

E

METERING

E

	Modular energy (kWh) meters	E-1 E-9	Lovato Socomec
	Modular multimeters	E-2 E-10	Lovato Socomec
	Panel mount network analysers	E-3...5 E11...12	Lovato Socomec
	Digital panel meters	E-7...8	Lovato
	Power monitoring systems	E-6 E-13...17	Lovato Socomec
	Analog panel meters	E-18	EM
	Current transformers (CT's)	E-19...22 E-24	MBS EM
	Split core current transformers (CT's)	E-23	MBS
	Datalogger	E-17	Socomec



DMED110T1



DMED120T1



DMED330



DMECD

EXM1001



EXM1010

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 current transformer (CT).

Expandable versions of the DMED models are available with 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.



type	input current	description	static pulse output	module width x 18 mm	price
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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 connection digital energy meter	1	1	1 236.29
DMED110T1	40A	direct connection digital energy meter	1	1	3 053.35
DMED111	40A	as above with RS-485 interface	-	1	2 154.02
DMED120T1	63A	direct connection digital energy meter	1	2	1 933.22
DMED121	63A	as above with RS-485 interface	-	2	2 661.19
DMED130LM	63A	includes EXM1001 module	-	2	8 464.27

Three phase direct connection 80A (modular design DIN rail mountable)

Multi-measurements: Total and partial active, reactive energy, active, reactive power, voltage, current and power factor, hour counter.

- Graphic backlit LCD screen with 6+1 digits
- Tariff selection (2 tariffs)

DMED300T2	80A	3ph+N digital energy meter	2	4	4 434.54
DMED301	80A	3ph+N digital energy meter (RS-485)	-	4	5 068.21

Three phase CT connection .../5A (modular design DIN rail mountable)

Multi-measurements: Total and partial active, reactive energy, active, reactive power, voltage, current and power factor.

- Backlit LCD screen (128 x 80 pixels)

DMED310T2*	/5A	3ph digital energy meter	2	4	5 068.21
DMED330	1/5A	3ph digital energy meter (RS-485)	-	4	4 750.80

* 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, using Xpress software.

- 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	9 235.94
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Expansion modules for DMED310T2, DMECD, DMG300 (DIN rail mountable)

EXM8004	sealable terminal cover for DMG100/110/200/210/300	2	120.76
EXM1001	2 opto-isolated digital inputs and 2 relay outputs (5A 250 VAC)	2	3 547.87
EXM1002	4 opto-isolated digital inputs and 2 relay outputs (5A 250 VAC)	2	6 143.50
EXM1010	opto-isolated USB interface	2	3 547.87
EXM1012	opto-isolated RS-485 interface	2	2 624.39
EXM1013	opto-isolated Ethernet interface	2	4 406.94
EXM1020	opto-isolated RS-485 interface and 2 relay outputs (5A 250 VAC)	2	3 906.68
EXM1030	data storage, clock-calendar (RTC) with backup for data logging	2	8 276.81



DMG100



DMG200



DMG300



new

PMVF80

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

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

Voltage/Current:	±0.5%	(<i>True RMS measurements</i>)
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	module width x 18 mm	price								
DMG100 series - LCD multifunction meters <i>economical with icon LCD display</i>											
<ul style="list-style-type: none"> • 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	3 800.87								
DMG110	modular power analyser with RS-485 interface	4	4 434.54								
DMG200 series - LCD multifunction meters <i>with graphic backlight LCD display</i>											
As above DMG100 but with following additional features:											
<ul style="list-style-type: none"> • Voltage measurement: 20...830 VAC L-L 											
DMG200	modular power analyser	4	6 334.40								
DMG210	modular power analyser with RS-485 interface	4	8 235.41								
DMG300 series (expandable) <i>with graphic backlight LCD display</i>											
As above DMG200 but with following additional features:											
<ul style="list-style-type: none"> • Voltage measurement: 20...830 VAC L-L / 10...480 VAC L-N • Optional communication ports: USB, RS-232, RS-485, Ethernet • Harmonic analysis of voltage and current up to the 31° order 											
<ul style="list-style-type: none"> • Accuracy: <table style="display: inline-table; vertical-align: top; margin-left: 20px;"> <tr> <td>Voltage/current</td> <td>±0.2%</td> </tr> <tr> <td>Power/power factor</td> <td>±0.5%</td> </tr> <tr> <td>Frequency</td> <td>±0.05%</td> </tr> <tr> <td>Active energy</td> <td>class 0.5S (IEC/EN 62053-22)</td> </tr> </table> 				Voltage/current	±0.2%	Power/power factor	±0.5%	Frequency	±0.05%	Active energy	class 0.5S (IEC/EN 62053-22)
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	9 501.60								
* Accepts EXM... (up to 3) plug-in optic expansion modules, see page E-1											
PV interface protection unit <i>(modular design DIN rail mountable)</i>											
The PMVF80 has been designed as grid protection device to disconnect PV systems. It is used when a local generating system is connected in parallel with the electric utility. The controls refer to limits of voltage and frequency monitoring. In compliance with regulations set out in NRS 097-2-1:2017 (<i>compliant with VDE-AR-N4105</i>)											
In the event of problems on the grid (<i>e.g. due to maintenance</i>), the system trips by opening the interface switch (<i>e.g. contactor</i>) and isolating the generation system. In the event of interface switch (IS) failure, it can also control a backup device to disconnect the generation system.											
<ul style="list-style-type: none"> • Programmable rated voltage and frequency thresholds and delays • Voltage measurements range: 20...480 VAC L-L / 10...276 VAC L-N • Supports EXM series expansion modules (<i>USB, RS-232, RS-485 and Ethernet</i>) • Optional current inputs via CTs with selectable secondary • Complies with: VED, VDES0126-1-1, IEC/EN/BS60255-27 											
type	aux. power supply	inputs	outputs	description	price						
PMVF80	100 - 240 VAC	4	2	Din mount meter with RS-485 Modbus	14 674.46						

new



DMG620



DMG611...



EXP1004

Flush mounting digital metering instruments (96 x 96 mm)

The **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, expendability and a graphic interactive interface for simple use.

Main measurement functions include:

- True RMS measurements of voltage and current values
- HIGH-LOW-AVERAGE value functions for all measurements
- Maximum demand of power and current values
- Energy meters for active, reactive, apparent partial and total values
- Hour counter for programmable total and partial hours
- Current input: CT - 1A or 5A
- Power: apparent/active/reactive: ±1% f.s. - phase and total values
- Frequency measurement range 45...66Hz: ±0.05%
- Harmonic distortion (THD) Voltage and Current: Up to the 15th order
- Active energy: Class 1 (IEC/EN 62053-21)
- Reactive energy: Class 2 (IEC/EN 62053-23)
- P.F. Power Factor (*per phase and total*): ±0.5%

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

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

DMG500	no	no	digital panel mount power analyser	–	3 459.31
DMG510	RS-485	no	digital panel mount power analyser	–	3 991.78

DMG600 series - Multi measurement instrument with backlit LCD icon display

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
Active energy: **DMG600/610** - Class 1 / **DMG615/620** - Class 0.5s
Memory: Non volatile memory for data storage
Display: Wide graphic LCD display
Expansion: Accepts 1 plug-in expansion module
Measurement accuracy: **DMG600/610** - voltage/current +/- 0.5s
DMG615/620 - voltage/current +/- 0.2s

DMG600	no	yes	digital panel mount power analyser	1	4 324.14
DMG610	RS-485	yes	digital panel mount power analyser	1	4 988.86
DMG615	RS-485	yes	digital panel mount power analyser	1	6 018.14
DMG620	Ethernet	yes	digital panel mount power analyser	1	8 074.41

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	21 540.18
DMG611R3000	RS-485	yes	100...3000A	power analyser with Rogowski coils	1	23 127.23

Expansion modules and accessories for above DMG series

Inputs and outputs

EXP1000	4 digital opto-isolated inputs					1 982.67
EXP1001	4 static opto-isolated outputs					1 982.67
EXP1002	2 digital inputs and 2 static outputs, opto-isolated					2 378.28
EXP1003	2 output relays (5A 250 VAC)					2 378.28
EXP1004	2 analog opto-isolated inputs	0/4 - 20mA or 0-5/10V		(for DMG75/8/9000)		7 129.08
EXP1005	2 analog opto-isolated outputs	0/4 - 20mA or 0-5/10V		(for DMG75/8/9000)		7 129.08

Communication ports

EXP1010	opto-isolated USB interface					3 566.27
EXP1011	opto-isolated RS-232 interface					3 566.27
EXP1012	opto-isolated RS-485 interface					1 468.60
EXP1013	opto-isolated Ethernet interface					3 428.26
EXP1014	opto-isolated Profibus-DP interface			(for DMG75/8/9000)		14 823.97

Software and accessories for DMG7500/8000/9000

CX01				PC - controller USB dongle with connecting cable		3 583.52
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INTRODUCING THE NEW DMG SERIES - POWER ANALYSER



WIDESCREEN
COLOUR LCD

VOLTAGE AND CURRENT HARMONIC
ANALYSIS UP TO THE **63rd ORDER**

HIGH ACCURACY LEVEL
FOR **MEASUREMENTS**

POLAR **DIAGRAM**

INTEGRATED
COMMUNICATION

PLC LOGIC

NFC CONFIGURATION

EXPANDABILITY
FOR INTEGRATION WITH
SIGNALS FROM THE FIELD

WEB SERVER

STATISTICS
ACCORDING TO EN 50160

INTEGRATED DATA **MEMORY**

Comparative table

	DMG7500	DMG8000	DMG9000
Built-in RS485 port	■	-	■
Built-in Ethernet port (with web-server)		■	■
Ethernet-RS485 gateway function	+ 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	■	■	■

new



DMG...



