24 Metering instruments and current transformers

Digital metering instruments



Flush-mount LED instruments single-phase, non expandable



DMK 0...

Order code	Displayed measurements	Relay output	Qty per pkg	Wt
	n°	n°	n°	[kg]
Voltmeter.				
DMK 00	1 voltage value	_	1	0.290
DMK 00 R1@	1 max voltage value 1 min voltage value	1	1	0.323
Ammeter.				
DMK 01	1 current value	-	1	0.290
DMK 01 R1@	1 max current value 1 min current value	1	1	0.323
Voltmeter or an	nmeter.			
DMK 02 0	voltage or current value maximum voltage or current value minimum voltage or current value	ı	1	0.290
Frequency meter				
DMK 03 R1@	1 frequency value 1 max frequency value 1 min frequency value	1	1	0.323
Cos_{ϕ} meter.				
DMK 04 R1@	1 cosφ value 1 power factor value	1	1	0.290

- The DMK02 can operate as a voltmeter or ammeter. It is duly equipped with two front plates (V and A) which must be fitted by the user depending on which instrument is required and on the wiring scheme
- Relay output for control and protection functions.

General characteristics

The DMK 0... instruments are available with flush-mount housing, 96x48mm/3.78x1.89".

Measurements are True RMS values and provide for reliable operation even in the presence of harmonics

Operational characteristics

- Auxiliary supply voltage: 220-240VAC;
- Operating frequency: 50-60Hz
- True RMS measurements
- Max. and min. measurement storage
- 1 relay output with 1 changeover contact (for DMK...R1
- Housing: flush-mount 96x48mm/3.78x1.89"
- Terminals: 4mm²
- Degree of protection: IP54 on front; IP20 at terminals.

DMK 00 - DMK 00 R1

- Voltage measurement range: 15-660VAC
- Operating frequency range: 45-65Hz
- Programmable VT ratio: 1.00-500.00
- Accuracy: ±0.25% f.s. ±1 digit

DMK 01 - DMK 01 R1

- Current measurement range: 0.05-5.75A
- Operating frequency range: 45-65Hz
- Programmable CT ratio: 5-10,000
- Accuracy: ±0.5% f.s. ±1 digit

DMK 02

- Voltage measurement range: 15-660VAC
 Current measurement range: 0.05-5.75A
- Operating frequency range: 45-65Hz
- Operating frequency range: 43-03f2
 Programmable VT ratio: 1.00-500.00
 Programmable CT ratio: OFF/5-10,000
 Accuracy: Voltage ±0.25% f.s. ±1 digit
- Current ±0.5% f.s. ±1 digit

DMK 03 R1

- Measurement input: 15-660VAC
- Frequency measurement range: 15-65Hz
- Accuracy: ±1 digit

DMK 04 R1

- Cosφ measurement error: ±0.5° ±1 digit
- Cosφ measurement in 4 quadrants
 Accuracy: ±1° ±1 digit

Control and protection functions

- Voltage loss or failure: OFF/5-85%
- Maximum voltage: OFF/102-120%
- Minimum voltage: OFF/70-98%
- Time delay for max-min voltage or voltage losses: 0.0-900.0 seconds.

DMK 01 R1

- Current loss: OFF/2-100%
- Maximum current: OFF/102-200%
- Maximum current instantaneous tripping: OFF/110-600%
- Minimum current: OFF/5-98%
- Time delay for max-min current or current loss@: 0.0-900.0 seconds.

DMK 03 B1

- Maximum frequency: OFF/101-110%
- Minimum frequency: OFF/90-99%
- Time delay for min-max frequency **③**: 0.5-900.0 seconds.

- Minimum-maximum cosφ thresholds in 4 quadrants
- Minimum-maximum PF thresholds in 4 quadrants
- Delay time for max or min threshold **③**: 1-9,000 seconds.

Certifications and compliance

Certifications obtained: EAC; UL Listed, for USA and Canada (cULus - File E93601), as Auxiliary Devices-Multimeters. Compliant with standards: IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n° 14.

