

Single-phase Digital active energy meter with measurement I - U - P - Hz - PF imported and exported energies and by IR side set up communication - Direct connection 32 A and 40 A

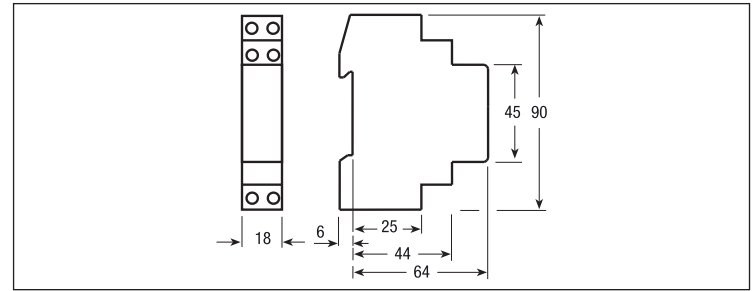
IIST105-02 Stand 20-11-2012



Code	Description
DRM-32-1P	single-phase active energy-meter with direct connection 0.020 to 32 A - 1 tariff - 1 SO (MID calibrated)
DRM-40-1P	single-phase active energy-meter with direct connection 0.020 to 32 A - 1 tariff - 1 SO (MID calibrated)

WARNING
Installation must be carried out and inspected by a specialist or under his supervision.
When working on the instrument, switch off the mains voltage!

Dimension



1) Quantities displayed

Depending on the model, by pushing the command button it is possible to show:

Ref.	Quantities	Unit	Symbol	DRM-32-1P	DRM-40-1P
E1	Active Energy Imported	kWh	→	x	x
E2	Active Energy Exported	kWh	←	x	x
P	Active Power Imported	W	W →	-	x
P	Active Power Exported	W	W ←	-	x
U	Voltage	V	U	-	x
I	Current	A	A	-	x
F	Frequency	Hz	Fr	-	x
PF	Power factor	PF	PF	-	x

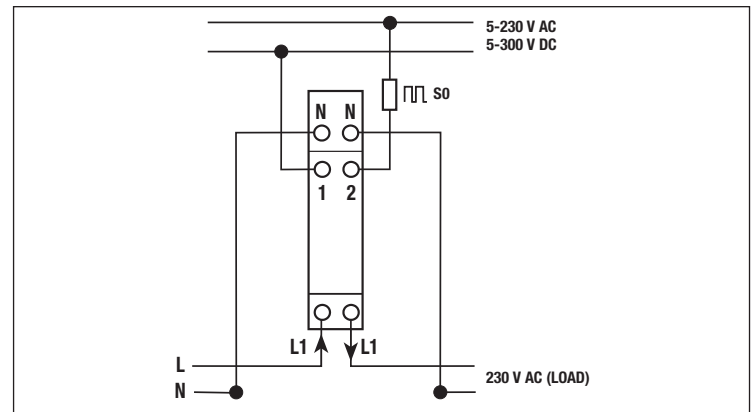
2) LCD display pages

The main page is shown at the meter power on, and whenever command button is not pushed for 20 seconds. This page automatically displays the energy counter (E1 or E2) which is increasing at that moment; on the top line is displayed the direction of the energy imported (→) or exported (←).

Depending on the model, by pushing the command button it is possible to show:

DRM-32-1P	DRM-40-1P
- Active energy imported (→)	- Active energy imported (→)
- Active energy exported (←)	- Active energy exported (←)
	- The Instantaneous Power active imported (→)
	- The Instantaneous Power active exported (←)
	- The Voltage
	- The Current
	- The Frequency
	- The Power factor
- The Firmware release	- The Firmware release
- The Firmware checksum	- The Firmware checksum
- The display test page	- The display test page