Embedded Web-Server



DMG9000 + CX01

Power analysers with widescreen colour LCD

(flush mounting - cutout 92 x 92mm)

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

- 4.3" Widescreen (H) 96 x (W) 118mm colour LCD permits optimal indication of measures and parameters
- 3 programmable front LEDs provides device status at a glance
- Programmable via NFC (Near Field Communication) or optical ports
- Perform simple automation with built in PLC logic functionality via Xpress
- Measurements are verified according to the recognised international standards: IEC 62053-22 (class 0.5s), IEC 62053-24 (class 1) and IEC 61557-12
- Auxiliary power supply: 100...240 VAC / 110...250 VDC
- Voltage measurement range: 40...830 L-L / 5...480 L-N
- Voltage: phase, phase-neutral and ground neutral-earth
- Current: phase values
- Neutral current calculated and true values
- Power: apparent, active and reactive phase and total values
- P.F. Power Factor per phase and total / Cosφ per phase
- Frequency of measured voltage value
- Voltage and current asymmetry
- Total harmonic distortion (THD) of voltage and current
- Harmonic analysis of voltage and current up to the 63rd order
- HIGH-LOW-AVERAGE value functions for all measurements
- Maximum demand of power and current values
- Energy meters with programmable tariff functions
- Hour counter for programmable total and partial hours
- Pulse counter for consumption of water, gas, etc.(with expansion module)
- Energy quality analysis to EN 50160 (with DMG9000)
- Expansion with (up to 3) EXP...plug-in modules
- Modbus protocol support



Embedded Web-Server function (DMG8000 and DMG9000)

Setting of all parameters

The programming of the parameters, as well as from the front panel, can also be done through the browser on a PC. The built-in web-server also allows the setting of the parameters of the EASY BRANCH power monitoring system, such as the descriptions of the individual measurement points.

Webserver and built-in data memory

A flash data memory allows archiving of historical data. Through the built-in webserver the user can:

- Select the measures (up to 128)
- Set the sampling frequency
- Download the .CSV file with the acquired information

For example, by sampling 20 measurements with 1 minute of sampling time, 10 days of data can be stored.

Measurement view

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

type	comm. port	description	expansion slots	price
DMG7500 - Power analyser with built-in RS-485 IP65				
• Compatible with EASY BRANCH power monitoring system (see opposite page, E-6)				
DMG7500	RS-485	digital panel mount power analyser	3	7 961.70
DMG8000 - Power analyser with built-in Ethernet and Web Server IP65				
• Web Server and memory for data collection				
• Compatible with EASY BRANCH power monitoring system (see opposite page, E-6)				
DMG8000	Ethernet / Web Server	digital panel mount power analyser	3	13 650.93
DMG9000 - Power analyser with built-in Ethernet and RS-485 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	panel mount power analyser	3	18 768.59
CX01		PC - controller USB dongle with connecting cable		3 583.52

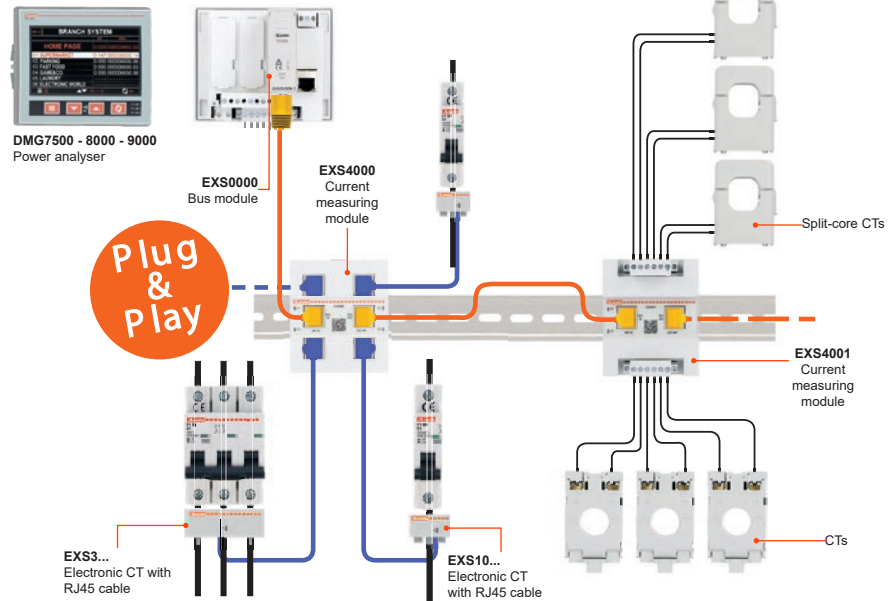
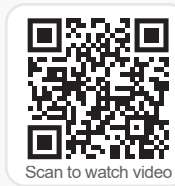
EASY BRANCH POWER MONITORING SYSTEM / **PLUG & PLAY**

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



new

EASY BRANCH - Power monitoring system

The 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

Installed in one of the expansion slots of the power analyzer, 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	3 884.83
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Current measuring modules - connects to bus module using ethernet cable (Cat6)

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	9 580.95
EXS4001	6	current measuring module for traditional CTs	8 804.68

For traditional CTs, see page **E-19...24**

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

EXS1032	32A	7.8	7 mm	single phase electronic CT	2m	1 813.61
EXS1063	63A	7.8	7 mm	single phase electronic CT	2m	1 813.61
EXS1080	80A	12.2	12 mm	single phase electronic CT	2m	1 813.61
EXS1125	125A	12.2	12 mm	single phase electronic CT	2m	1 813.61

Three phase

EXS3032	32A	7.6	18 mm	three phase electronic CT	2m	3 185.60
EXS3063	63A	7.6	18 mm	three phase electronic CT	2m	3 185.60
EXS3080	80A	12.2	27 mm	three phase electronic CT	2m	3 185.60
EXS3125	125A	12.2	27 mm	three phase electronic CT	2m	3 185.60



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 (*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

type	description	monitored range	price
Voltage monitors (<i>measures and displays single and three phase voltages</i>)			
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...500.00 (accuracy: ±0.25% f.s. ±1digit)		
DMK80R1	1-phase over/under voltage meter/monitor	15 - 660 VAC	2 500.18
DMK70R1	3-phase over/under voltage meter/monitor	15 - 660 VAC	2 784.24
DMK70	3-phase voltage meter/monitor	15 - 660 VAC	1 522.65
Current monitors (<i>measures and displays single and three phase currents</i>)			
Measurement range:	0.05A...5.75A (CT ratio: 5...10.000A) ±0.5%		
Overcurrent range:	Off / 102...200% (delay 0 - 900sec)		
Undercurrent range:	Off / 5...98% (delay 0 - 900sec)		
Instantaneous tripping:	Off / 110...600%		
DMK81R1	single-phase over/under current meter/monitor	0.05A - 5.75A	2 594.49
DMK71R1	three-phase over/under current meter/monitor	0.05A - 5.75A	2 993.55
Frequency monitors (<i>measures and displays line frequency</i>)			
Measurement range:	15...660V / 50...60 Hz (±10%)		
DMK83R1	frequency meter/monitor	45 - 65Hz	3 378.81
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%	
– Current	Asymmetry:	Off / 2...20%	0.05...5.75A
	Phase sequence:	Off / L1-L2-L3 / L3-L2-L1	
	Current loss:	Off / 2...100%	
– Power	Maximum current:	Off / 102...200%	45...66Hz
	Minimum current:	Off / 5...98%	
	Maximum current instantaneous trip:	Off / 110...600%	
	Rated power:	1...10.000 kW	
	Maximum power:	Off / 101...200%	
– Frequency	Max power instantaneous trip:	Off / 110...600%	4 228.69
	Minimum power:	Off / 10...99%	
	Maximum frequency:	Off / 101...110%	
DMK75R1	three-phase multi measurement digital meter/monitor		



DMK00R1



DMK10R1



DMK01R1



DMK11R1

Digital panel meters Panel mount (H) 48 x (W) 96 mm

General features:

- Auxiliary supply 220...240 VAC (others on request)
- True RMS measurements
- 0.5 current / 0.25 voltage
- Current measure range: 0.05...5.75A
- Frequency range: 45...65Hz
- Accuracy: $\pm 0.25\%$ f.s ± 1 digit

Additional features:

- Connection by external CTs
- Memory storage of maximum and minimum values
- Storing of minimum and maximum values
- IEC protection degree: IP54 on front; IP20 at terminals
- Current transformer (CT) primary setting using "A" key on front
- Programmable time delay for max, min or voltage/current loss (0 - 900 sec)

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:		102...120% Ue	(0 - 900sec)	
– Maximum voltage:		5...85% Ue	(0 - 900sec)	
– Minimum voltage:		70...98Ue	(0 - 900sec)	
DMK00R1	single phase digital voltage monitor	relay out	15-660 VAC	2 818.74
DMK10R1	three phase digital voltage monitor	relay out	15-660 VAC	3 044.15
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	single phase digital current monitor	relay out	0.05 - 5.75A	2 818.74
DMK11R1	three phase digital current monitor	relay out	0.05 - 5.75A	3 044.15
Three-phase multi-measurement instrument combination voltage, current, power factor				
• Voltage: Ph-to-Ph and Ph-to-Neutral values				
• Power factor				
• Current: 3 phase				
• Frequency				
• Hour counter				
• Active, reactive, apparent power and energy				
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...10.000				
DMK16	three-phase multi-meter only	meter only	multi-meter	4 146.25
DMK16R1	three-phase multi-meter and monitor	relay out	multi-meter	4 958.96



4850 3058



4850 3043



4850 3054



4850 3012



4853 0000

COUNTIS series - Active energy meters (kWh meters)

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).