1 Independent adjustable delays.

Digital metering instruments



Flush-mount LED instruments three-phase, non expandable



DMK 1...

	rder ode	measurements	output	per pkg	VVT
		n°	n°	n°	[kg]
Vo	oltmeter.				
DI	MK 10	3 phase voltage values	_	1	0.297
DI	MK 10 R1@	3 phase to phase	1	1	0.330
	IIIK 10 1119	voltage values	'	'	0.000
		3 maximum phase			
		voltage values			
		3 maximum phase to phase voltage values			
		3 minimum phase			
		voltage values			
		3 minimum phase to			
		phase voltage values			
ıA	mmeter.				
DI	MK 11	3 phase current values	-	1	0.292
DI	MK 11 R1@	3 maximum phase	1	1	0.336
		current values		i i	0.000
		3 minimum phase			
_		current values			
Vo	oltmeter, amm	neter and wattmeter.			
DI	MK 15	3 phase voltage values	-	1	0.332
DI	MK 15 R1 ⊙ ❷	3 phase to phase	1	1	0.350
		voltage values 3 phase current values			
		4 active power values.			
		phase and total			
		3 maximum phase			
		voltage values			
		3 maximum phase to			
		phase voltage values			
		3 maximum phase			
		current values 4 maximum active			
		power values,			
		phase and total			
		3 minimum phase			
		voltage values			
		3 minimum phase to			
		phase voltage values			
		3 minimum phase			
		current values			
		4 minimum active power values,			
		phase and total			
_		phase and total			

Displayed

Relay Qty Wt

- Connection also to single-phase.
- Relay output for control and protection functions.

General characteristics

The DMK 1... instruments are available with flush-mount housing, 96x48mm/3.78x1.89".

Measurements are True RMS values and provide for reliable operation even in the presence of harmonics.

Operational characteristics

- Auxiliary supply voltage: 220-240VAC; Operating frequency: 50-60Hz True RMS measurements

- Max and min measurement storage
- 1 relay output with 1 changeover contact (for DMK...R1
- Housing: flush-mount 96x48mm/3.78x1.89°
- Terminals: 4mm²
 Degree of protection: IP54 on front; IP20 at terminals.

DMK 10 - DMK 10 R1

- MK 10 DMK 10 R1 Voltage measurement range: 15-660VAC Operating frequency range: 45-65Hz Programmable VT ratio: 1.00-500.00 Accuracy: ±0.25% f.s. ±1 digit.

DMK 11 - DMK 11 R1

- Operating frequency range: 45-65Hz

 Operating frequency range: 45-65Hz

 Programmable CT ratio: 5-10,000

 Accuracy: ±0.5% f.s. ±1 digit.

- DMK 15 DMK 15 R1

 Voltage measurement range: 35-660VAC

 Current measurement range: 0.05-5.75A

 Frequency measure range: 45-65Hz

 Programmable VT ratio: 1.00-500.00

 Programmable CT ratio: 5-10,000

 Accuracy: Voltage ±0.25% f.s. ±1 digit Current ±0.5% f.s. ±1 digit.

Control and protection functions

- Phase 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
- Frequency

DMK 11 R1

- Current loss: OFF/2-100%Maximum current: OFF/102-200%
- Maximum current instantaneous tripping: OFF/110-600%

- Minimum current: 0FF/5-98%
 Asymmetry: 0FF/2-20%
 Time delay for max-min current or current loss and asymmetry 8: 0.5-900.0 seconds.

DMK 15 R1 Voltage

- voltage

 Phase 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/5-85%
- Maximum current: 0FF/102-200%
 Maximum current instantaneous tripping: OFF/110-600%
- Minimum current: OFF/5-98%
 Asymmetry: OFF/2-20%
- Power

- Nated power: 1-10,000
 Maximum power: 0FF/101-200%
 Max. power instantaneous tripping: 0FF/110-600%
 Minimum power: 0FF/10-99%
- Frequency

- Maximum frequency: OFF/101-110%
 Minimum frequency OFF/90-99%
 Time delay for max-min voltage, max-min current or current loss, phase loss, asymmetry and min-max power **3**: 0.0-900.0 seconds.

Certifications and compliance Certifications obtained: EAC; UL Listed, for USA and Canada (CULus - File E93601), as Auxiliary Devices-Multimeters. Compliant with standards: IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL 508, CSA C22.2 n° 14.

1 Independent adjustable delays.

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24 Metering instruments and current transformers

Digital metering instruments



Flush-mount LED multimeter three-phase, non expandable



DMK 16

Order code	Displayed measurements	Qty per pkg	Wt
		n°	[kg]
DMK 16	3 phase voltage values 3 phase to phase voltage values 3 phase current values 4 active power values, phase and total 4 reactive power values, phase and total 4 apparent power values, phase and total 3 phase power factor values 1 frequency value 1 active energy value in kWh 1 reactive energy value in kWh 1 reactive energy value in kvarh 1 hour counter 3 maximum phase voltage values 3 maximum phase to phase voltage values 3 maximum phase current values 4 maximum active power values, phase and total 4 maximum apparent power values, phase and total 3 minimum phase to phase voltage values 4 minimum active power values, phase and total 4 minimum active power values, phase and total 4 minimum reactive power values, phase and total 4 minimum reactive power values, phase and total 4 minimum apparent power values, phase and total	1	0.35

General characteristics

The DMK 16 multimeter is available with flush-mount housing, 96x48mm/3.78x1.89".

