20	200/5A	ring current transformer	1	5	87	64	42	252.00	
IMN1/25	250/5A	ring current transformer	1	7.5	87	64	42	257.00	
4 - 20 mA version on request									
IMN2 current transformers									
Primary bar conductor: 40 x 12.5 mm									
Ø round conductor: 38 mm									
IMN2/16	160/5A	ring current transformer	1	5	99	75	42	321.00	
IMN2/20	200/5A	ring current transformer	1	10	99	75	42	330.00	
IMN2/25	250/5A	ring current transformer	1	10	99	75	42	352.00	
IMN2/30	300/5A	ring current transformer	1	15	99	75	42	364.00	
IMN2/40	400/5A	ring current transformer	1	25	99	75	42	386.00	
IMN2/50	500/5A	ring current transformer	1	30	99	75	42	449.00	
IMN2/60	600/5A	ring current transformer	1	30	99	75	42	450.00	
IBR1 current transformers									
Primary bar conductor: 60 x 20 mm									
Ø round conductor: 60 mm									
IBR1/06	600/5A	ring current transformer	0.5	7.5	115	104	45	523.00	
IBR1/08	800/5A	ring current transformer	0.5	15	115	104	45	519.00	
IBR1/10	1000/5A	ring current transformer	0.5	30	115	104	45	554.00	
IBR1/12	1250/5A	ring current transformer	0.5	30	115	104	45	593.00	
IBR3 current transformers									
Primary bar conductor: 100 x 30 mm									
Ø round conductor: 110 mm									
IBR3/12	1250/5A	ring current transformer	0.5	15	170	152	45	787.00	
IBR3/16	1600/5A	ring current transformer	0.5	30	170	152	45	878.00	
IBR3/20	2000/5A	ring current transformer	0.5	30	170	152	45	884.00	
IBR3/25	2500/5A	ring current transformer	0.5	30	170	152	45	894.00	
IBR3/30	3000/5A	ring current transformer	0.5	30	170	152	45	958.00	
IBNP primary wound current transformers									
IBNP/05	5/5A	primary wound CT	0.5	5	111	68	43	345.00	
IBNP/10	10/5A	primary wound CT	0.5	5	111	68	43	345.00	
IBNP/15	15/5A	primary wound CT	0.5	5	111	68	43	345.00	
IBNP/20	20/5A	primary wound CT	0.5	5	111	68	43	345.00	
IBNP/25	25/5A	primary wound CT	0.5	5	111	68	43	345.00	
IBNP/30	30/5A	primary wound CT	0.5	5	111	68	43	345.00	
IBNP/40	40/5A	primary wound CT	0.5	5	111	68	43	345.00	
DC shunts									
75mV output									
- Accuracy:		0.50%							
- Overload:		120% continuously, 1000% for 5 seconds							
type	current	output	description	dimensions (mm)					
							mount holes		
				(H)	(W)	(D)	centre	Ø	
FL-2/001-7	10A	75mV	DC shunts	120	25	14	100	6.5	208.00
FL-2/002-7	20A	75mV	DC shunts	120	25	14	100	8.5	208.00
FL-2/003-7	30A	75mV	DC shunts	120	25	14	100	8.5	208.00
FL-2/004-7	40A	75mV	DC shunts	120	25	14	100	8.5	208.00
FL-2/005-7	50A	75mV	DC shunts	120	25	14	100	8.5	208.00
FL-2/006-7	60A	75mV	DC shunts	109	23	11	85	8.5	378.00
FL-2/007-7	75A	75mV	DC shunts	109	23	11	85	8.5	378.00
FL-2/010-7	100A	75mV	DC shunts	109	23	11	85	8.5	434.00
FL-2/015-7	150A	75mV	DC shunts	118	22	22	85	8.5	471.00
FL-2/020-7	200A	75mV	DC shunts	118	22	22	85	8.5	490.00
FL-2/025-7	250A	75mV	DC shunts	127	46	22	100	10.5	510.00
FL-2/030-7	300A	75mV	DC shunts	127	46	22	100	10.5	585.00
FL-2/040-7	400A	75mV	DC shunts	127	46	22	100	10.5	792.00
FL-2/050-7	500A	75mV	DC shunts	127	46	22	100	10.5	981.00
FL-2/060-7	600A	75mV	DC shunts	127	76	22	100x50	4x10.5	1 230.00
FL-2/075-7	750A	75mV	DC shunts	127	76	22	100x50	4x10.5	1 470.00
FL-2/100-7	1000A	75mV	DC shunts	127	96	22	100x50	4x10.5	1 890.00
60mV available on request									
Intermediate and larger sizes up to 10 000A also available on request									

Notes

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