The COUNTIS E range is compatible with every type of integration, network and load (direct readings up to 100 A and up to 6000 A on the CT). There are multiple features and benefits with this range: MID metering, various communication protocols, multimeasurements and multi-tariff options.

The COUNTIS E range perfectly meets the needs and constraints of every electrical system: industrial buildings, medical centres, data centres, infrastructures, high rise buildings.

type	current	reading	RS-485 modbus	dual tariff	description	width in 17.5 mm	price
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Single phase direct connection kWh meters (modular design DIN rail mounting)

- Display: LCD display
- Bidirectional: Energy consumption and production
- Measurement accuracy: 1 %
- Rated supply voltage: 230 VAC
- Pulse output: 100Wh
- Active energy: Class 1 (IEC/EN 62053-21) Class B (EN 50470)

4850 3058	E00	40A	direct	no	no	single phase kwh meter	1	1 481.25
4850 3039	E03	40A	direct	yes	yes	single phase kwh meter	1	2 321.93
4850 3060	E11	80A	direct	no	yes	single phase kwh meter	2	4 219.49
4850 3043	E13	80A	direct	yes	yes	single phase kwh meter	2	5 286.72
4850 3047*	E17	80A	direct	no	yes	single phase kwh meter	2	12 270.89

* Ethernet web server embedded

Three phase direct connection kWh meters (modular design DIN rail mounting)

- Display: Backlit LCD display
- Rated supply voltage: 230...400 VAC
- Pulse output: 100Wh
- Measurement accuracy: 1 %
- Detection: Detects connection errors
- Bi-directional: Energy consumption and production
- Active energy: Class 1 (IEC/EN 62053-21) Class B (EN 50470)
- Typical applications: Industry, infrastructure, data centre

4850 3003	E20	63A	direct	no	no	three phase kwh meter	4	3 168.35
4850 3062	E21	80A	direct	no	yes	three phase kwh meter	4	5 176.32
4850 3050	E23	80A	direct	yes	yes	three phase kwh meter	4	6 618.46
4850 3054*	E27	80A	direct	no	yes	three phase kwh meter	4	14 685.96
4850 3005	E30	100A	direct	no	no	three phase kwh meter	7	6 324.05
4850 3006	E31	100A	direct	no	yes	three phase kwh meter	7	6 833.52
4850 3012	E33	100A	direct	yes	via com	three phase kwh meter	7	7 953.65

* Ethernet web server embedded

Note MID compliant devices available on request.

CT operated ...1/5A

4850 3063	E41	..1/5A	CT	no	no	three phase kwh meter	4	4 340.24
4850 3065	E43	..1/5A	CT	yes	via com	three phase kwh meter	4	5 686.93
4850 3027*	E45	..1/5A	CT	yes	via com	three phase kwh meter	4	7 018.67

* Mbus

Pulse concentrator (modular design DIN rail mounting)

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 (litres, m³...)
- Customisation by selection of the measuring unit: kWh, m³, litres
- Generate event alarms (1 dedicated relay output)
- 230... 400 VAC supply

4853 0000	ECi2			yes		pulse concentrator for up to 7 inputs	4	7 840.95
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DIRIS series - Multifunction meters

Compact and ergonomic, the **DIRIS** multifunction meter specially adapted for monitoring and managing electrical energy. Its communication function allows the analysis of data collected via a PLC or energy management software.

- Compact: Panel or Din rail mount options enables easy integration into any type of electrical cabinet
- Compliant: **IEC61557-12** high-level standard for all PMD's (*Performance Monitoring Devices*)
- RS-485: Communication permits the extraction of data and device configuration remotely
- Ease of use: Permits easy navigation via direct keys and easy to read backlit LCD screen display
- Advanced: Programmable input and output as standard including pulse metering, alarm report and pulse output

Multi-measurement (model dependant)

- Frequency - 45...65 Hz
- Current - Instantaneous and maximum average I1, I2, I3, In
- Voltage and frequency - Instantaneous V1, V2, V3, U12, U23, U31,F
- Power - Instantaneous and maximum average 3P, ΣP, 3Q, ΣQ, 3S, ΣS
- Power factor - Instantaneous 3PF, ΣPF and maximum average
- Energy - Active energy: +/- kWh Reactive energy: +/- kvarh - hours
- Harmonic analysis - THD Current, voltage, phase-to-phase voltage
- Events - Alarms on all electrical values
- Energy accuracy - Active energy class 0.55 (IEC 62053-23)

Advantages

- High performance: Class 0.5S IEC 62053-22
- Connectivity: Ethernet and embedded web server
- Plug & Play: Direct access to configuration, parameters and measurement on its large backlit LCD display



4825 0401



4825 0020

type	auxiliary power supply	width in	description	price
		17.5 mm		

DIRIS A10 - Multifunction meter *DIN rail mount*

The **DIRIS A10** 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.

Advantages

- **Easy to use:** Five direct access pushbuttons enable all measurements to be clearly viewed on its backlit LCD display
- **Integrated temp sensor:** It allows variations in temperature to be detected
- **Detects wiring errors:** An integrated test function can be utilised to detect incorrect wiring and to automatically correct CT installation errors

- Compliant with IEC 61557-12
- Navigation is via 5 direct access keys and easy to read screen display
- Harmonic analysis up to (*level 51*)
- Integrated temperature sensor
- Detects wiring errors to automatically correct CT installation errors
- Dual tariff selection
- Dimensions: 72 x 90 mm x 64 mm deep

4825 0401	110 - 277 VAC	4	A10	as above with RS-485 Modbus comms	4 993.46
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DIRIS A14 - Multifunction meter *DIN rail mount*

DIRIS A14 with MID certification provide the guaranteed accuracy required for applications in which sub-billing of the electrical energy consumed is necessary. With Bi-directional metering (*four quadrants*) function, allowing for measurement of energy production or consumption.

- Auxiliary power supply : Self supply
- Display of electrical values (I,U,V, ΣP, ΣQ, ΣQ, ΣS, PF) Over a 7 day period via communication
- Total and partial metering +/- Kwh +/- Kvarh
- Harmonic analysis (via comm) up to level 63
- Multi traffic functions (via comm.) selection of one our of four billing tariffs
- Dimensions: 72 x 90 mm x 64 mm deep
- Backlit LCD display
- Detection of connection errors
- Multi-measurement and load curve

4825 0020	50 to 460 VAC +/- 15%	4	A14	72 x 90 mm MID + RS-485 Modbus comm.	6 571.31
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4825 0402



4825 0403



4825 0094

type	auxiliary power supply	number plug-in modules		description	price
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DIRIS A20 - Multifunction meter *panel mount*

DIRIS A20 multifunction meters are panel mounted measurement units which ensure the user has access to all the measurements required for successfully carrying out energy efficiency projects and ensuring the electric distribution is monitored. DIRIS A-20 can provide the user with flexibility and expandability throughout the service life of the product.

General features:

- Hours metering
- Accuracy: Class 0.5s
- Compliant with IEC 61557-12
- Harmonic analysis up to (level 51st order)
- Large backlit multiple-display screen with 4 hot keys
- Detects wiring errors to automatically correct CT installation errors
- Accepts 1 x functional plug-in module for output or RS-485 Modbus communication
- Dimensions: 96 x 96 mm x 60 mm deep

4825 0402	110 - 400 VAC	A20	96 x 96 mm panel mount multifunction meter	4 941.71
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DIRIS A30/41 - Multifunction meter *96 x 96 mm panel mount 60 mm deep*

The **DIRIS A30/41** series provides access to all measurements required for successfully carrying out energy efficiency projects for electrical distribution monitoring, the units are easily customisable or upgradeable through optional plug-in modules (up to 4)

- A41 has CT current input for measuring neutral current as well
- Provides accurate instantaneous, average and maximum levels of most important measurements
- Metering active, reactive and apparent energy with hours
- Harmonic analysis up to (level 53rd order)
- Provide load curves of Active/Reactive power with voltages and frequency
- Accepts 4 x functional plug-in modules
- Dimensions: 96 x 96 mm

4825 0403	110 - 400 VAC	4	A30	96 x 96 mm panel mount multifunction meter	8 731.08
4825 0404	110 - 400 VAC	4	A41	as above with neutral monitoring	12 592.90
4825 0405	12 - 48 VDC	4	A30	96 x 96 mm panel mount multifunction meter	13 754.44

Accessories for DIRIS meters

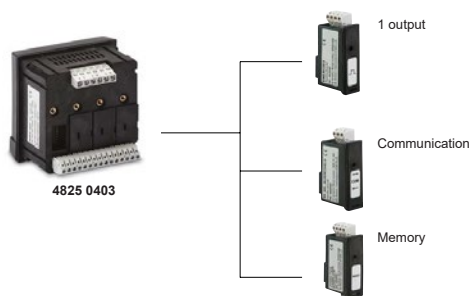
type	function		description	for model	price
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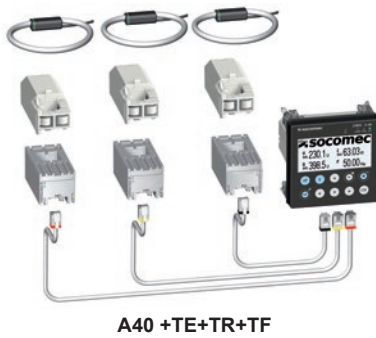
Plug-modules

(for customisation or upgrading of meters)

4825 0080	1 x output		plug-in optional modules	A20	555.47
4825 0082	RS-485 Modbus comms		plug-in optional modules	A20	798.13
4825 0090	2 configurable pulse outputs		plug-in optional modules	A30/41	798.13
4825 0092	RS-485 Modbus comms		plug-in optional modules	A30/41	1 381.20
4825 0093	2 Analog outputs		plug-in optional modules	A30/41	2 240.28
4825 0094	2 inputs / 2 outputs		plug-in optional modules	A30/41	1 254.69
4825 0205	Sub D9 PROFIBUS DP comm		plug-in optional modules	A30/41	9 031.24
4825 0097	Memory		plug-in optional modules	A30/41	1 132.79
4825 0203	Ethernet comm. + Modbus TCP		plug-in optional modules	A30/41	5 528.23
4825 0204	Ethernet + RS-485 Modbus TCP		plug-in optional modules	A30/41	5 159.07
4825 0089	IP65 protection cover		for DIRIS meters	A30/41	373.77

DIRIS A... multifunction meters + optional plug-in modules for customisation or upgrading of meters. See below example.