Measurements are True RMS values and provide for reliable operation even in the presence of harmonics.

Operational characteristics

- Auxiliary supply voltage: 220-240VAC
 Operating frequency: 50-60Hz

 True BMS requested.

- Operating inspaces, 5.1.1

 True RMS measurements

 Accuracy: Voltage ±0.25% f.s. ±1 digit Current ±0.5% f.s. ±1 digit
- Active energy accuracy: Class 2 (IEC/EN 62053-21 and IEC/EN 62053-23)
- Max and min measurement storage
- Voltage measurement range: 35-660VAC
- 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
- Housing: flush-mount 96x48mm/3.78x1.89"
- Terminals: 4mm²
- EN degree of protection: IP54 on front; IP20 at terminals.

Certifications and compliance

Certifications obtained: EAC; UL Listed, for USA and Canada (cULus - File E93601), as Auxiliary Devices-Multimeters.
Compliant with standards: IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n° 14.

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24 Metering instruments and current transformers

Digital metering instruments



Flush-mount LED multimeter three-phase, non expandable



DMK 16 R1

Order code	Displayed measurements	Relay output	Qty per pkg	Wt
	n°	n°	n°	[kg]
DMK 16 R1 •	n° 3 phase voltage values 3 phase to phase voltage values 3 phase current values 4 active power values, phase and total 4 reactive power values, phase and total 4 apparent power values, phase and total 3 phase power factor values 1 frequency value in kWh 1 reactive energy value in kWh 1 reactive energy value in kWh 1 maximum phase voltage values 3 maximum phase voltage values 3 maximum phase voltage values 4 maximum active power values, phase and total 4 maximum apparent power values yourent values 4 maximum phase voltage values 3 minimum phase urrent values 4 maximum active power values, phase and total 5 minimum phase voltage values 8 minimum phase voltage values 9 minimum phase voltage values 1 minimum phase to phase and total 1 minimum apparent power values, phase and total 2 minimum and	n° 1	n° 1	[kg] 0.353
	maximum power			

Connection also to single-phase.

General characteristics

The DMK 16 R1 multimeter is available with flush-mount housing, 96x48mm/3.78x1.89'

Measurements are True RMS values and provide for reliable operation even in the presence of harmonics.

Operational characteristics

- Auxiliary supply voltage: 220-240VAC
 Operating frequency: 50-60Hz

 True BASS
- True RMS measurements
- Accuracy: Voltage ±0.25% f.s. ±1 digit Current ±0.5% f.s. ±1 digit
- Active energy accuracy: Class 2 (IEC/EN 62053-21 and IEC/EN 62053-23)
- Max and min measurement storage
- Voltage measurement range: 35-660VAC
- Current measurement range: 0.05-5.75A
- Frequency measurement range: 45-65Hz
- Programmable VT ratio: 1.00-500.0
- Programmable CT ratio: 5-10,000
- 1 relay output with 1 changeover (SPDT) contact
- Housing: flush-mount 96x48mm/3.78x1.89"
- Terminals: 4mm²
- EN degree of protection: IP54 on front; IP20 at terminals.

PROGRAMMABLE RELAY OUTPUT

- Voltage
 - Phase 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
- Protection inhibition max current: OFF/2-100%
- Maximum current: OFF/102-200%
- · Maximum current instantaneous tripping: OFF/110-600%
- Minimum current: OFF/5-98%
- Asymmetry: OFF/2-20%
- Power factor
 - Maximum power factor: 0.10-1.00
 - Minimum power factor: 0.10-1.00
- Time delay for max-min voltage, max-min current or current loss, phase loss, asymmetry and min-max power factor @: 0.0-900.0 seconds.

Certifications and compliance

Certifications obtained: EAC; UL Listed, for USA and Canada (cULus - File E93601), as Auxiliary Devices-Multimeters. Compliant with standards: IEC/EN 61010-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL508, CSA C22.2 n° 14.

Independent adjustable delays.