A40 +TE+TR+TF

DIRIS A40 is a Panel Mounted Monitoring Device (PMD). It offers a range of functions for measuring voltage, current, power, energy and quality. It is designed for measuring, monitoring and reporting historical data and allows analysis of a single phase or three phase load.

Multi-measurement:

- Current - Instantaneous and maximum average I1, I2, I3, In
- Voltage and frequency - Instantaneous V1, V2, V3, U12, U23, U31, Ussystem
- Frequency - 45...65 Hz
- Power - Instantaneous and maximum average 3P, ΣP, 3Q, ΣQ, 3S, ΣS
- Power factor - Instantaneous 3PF, ΣPF
- Energy - Active energy: +/- kWh Reactive energy: +/- kvarh - hours
- Harmonic analysis - THD Current, voltage, phase-to-phase voltage
- Events - Alarms on all electrical values
- Inputs - 3 digital inputs (*pulse metering, status checking*)
- Outputs - 2 outputs (*alarms or pulses*)

Power and energy measurement:

- Accuracy - 0.2 DIRIS A-40 Class only
- Active energy and active power - Class 0.5 with TE, TF or iTR sensors - Class 1 with TR sensors
- Accuracy of reactive energy - Class 2 with TE, TR or TF sensors

Voltage measurement:

- Characteristics of the network measured - 50...300 VAC (Ph/N) - 87...520 VAC (Ph/Ph) - CAT III
- Frequency accuracy - Class 0.02



4825 ...

type	Aux. power supply	inputs	outputs	description	price
DIRIS A40 - Multifunction meter			<i>92 x 92 mm panel mount 68 mm deep</i>		
4825 0500	110 - 400 VAC	3	2	panel mount meter with RS-485 Modbus	12 960.91
4825 0501*	110 - 400 VAC	3	2	as above with Ethernet Modbus	19 148.10
4825 0502	110 - 400 VAC	3	2	as above with Profibus	20 298.14

Current sensors

for above A40 multifunctional meter

Various types of current sensors can be connected to the DIRIS A40: solid-core (TE), split-core (TR / iTR) or Rogowski (TF). This range of sensors is suitable for all types of new or existing installations. A quick RJ12 connection makes wiring easy and reliable and prevents wiring errors. The A40 automatically recognizes the sensor size and type. This guarantees the overall accuracy of the A40 + current sensor measurement chain.

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	654.38
4829 0501	TE-18	0.5...75	solid current sensor	18	Ø 8.6	577.32
4829 0502	TE-25	0.8...192	solid current sensor	25	13.5 ■	721.08
4829 0503	TE-35	1.26...300	solid current sensor	35	21 ■	803.88
4829 0504	TE-45	3.2...756	solid current sensor	45	31 ■	1 123.59
4829 0505	TE-55	8...1200	solid current sensor	55	41 ■	1 444.45
4829 0506	TE-90	12...2400	solid current sensor	90	64 ■	2 631.29
TR - Split-core current sensors			class 1			
4829 0555	TR-10	0.5...90	split-core current sensors	-	Ø 10	1 840.06
4829 0556	TR-14	0.8...192	split-core current sensors	-	Ø 14	2 327.68
4829 0552	TR-16	0.64...120	split-core current sensors	-	Ø 16	2 271.33
4829 0557	TR-21	1.26...300	split-core current sensors	-	Ø 21	2 967.10
4829 0553	TR-24	1.26...200	split-core current sensors	-	Ø 24	2 893.50
4829 0558	TR-32	3.2...720	split-core current sensors	-	Ø 32	3 367.31
4829 0554	TR-36	4...720	split-core current sensors	-	Ø 36	3 284.51
iTR - Split-core current sensors			class 0.5 (intelligent)			
4829 0655	iTR-10	0.5...75	split-core current sensors	-	Ø 10	2 924.55
4829 0656	iTR-14	0.8...192	split-core current sensors	-	Ø 14	3 491.51
4829 0657	iTR-21	1.26...300	split-core current sensors	-	Ø 21	4 448.34
4829 0658	iTR-32	3.2...720	split-core current sensors	-	Ø 32	5 049.81
TF - Flexible current sensors (Rogowski coil)						
4829 0570	TF-55	3...720	flexible current sensors	-	Ø 55	7 180.83
4829 0571	TF-120	10...2400	flexible current sensors	-	Ø 120	7 365.99
4829 0572	TF-300	32...7200	flexible current sensors	-	Ø 300	8 166.41



TE...



TR...



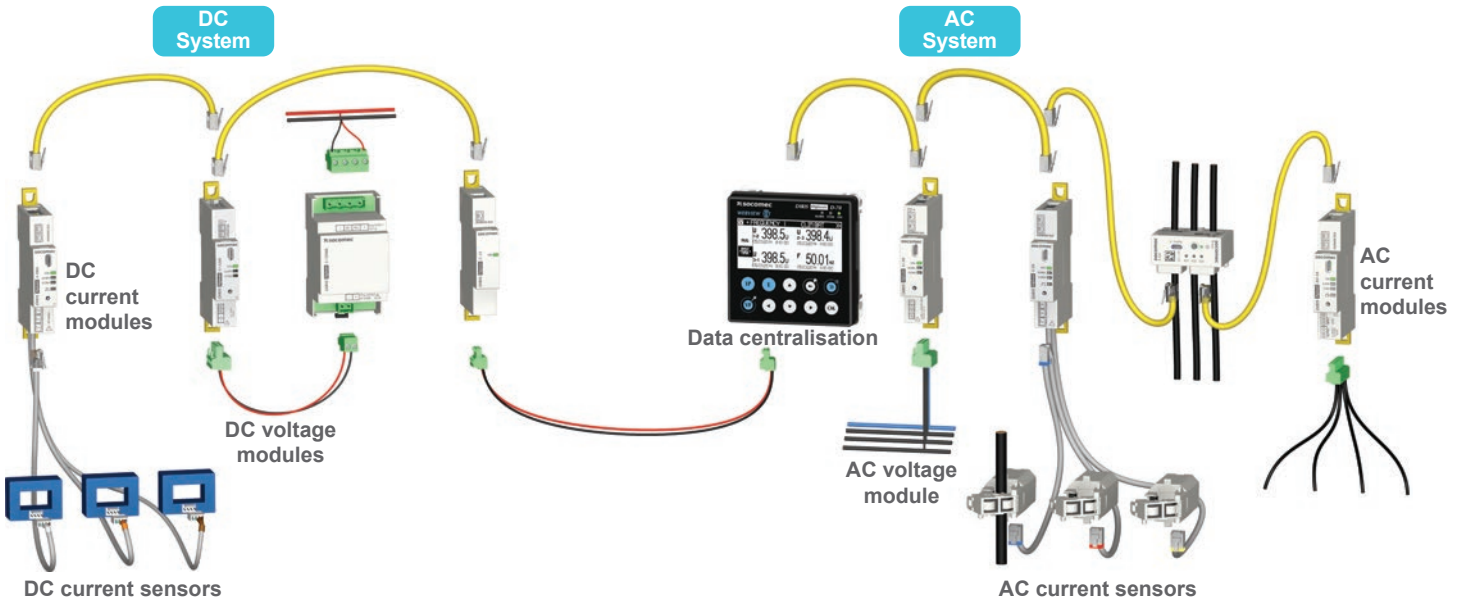
TF...

The **DIRIS Digiware** is a multi-circuit AC or DC power monitoring device that is the most effective solution for metering consumption. Measuring and monitoring the quality of electrical energy in industrial and commercial data centre applications.

- 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 :



type	description	module width	price
Control and power supply interface			
<ul style="list-style-type: none"> • Power supply 24 VDC (required, see page B-65, B-66) • Communication via RS-485 Modbus and Digiware BUS 			
C-31 Data centralisation only (no display)			
<ul style="list-style-type: none"> • Centralises all of the Digiware systems data unto Modbus RS-485 			
4829 0101	modular centralisation unit	18 mm	3 006.20
D-50/70 centralisation and display of data		<i>panel mount 96 mm²</i>	
<ul style="list-style-type: none"> • High-resolution LCD display • 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 			
D-50			
4829 0204	centralisation unit with multi-point display + Modbus TCP		7 740.90
D-70 (see page E-17 for more information)			
4829 0203	centralisation unit with multi-point display + Ethernet comm / embedded webserver		37 594.68
C-32 Range extending repeater			
<ul style="list-style-type: none"> • Required when Digiware bus length exceeds 100m • Maximum bus length 300m (2 repeaters) • Power supply 24 VDC (required, see page B-65, B-66) 			
4829 0103	range extending repeater	18 mm	3 605.37
Note: For RJ45 connecting cables for above see E-15			



4829 0106



4829 0112



4829 0160



4829 0161

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

- Three phase voltage and frequency monitoring
- RJ45 bus allows you measurement of 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	module width	price
U-10 Metering module			
4829 0105	modular AC voltage measurement metering module	18 mm	3 366.16
U-20 Monitoring module (as above but with additional 3ph THDu monitoring)			
4829 0106	modular AC voltage measurement monitoring module	18 mm	4 507.00
U-30 Analysis module (all electrical parameters including history of average values)			
4829 0102	modular AC voltage measurement analysis module	18 mm	5 122.27

AC current measurement modules

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, Σ P, Σ Q, Σ S, Σ PF
- Wiring errors are also prevented and implementation is simplified
- **RJ45** and **RJ12** rapid connection and automatically configures connected current sensors

type	description	current Inputs	module width	price
I-30/60 metering modules				
4829 0110	I-30 modular current measurement metering module	3	18 mm	2 884.30
4829 0112	I-60 modular current measurement metering module	6	36 mm	6 026.19
I-31/61 metering and load curve modules				
4829 0111	I-31 modular current measurement metering module	3	18 mm	5 024.51
4829 0113	I-61 modular current measurement metering module	6	36 mm	8 414.82
I-35/45 analysis module (all electrical parameters including history of average values)				
4829 0130	I-35 modular current measurement analysis module	3	18 mm	5 547.78
4829 0131	I-45 modular current measurement analysis module	4	27 mm	13 225.42

DIRIS Digiware S - Current measurement modules

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 63 A, solving issues of space constraints

4829 0160	S-130 modular current measurement metering module	3	–	8 379.17
4829 0161	S-135 modular current measurement analysis module	3	–	10 684.99
4829 0162	S-Datacenter modular 3 x single phase monitoring	3	–	8 379.17

DIRIS Digiware S - Accessories

4829 0195	Mounting clip for above Digiware S modules	pack	(x 10)	737.18
4829 0196	Holding clip for above Digiware S modules	pack	(x 10)	851.03
4829 0189	Flat RJ45 Digiware bus connection cable		0.06 m	190.91

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

DIRIS Digiware I/O (input/output modules)

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

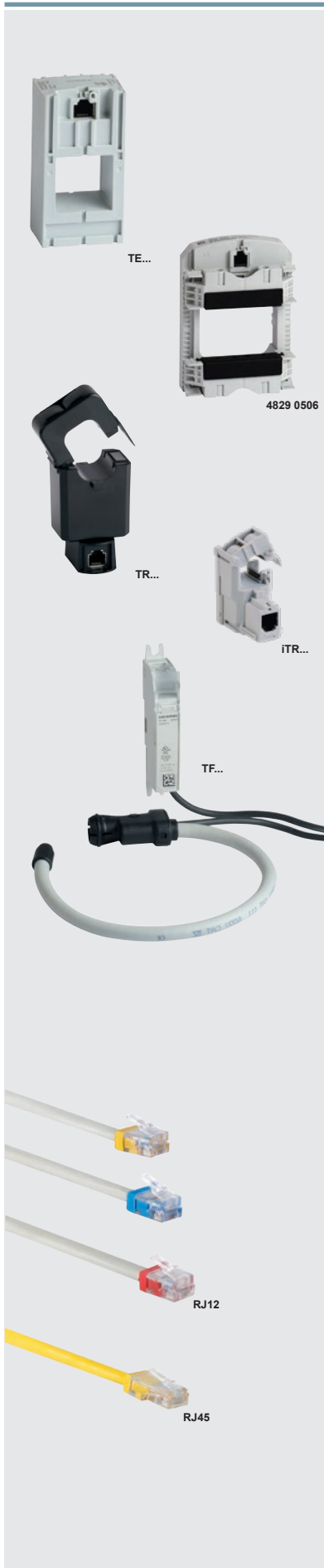
The **I/O-10** modules have 4 digital inputs and 2 digital outputs, which can be used:

- 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			price
4829 0140	4	2	–	input/output modules	(18 mm)	4 733.55
4829 0145	–	–	2	input/output modules	(18 mm)	6 213.65



Current sensors

Current sensors can be connected to the DIRIS Digiware system via a rapid RJ12 connection 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	654.38
4829 0501	TE-18	0.5...75	solid current sensor	18	Ø 8.6	577.32
4829 0502	TE-25	0.8...192	solid current sensor	25	13.5 ■	721.08
4829 0503	TE-35	1.26...300	solid current sensor	35	21 ■	803.88
4829 0504	TE-45	3.2...756	solid current sensor	45	31 ■	1 123.59
4829 0505	TE-55	8...1200	solid current sensor	55	41 ■	1 444.45
4829 0506	TE-90	12...2400	solid current sensor	90	64 ■	2 631.29
TR - Split-core current sensors class I						
4829 0555	TR-10	0.5...90	split-core current sensors	–	Ø 10	1 840.06
4829 0556	TR-14	0.8...192	split-core current sensors	–	Ø 14	2 327.68
4829 0552	TR-16	0.64...120	split-core current sensors	–	Ø 16	2 271.33
4829 0557	TR-21	1.26...300	split-core current sensors	–	Ø 21	2 967.10
4829 0553	TR-24	1.26...200	split-core current sensors	–	Ø 24	2 893.50
4829 0558	TR-32	3.2...720	split-core current sensors	–	Ø 32	3 367.31
4829 0554	TR-36	4...720	split-core current sensors	–	Ø 36	3 284.51
iTR - Split-core current sensors class 0.5 (intelligent)						
4829 0655	iTR-10	0.5...75	split-core current sensors	–	Ø 10	2 924.55
4829 0656	iTR-14	0.8...192	split-core current sensors	–	Ø 14	3 491.51
4829 0657	iTR-21	1.26...300	split-core current sensors	–	Ø 21	4 448.34
4829 0658	iTR-32	3.2...720	split-core current sensors	–	Ø 32	5 049.81
TF - Flexible current sensors (Rogowski coil)						
4829 0570	TF-55	3...720	flexible current sensors	–	Ø 55	7 180.83
4829 0571	TF-120	10...2400	flexible current sensors	–	Ø 120	7 365.99
4829 0572	TF-300	32...7200	flexible current sensors	–	Ø 300	8 166.41

Cables and accessories for current sensors

type	model	description	cable length (mm)	pack size (mm)	price
RJ12 current sensor connection cables (inter connection)					
• 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	239.21
4829 0595	RJ12	AC current sensor connection cable	0.5 m	3 x cables	318.56
4829 0583	RJ12	AC current sensor connection cable	1.0 m	3 x cables	394.47
4829 0584	RJ12	AC current sensor connection cable	2.0 m	3 x cables	608.37
4829 0597	RJ12	AC current sensor connection cable	0.5 m	6 x cables	595.72
4829 0593	RJ12	AC current sensor connection cable	1.0 m	6 x cables	750.98
4829 0594	RJ12	AC current sensor connection cable	2.0 m	6 x cables	1 200.64
4829 0602	RJ12	AC current sensor connection cable	5.0 m	1 x cables	509.47
4829 0782	RJ12	DC molex current sensor conn. cable	0.3 m	3 x cables	515.22
4829 0783	RJ12	DC molex current sensor conn. cable	0.5 m	3 x cables	550.87
4829 0784	RJ12	DC molex current sensor conn. cable	1.0 m	3 x cables	687.73
4829 0785	RJ12	DC molex current sensor conn. cable	2.0 m	3 x cables	867.13
4829 0786	RJ12	DC molex current sensor conn. cable	5.0 m	1 x cable	457.72

RJ45 current sensor connection cables (bus connection)

• Interconnection of I and U modules via Digiware Bus					
4829 0181	RJ45	Digiware bus AC connection cable	0.1 m	–	101.21
4829 0182	RJ45	Digiware bus AC connection cable	0.5 m	–	127.66
4829 0183	RJ45	Digiware bus AC connection cable	1.0 m	–	190.91
4829 0184	RJ45	Digiware bus AC connection cable	2.0 m	–	294.41
4829 0185*	RJ45	AC current sensor cable + 50 connectors	50 m	(cable roll)	8 151.46
* Maximum cable distance between current measurement modules and current sensors is 10 m					
4829 0599		5A/CT adapter (measurement >1000 A)			1 124.74
4829 0598		coupling link for interconnecting sensors staggered or linear mounted		(30pcs)	830.33
4829 0600		sealable cover (guarantees the immunity of sensor connection)		(20pcs)	716.48



4829 0150



4829 0153



4829 0156



4829 0700



4829 0750

DC voltage measurement modules

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	module width	price
U-31dc Metering module					
4829 0150	19...60 VDC		modular voltage measurement metering module	18 mm	5 965.24
U-32dc Metering module					
4829 0151	38...180 VDC		modular voltage measurement metering module	18 mm	7 585.64
DC voltage adaptor					
4829 0153	200...600 VDC		U500DC modular voltage adaptor metering module	53 mm	3 683.57
4829 0154	400...1200 VDC		U1000DC modular voltage adaptor metering module	53 mm	5 523.63
4829 0155	1200...1650 VDC		U1500DC modular voltage adaptor metering module	53 mm	7 364.84

DC measurement modules

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

General features:

- Metering: ± 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	module width	price
I-30dc metering modules				
4829 0156	I-30dc modular current measurement metering module	3	18 mm	6 480.46
I-35dc metering and analysis module				
4829 0157	I-35dc modular current measurement analysis module	3	18 mm	10 237.63

DC current sensors

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	959.14
4829 0701	1	100A	DC solid-core current sensor	25	■ 10.4 x 20.4	959.14
4829 0702	1	200A	DC solid-core current sensor	35	■ 10.4 x 20.4	959.14
4829 0703	1	300A	DC solid-core current sensor	45	■ 10.4 x 20.4	959.14

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	∅ 21	7 439.59
4829 0751	1	100A	DC split-core current sensor	0	∅ 21	7 439.59
4829 0752	1	200A	DC split-core current sensor	0	∅ 21	7 439.59

Up to 2000A available on special request.



4829 0000



4829 0203



4854 0020

DIRIS B-30 series - Power monitoring devices

The **DIRIS B-30** is a PMD in modular format that communicates wirelessly or via RS-485. The 4 x RJ independent current inputs allows it to manage several types and number of circuits i.e 4 single-phase loads or 1 three phase load + 1 single-phase load.

type	description	module width (mm)	price
4829 0000	B-30 RS RS-485 Modbus communication	54	9 778.76
Accessories			
4829 0200	D-30 single point display for B-30 <i>(panel mount)</i>	96 x 96	3 864.13
4829 0280	RJ9 cable for above D-30 display unit	1.5 m	133.41
4829 0281	RJ9 cable for above D-30 display unit	3.0 m	227.71

DIRIS D-70/M-70 series - communication gateway

DIRIS D-70/M-70 acts as a gateway, centralising measurements from DIRIS Digiware, DIRIS A, DIRIS B and COUNTIS E devices and making them available over Ethernet. Data can be visualized on Webview, the "Power & Energy monitoring" embedded web server. Permits real time monitoring of electrical values and analysis of consumption data.

Advantages:

- Plug and Play automatic detection and addressing of measurement and metering devices
- Automatic recording and storage of measurements and consumption data, sending of alarms
- Ethernet/RS-485 Modbus communication with embedded WEBVIEW power monitoring

General features:

- Inputs: Digiware/RS-485
- Outputs: Ethernet
- Protocols: Modbus TCP, BACnet, IPSNMP v1, v2, v3
- Webserver: Embedded web server WEBVIEW-M (32 devices)
- Screen: High-resolution graphic screen **(D-70)**
- Voltage: 24 VDC SELV (*Safety Extra Low Voltage*) power supply elimination of hazardous voltage on cabinet doors.
- Ergonomic and easy to use with 10 direct access buttons for:
 - Measurement information
 - Output selection
 - Equipment configuration
- Centralising measurement points:
 - Circuit selection
 - Displaying data

type	description	mounting (mm) (H) (W) (D)	price
4829 0203	D-70 multi-point display, Ethernet com. + web server	panel 97 97 -	37 594.68
4829 0222	M-70 as above without display	DIN 90 89 65	27 612.37

WEBVIEW Datalogger

DATALOG H80 provides the ability to create a smart energy data communication network in order to:

- Pool, secure, store and provide the data to a computer application.
- Connect your meters and multi-function measurement units in an Ethernet network
- Quick installation on DIN rail or door mounting
- Remotely and automatically read multi-fluid energy meters and multi-function meters, isolated or not

Function: Reliable collection and transmission

- Configurable collection frequency for each energy and multi-function meter
- Multiple communication protocols (Modbus RTU/TCP, HTTP(s), FTP(s))
- Collection and transmission interfaces: Ethernet

Advanced functions: Reports and extended data storage

- Extended data storage capacity (*1 year for index data and 2 months for load curves*)
- Auto-detects meters and measuring equipment
- Sends regular activity reports
- Event alerts (*communication errors, data quality, remote server connection*)

type	LAN Ethernet ports	device licenses	description	price
4854 0020	4	up to 100	data logger with webview	81 112.04



BEA40A



BEV40A



BEF50AP



BEF50AR



BEHCD



BEHCA4

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	description	price		
			48 mm ²	72 mm ²	96 mm ²
Ammeters (AC) moving iron (90° movement) (overscale 2 x In)					
BEA01A*	1A	direct reading AC ammeter	358.82	364.57	405.97
BEA05A*	5A	direct reading AC ammeter	326.62	332.37	372.62
BEA10A*	10A	direct reading AC ammeter	326.62	332.37	372.62
BEA15A*	15A	direct reading AC ammeter	326.62	332.37	372.62
BEA25A*	25A	direct reading AC ammeter	326.62	332.37	372.62
BEA40A*	40A	direct reading AC ammeter	303.88	332.37	372.62
BEA01AT**	/1A	CT operated AC ammeter	358.82	364.57	405.97
BEA05AT**	/5A	CT operated AC ammeter	326.62	332.37	372.62
Voltmeters (AC) moving iron (90° movement)					
BEV25A*	250V	direct reading AC voltmeter	594.57	371.47	412.87
BEV40A*	400V	direct reading AC voltmeter	594.57	371.47	412.87
BEV50A*	500V	direct reading AC voltmeter	594.57	371.47	412.87
BEV60A*	600V	direct reading AC voltmeter	594.57	371.47	412.87
Frequency meters (90° movement)					
BEF50AP*	45 - 55Hz	frequency (pointer type) 110 - 380V	—	1 182.24	1 278.85
BEF50AR*	47 - 53Hz	frequency (vibrating reed) 110 - 230V	—	1 521.50	1 393.85
BEF50AR*3	47 - 53Hz	frequency (vibrating reed) 380 - 500V	—	1 521.50	1 393.85
Maximum demand ammeters (90° movement) delay time: 15 min (standard)					
ERB01A**	/1A	maximum demand ammeters	—	1 131.64	1 131.64
ERB05A**	/5A	maximum demand ammeters	—	813.08	956.83
Combination maximum demand ammeters					
ERBC01A**	/1A	com. Max. demand ammeters	—	1 413.40	1 413.40
ERBC05A**	/5A	com. Max. demand ammeters	—	1 131.64	1 204.09
<p>Note: ** For scale change, add /... (scale value) to the end of the part number e.g. ERBC05A7/100 = (100 / 5A AC, 72 mm²) Standard ranges: 50/75/100/150/200/250/300/400/500/600...2000A</p>					
Ammeters (DC) moving coil (90° movement)					
BEA05D*	5A	direct reading DC ammeter	594.57	639.43	677.38
BEA10D*	10A	direct reading DC ammeter	594.57	639.43	677.38
BEA15D*	15A	direct reading DC ammeter	594.57	639.43	677.38
BEA20D*	20A	direct reading DC ammeter	594.57	639.43	677.38
BEA25D*	25A	direct reading DC ammeter	594.57	639.43	677.38
BEA30D*	30A	direct reading DC ammeter	594.57	639.43	677.38
BEV50MVD**	50mV	shunt operated ammeter	594.57	639.43	677.38
BEA01MAD*	1mA	DC (low current) ammeter	652.08	716.48	806.18
BEA20MAD*	4 - 20mA	DC (low current) ammeter	658.98	716.48	806.18
** For DC shunts please refer to page E-24					
Voltmeter (DC) (90° movement)					
BEV03D*	0 - 30V	DC voltmeter	594.57	639.43	677.38
BEV15D*	1 - 150V	DC voltmeter	594.57	639.43	677.38
BEV60D*	150 - 600V	DC voltmeter	594.57	639.43	677.38
Running hour meters					
BEHCA*	AC	running hour meter 24/110/230/380 VAC	353.07	861.38	929.23
BEHCD*	DC	running hour meter 10 - 80 VDC	631.37	1 059.19	1 162.69
* 4 = 48 x 48 mm ² / 7 = 72 x 72 mm ² / 9 = 96 x 96 mm ²					



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)			price
					round	B/bar 1	B/bar 2	

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				438.17
26029	60/5A	1	1.25	tube current transformer				438.17
26031	75/5A	1	1.5	tube current transformer				438.17
26035	100/5A	1	2.5	tube current transformer	Ø21	-	-	438.17
26041	150/5A	1	3.75	tube current transformer				438.17
26051	200/5A	1	3.75	tube current transformer				438.17
26046	250/5A	1	5	tube current transformer				438.17

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				438.17
7039	60/5A	1	1	std current transformer				438.17
7041	75/5A	1	1.5	std current transformer				438.17
7045	100/5A	1	2.5	std current transformer	Ø26	30x10	20x20	438.17
7047	150/5A	1	2.5	std current transformer				438.17
7050	200/5A	1	5	std current transformer				438.17
7053	250/5A	1	5	std current transformer				438.17

ASK 41.4		current transformers		(H) 85.5 x (W) 71 x (D) 58 mm				
13044	100/5A	1	2.5	std current transformer				373.77
13048	150/5A	1	5	std current transformer				373.77
13050	200/5A	1	5	std current transformer				373.77
13054	250/5A	1	10	std current transformer				373.77
13057	300/5A	1	10	std current transformer	Ø32	40x10	30x15	373.77
13062	400/5A	1	15	std current transformer				373.77
13066	500/5A	1	15	std current transformer				373.77
13070	600/5A	1	15	std current transformer				373.77
13073	750/5A	1	15	std current transformer				373.77
13077	800/5A	1	15	std current transformer				373.77

ASK 51.4		current transformers		(H) 98.5 x (W) 86 x (D) 58 mm				
16055	400/5A	1	10	std current transformer				473.82
16060	500/5A	1	15	std current transformer				473.82
16064	600/5A	1	15	std current transformer	Ø44	50x10	40x20	473.82
16068	750/5A	1	15	std current transformer				473.82
16071	800/5A	1	15	std current transformer				473.82
16075	1000/5A	1	15	std current transformer				473.82

ASK 61.4		current transformers		(H) 105.5 x (W) 96 x (D) 58 mm				
19065	600/5A	1	15	std current transformer				480.72
19069	750/5A	1	15	std current transformer				480.72
19073	800/5A	1	15	std current transformer	Ø44	60x10	50x30	480.72
19076	1000/5A	1	15	std current transformer				480.72
19085	1250/5A	1	30	std current transformer				480.72

ASK 81.4		current transformers		(H) 123.5 x (W) 120 x (D) 58 mm				
21045	600/5A	1	10	std current transformer				782.03
21049	750/5A	1	15	std current transformer				782.03
21053	800/5A	1	15	std current transformer	Ø55	80x10	60x30	782.03
21056	1000/5A	1	15	std current transformer				782.03
21064	1250/5A	1	15	std current transformer				782.03
21072	1600/5A	1	30	std current transformer				782.03



ASK 103.3



ASK 103.41



121-1000...



new

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 x I_N
- Maximum operating voltage: U_m ≤ 0.72 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)		price
					round	B/bar 1 B/bar 2	

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		882.08
22062	1600/5A	1	30	std current transformer			882.08
22070	2000/5A	1	30	std current transformer			882.08
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		1 012.04
23062	2000/5A	1	30	std current transformer			1 012.04
23066	2500/5A	1	30	std current transformer			1 012.04
23070	3000/5A	1	30	std current transformer			1 012.04

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 -		1 856.16
97056	600/5A	1	5	std current transformer			1 856.16
97058	750/5A	1	5	std current transformer			1 856.16
97060	800/5A	1	10	std current transformer			1 856.16
97062	1000/5A	1	15	std current transformer			1 856.16
97066	1250/5A	1	15	std current transformer		1 856.16	
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 -		2 610.59
94058	1500/5A	1	30	std current transformer			2 911.90
94060	2000/5A	1	30	std current transformer			3 040.70
94062	2500/5A	1	30	std current transformer			3 040.70

Accessories for current transformers

55013	DIN clip	DIN rail mounting clip for current transformers		ASR 20.3	121.91
55011	DIN clip	DIN rail mounting clip for current transformers		ASK 30.3	121.91
55012	DIN clip	DIN rail mounting clip for current transformers		ASK 41.4	121.91

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
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121-10004	665	200	1 x Rogowski coil	3 m	3 986.03
121-10005	965	300	1 x Rogowski coil	3 m	3 986.03

Note: 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
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121-10106	2000/1A	3	integrator for Rogowski coil	22.5 mm	7 750.10
121-10107	4000/1A	3	integrator for Rogowski coil	22.5 mm	7 750.10
121-10108	6000/1A	3	integrator for Rogowski coil	22.5 mm	7 750.10



ASK 41.4



ASK 61.4



ASK 103.3



ASK 51.4

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	<table border="1"> <tr><td>Ø32</td><td>40x10</td><td>30x15</td></tr> </table>	Ø32	40x10	30x15	817.68
Ø32	40x10	30x15							
13086	250/5A	0.5	5	std current transformer		817.68			
13087	300/5A	0.5	10	std current transformer		817.68			
13088	400/5A	0.5	10	std current transformer		817.68			
13089	500/5A	0.5	15	std current transformer		817.68			
13090	600/5A	0.5	15	std current transformer		817.68			
13031	800/5A	0.5	10	std current transformer	817.68				
ASK 51.4 current transformers (H) 101.5 x (W) 86 x (D) 58 mm									
16154	600/5A	0.5	15	std current transformer	<table border="1"> <tr><td>Ø44</td><td>50x12</td><td>40x20</td></tr> </table>	Ø44	50x12	40x20	1 003.99
Ø44	50x12	40x20							
16203	750/5A	0.5	15	std current transformer		1 003.99			
16033	800/5A	0.5	15	std current transformer		1 003.99			
16036	1000/5A	0.5	15	std current transformer	1 003.99				
ASK 61.4 current transformers (H) 108.5 x (W) 96 x (D) 58 mm									
19031	800/5A	0.5	15	std current transformer	<table border="1"> <tr><td>Ø44</td><td>63x10</td><td>50x20</td></tr> </table>	Ø44	63x10	50x20	1 110.94
Ø44	63x10	50x20							
19034	1000/5A	0.5	15	std current transformer		1 110.94			
19101	1250/5A	0.5	30	std current transformer	1 110.94				
ASK 81.4 current transformers (H) 126.5 x (W) 120 x (D) 58 mm									
21023	1000/5A	0.5	15	std current transformer	<table border="1"> <tr><td>Ø55</td><td>80x10</td><td>50x30</td></tr> </table>	Ø55	80x10	50x30	1 498.50
Ø55	80x10	50x30							
21029	1250/5A	0.5	15	std current transformer		1 498.50			
21035	1600/5A	0.5	15	std current transformer	1 498.50				
ASK 103.3 current transformers (H) 187.5 x (W) 172 x (D) 52 mm									
23026	1600/5A	0.5	15	std current transformer	<table border="1"> <tr><td>Ø85</td><td>100x30</td><td>80x50</td></tr> </table>	Ø85	100x30	80x50	2 372.53
Ø85	100x30	80x50							
23029	2000/5A	0.5	30	std current transformer		2 372.53			
23032	2500/5A	0.5	30	std current transformer		2 372.53			
23035	3000/5A	0.5	30	std current transformer	2 372.53				
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	<table border="1"> <tr><td>Ø32</td><td>40x10</td><td>30x15</td></tr> </table>	Ø32	40x10	30x15	3 390.31
Ø32	40x10	30x15							
V24-1804F	250/5A	0.2s	5	std current transformer		3 390.31			
V24-1904F	300/5A	0.2s	5	std current transformer		3 390.31			
V24-2004H	400/5A	0.2s	10	std current transformer		3 390.31			
V24-2104H	500/5A	0.2s	10	std current transformer		3 390.31			
V24-2204F	600/5A	0.2s	5	std current transformer	3 390.31				
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	<table border="1"> <tr><td>Ø44</td><td>50x12</td><td>40x20</td></tr> </table>	Ø44	50x12	40x20	2 752.04
Ø44	50x12	40x20							
V34-2504J	1000/5A	0.2s	15	std current transformer	2 752.04				
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	<table border="1"> <tr><td>Ø44</td><td>60x10</td><td>50x20</td></tr> </table>	Ø44	60x10	50x20	3 412.16
Ø44	60x10	50x20							
V41-2804J	1600/5A	0.2s	15	std current transformer	3 412.16				
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	<table border="1"> <tr><td>Ø100</td><td>120x30</td><td>100x50</td></tr> </table>	Ø100	120x30	100x50	5 395.97
Ø100	120x30	100x50							
V56-2904J	1600/5A	0.2s	15	std current transformer		4 149.33			
V56-3004J	2000/5A	0.2s	15	std current transformer		4 149.33			
V56-3204J	2500/5A	0.2s	15	std current transformer		4 149.33			
V56-3304J	3000/5A	0.2s	15	std current transformer	4 149.33				



type	ratio	class	Burden (VA)	description	dimensions (mm)			price
					(H)	(W)	(D)	
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	1 219.04
30024	10/5A	1	5	wound current transformer	79	61	35	1 219.04
30026	15/5A	1	5	wound current transformer	79	61	35	1 219.04
30028	20/5A	1	5	wound current transformer	79	61	35	1 219.04
WSK 40 primary wound current transformers								
31070	25/5A	1	10	wound current transformer	89	71	45	1 426.05
31074	30/5A	1	10	wound current transformer	89	71	45	1 426.05
Summation current transformers					5A secondary - class 1			
KSU 2/3 summation current transformers								
41015	5+5/5A	1	10	summation transformer	94	127	57	2 006.82
41031	5+5+5/5A	1	10	summation transformer	94	127	57	2 795.74
SUSK 4 summation current transformers								
40027	5+5+5+5/5A	1	10	summation transformer	137	156	65	3 776.72
1A secondary - class 1 Busbar mounted current transformers								
type	ratio	class	Burden (VA)	description	max. hole diameter (mm)			price
					round	B/bar 1	B/bar 2	
ASK 41.4 current transformers					<i>(H) 85.5 x (W) 71 x (D) 58 mm</i>			
13239	75/1A	1	1.5	std current transformer	Ø32	40x10	30x15	573.87
13244	100/1A	1	2.5	std current transformer				573.87
13248	150/1A	1	5	std current transformer				573.87
13250	200/1A	1	5	std current transformer				573.87
13254	250/1A	1	10	std current transformer				573.87
13257	300/1A	1	10	std current transformer				573.87
13262	400/1A	1	15	std current transformer				573.87
13266	500/1A	1	15	std current transformer				573.87
13270	600/1A	1	15	std current transformer				573.87
13273	750/1A	1	15	std current transformer				573.87
13277	800/1A	1	15	std current transformer	573.87			
ASK 51.4 current transformers					<i>(H) 85.5 x (W) 71 x (D) 58 mm</i>			
16260	500/1A	1	15	std current transformer	Ø44	50x10	40x30	767.08
16264	600/1A	1	15	std current transformer				767.08
16268	750/1A	1	15	std current transformer				767.08
16271	800/1A	1	15	std current transformer				767.08
16275	1000/1A	1	15	std current transformer				767.08
ASK 61.4 current transformers								<i>(H) 105.5 x (W) 96 x (D) 58 mm</i>
19265	600/1A	1	15	std current transformer	Ø44	60x10	50x30	753.28
19269	750/1A	1	15	std current transformer				753.28
19273	800/1A	1	15	std current transformer				753.28
19285	1250/1A	1	30	std current transformer				753.28
ASK 81.4 current transformers					<i>(H) 123.5 x (W) 120 x (D) 58 mm</i>			
21253	800/1A	1	15	std current transformer	Ø55	80x10	60x30	1 319.10
21256	1000/1A	1	15	std current transformer				1 319.10
21264	1250/1A	1	15	std current transformer				1 319.10
21272	1600/1A	1	30	std current transformer				1 319.10
ASK 103.3 current transformers					<i>(H) 185 x (W) 172 x (D) 52 mm</i>			
23251	1250/1A	1	30	std current transformer	Ø85	100x30	80x50	1 118.99
23258	1600/1A	1	30	std current transformer				1 118.99
23262	2000/1A	1	30	std current transformer				1 118.99
23266	2500/1A	1	30	std current transformer				1 118.99
23270	3000/1A	1	30	std current transformer				1 118.99

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 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
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KBR series - Split-core CTs 5A secondary - class 1

• Delivered with 0.5m connection cable 2 x 1.5 mm²

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			1 763.01
18L-5002	200/5A	1	1.5	split-core current transformer	Ø18.4	–	1 763.01
18L-5004	250/5A	1	2	split-core current transformer			1 763.01
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			1 925.17
28-5003	400/5A	1	2.5	split-core current transformer	Ø26	–	1 925.17
28-5005	500/5A	1	3.0	split-core current transformer			1 925.17
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			2 088.47
42-5005	600/5A	1	5	split-core current transformer	Ø42.4	–	2 088.47
42-5009	800/5A	1	5	split-core current transformer			2 088.47
42-5011	1000/5A	1	5	split-core current transformer			2 088.47

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			2 150.57
80030	150/5A	3	1.50	split-core current transformer	Ø20	20x30	2 150.57
80031	200/5A	3	2.50	split-core current transformer			2 150.57
80044	250/5A	1	3.75	split-core current transformer			2 150.57
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			2 501.33
80062	300/5A	1	2.5	split-core current transformer			2 501.33
80063	400/5A	1	2.5	split-core current transformer			2 501.33
80038	400/5A	0.5	2.5	split-core current transformer			3 132.70
80064	500/5A	1	5.0	split-core current transformer			2 501.33
80054	500/5A	0.5	2.5	split-core current transformer	Ø 50	50x80	3 132.70
80065	600/5A	1	5.0	split-core current transformer			2 501.33
80055	600/5A	0.5	2.5	split-core current transformer			3 132.70
80067	800/5A	1	7.5	split-core current transformer			2 501.33
80057	800/5A	0.5	2.5	split-core current transformer			3 132.70
80068	1000/5A	1	10	split-core current transformer			2 501.33
80058	1000/5A	0.5	5	split-core current transformer			3 132.70
KBU 812	split-core current transformers			(H) 198 x (W) 155 x (D) 58 mm			
80098	1000/5A	1	10	split-core current transformer			2 965.95
80100	1250/5A	1	15	split-core current transformer	Ø80	120x80	2 965.95
80080	1250/5A	0.5	7.5	split-core current transformer			3 503.01
KBU 816	split-core current transformers			(H) 243 x (W) 195 x (D) 79 mm			
80147	1600/5A	1	15	split-core current transformer			3 493.81
80115	1600/5A	0.5	15	split-core current transformer			4 033.18
80149	2000/5A	1	15	split-core current transformer			3 493.81
80117	2000/5A	0.5	15	split-core current transformer			4 033.18
80151	2500/5A	1	15	split-core current transformer	Ø 80	160x80	3 493.81
80120	2500/5A	0.5	15	split-core current transformer			4 033.18
80153	3000/5A	1	30	split-core current transformer			3 493.81
80122	3000/5A	0.5	15	split-core current transformer			4 033.18
80155	4000/5A	1	30	split-core current transformer			3 493.81
80157	5000/5A	1	30	split-core current transformer			3 493.81

Note: Available with 1A secondary on request.



KBR 28



KBU 23



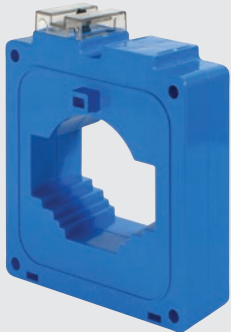
KBU 816



IMN1...



IBR1...



IBR3...



ACN30-5



ACN60-5

type	ratio	description	class	VA	dimensions (mm)			price
					(H)	(W)	(D)	
IMN1 ring type transformers			Ø round conductor: 32 mm					
IMN1/05	50/5A	ring current transformer	3	1.3	87	64	42	196.66
IMN1/06	60/5A	ring current transformer	3	1.3	87	64	42	197.81
IMN1/07	75/5A	ring current transformer	3	1.3	87	64	42	200.11
IMN1/10	100/5A	ring current transformer	1	2.5	87	64	42	200.11
IMN1/12	125/5A	ring current transformer	1	2.5	87	64	42	201.26
IMN1/15	150/5A	ring current transformer	1	3.8	87	64	42	201.26
IMN1/16	160/5A	ring current transformer	1	3.8	87	64	42	203.56
IMN1/20	200/5A	ring current transformer	1	5	87	64	42	211.61
IMN1/25	250/5A	ring current transformer	1	7.5	87	64	42	216.21
Note: 4 - 20 mA version on request.								
IMN2 current transformers			Ø round conductor: 38 mm					
Primary bar conductor: 40 x 12.5 mm			Ø round conductor: 38 mm					
IMN2/16	160/5A	ring current transformer	1	10	99	75	42	259.91
IMN2/20	200/5A	ring current transformer	1	10	99	75	42	266.81
IMN2/25	250/5A	ring current transformer	1	10	99	75	42	286.36
IMN2/30	300/5A	ring current transformer	1	15	99	75	42	294.41
IMN2/40	400/5A	ring current transformer	1	25	99	75	42	312.81
IMN2/50	500/5A	ring current transformer	1	30	99	75	42	363.42
IMN2/60	600/5A	ring current transformer	1	30	99	75	42	364.57
IBR1 current transformers			Ø round conductor: 60 mm					
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	417.47
IBR1/08	800/5A	ring current transformer	0.5	15	115	104	45	414.02
IBR1/10	1000/5A	ring current transformer	0.5	30	115	104	45	442.77
IBR1/12	1250/5A	ring current transformer	0.5	30	115	104	45	473.82
IBR3 current transformers			Ø round conductor: 110 mm					
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	592.27
IBR3/16	1600/5A	ring current transformer	0.5	30	170	152	45	722.23
IBR3/20	2000/5A	ring current transformer	0.5	30	170	152	45	704.98
IBR3/25	2500/5A	ring current transformer	0.5	30	170	152	45	753.28
IBR3/30	3000/5A	ring current transformer	0.5	30	170	152	45	810.78
IBNP primary wound current transformers			50mV output					
IBNP/05	5/5A	primary wound CT	0.5	5	111	68	43	284.06
IBNP/10	10/5A	primary wound CT	0.5	5	111	68	43	284.06
IBNP/15	15/5A	primary wound CT	0.5	5	111	68	43	284.06
IBNP/20	20/5A	primary wound CT	0.5	5	111	68	43	284.06
IBNP/25	25/5A	primary wound CT	0.5	5	111	68	43	284.06
IBNP/30	30/5A	primary wound CT	0.5	5	111	68	43	284.06
IBNP/40	40/5A	primary wound CT	0.5	5	111	68	43	284.06
DC shunts			50mV output					
– Accuracy:		0.5%						
– Overload:		120% continuously, 1000% for 5 seconds						
			dimensions (mm)					
			A	B	C	D	E	
ACN01-5	10A	50mV	105	25	35	14.3	5.5	540.52
ACN02-5	20A	50mV	105	25	35	14.3	5.5	540.52
ACN03-5	30A	50mV	105	25	35	14.3	5.5	540.52
ACN04-5	40A	50mV	105	25	35	14.3	5.5	540.52
ACN05-5	50A	50mV	105	25	35	19	9.5	607.22
ACN06-5	60A	50mV	105	25	35	19	9.5	607.22
ACN08-5	80A	50mV	105	25	35	19	9.5	607.22
ACN10-5	100A	50mV	105	25	35	19	9.5	607.22
ACN15-5	150A	50mV	105	25	35	19	14.3	771.68
ACN20-5	200A	50mV	105	25	35	24.5	16	792.38
ACN25-5	250A	50mV	135	40	50	50.8	12.7	1 368.55
ACN30-5	300A	50mV	135	40	50	50.8	12.7	1 368.55
ACN40-5	400A	50mV	135	50	50	38	31.5	1 602.86
ACN50-5	500A	50mV	135	50	50	38	31.5	2 167.82
ACN60-5	600A	50mV	135	65	50	38	31.5	2 167.82
ACN75-5	750A	50mV	135	65	50	38	31.5	2 801.49
ACN80-5	800A	50mV	135	75	50	38	31.5	2 831.39
ACN100-5	1000A	50mV	135	105	50	38	31.5	3 429.41
<i>Intermediate and larger sizes up to 10.000A available on request.</i>								