Wiring diagram

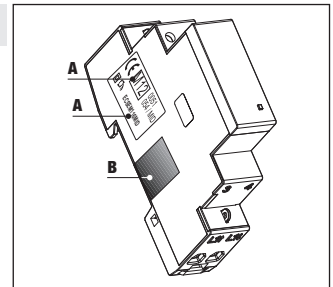


MID calibrated

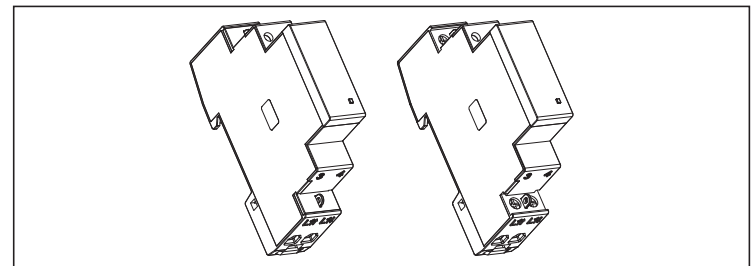
DRM-32-1P / DRM-40-1P

A) Device code and certification data indications

B) Tamper proof seal between upper and lower housing part

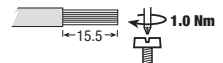


Sealable terminal covers

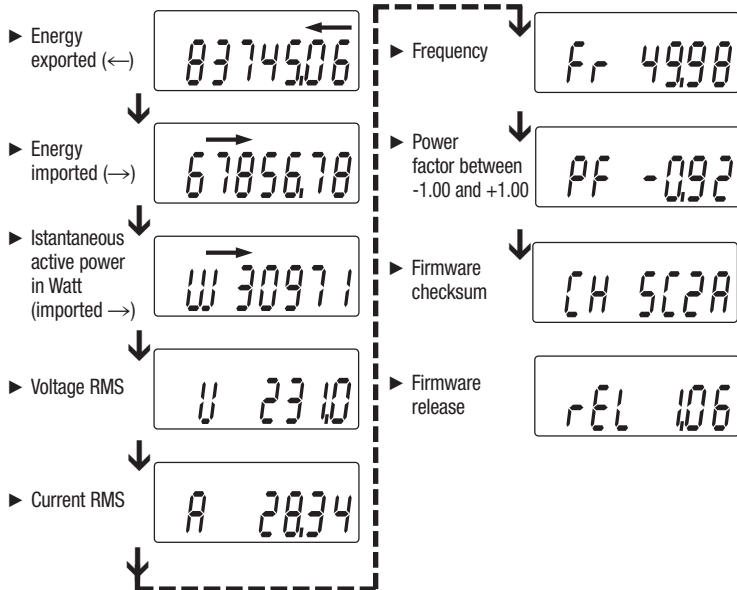
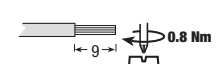


Cable stripping length and max. terminal screw torque

32 - 40 A direct connection main terminals
Screw driver PZ1

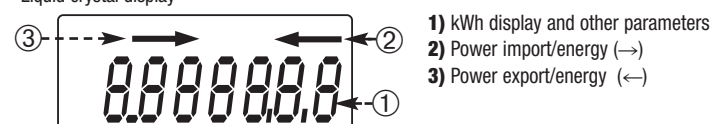


Tariff and communication terminals
Screw driver blade 0.8x3.5 mm



3) Display View

Liquid crystal display



- 1) kWh display and other parameters
- 2) Power import/energy (→)
- 3) Power export/energy (←)

Symbols

- Measuring elements
- Reversal preventing device
- Protected by double insulation

Technical data

Data in compliance with EN 50470-1, EN 50470-3 and EN 62053-31

			DRM-32-1P direct connection 32 A	DRM-40-1P direct connection 40 A
General characteristics				
• Housing	DIN 43880	DIN	1 modules	1 modules
• Mounting	EN 60715	35 mm	DIN rail	DIN rail
• Depth		mm	70	70
Operating features				
• Connectivity	to single-phase network	n° wires	2	2
• Storage of energy values and configuration	FRAM memory	-	yes	yes
Supply				
• Rated control supply voltage <i>Un</i>		VAC	230	230
• Operating range voltage		VAC	184 ... 276	184 ... 276
• Rated frequency <i>fn</i>		Hz	50 ±2%	50 ±2%
• Rated power dissipation (max.) <i>Pv</i>		VA (W)	≤8 (0.6)	≤8 (0.6)
Overload capability				
• Voltage <i>Un</i>	continuous	VAC	276	276
	momentary (1 s)	VAC	300	300
• Current <i>I_{max}</i>	continuous	A	32	40
	momentary (10 ms)	A	960	
Display (readouts)				
• Display type	LCD	n° digits	7 (2 decimals)	7 (2 decimals)
	digit dimensions	mm x mm	6.00 x 3	6.00 x 3
• Active energy: 1 display, 7-digit		kWh	0.00 ... 999999.9	0.00 ... 999999.9
• Instantaneous tariff measurement		-	1	1
	1 display, 1-digit	-	T1	T1
• Display period refresh		s	1	1
Measuring accuracy				
• Active energy and power	at 23 ±1°C, referred to nominal values acc.to EN 50470-3	class	B	B
Measuring input				
• Type of connection	phase/N	-	direct	direct
• Operating range voltage	phase/N	VAC	184 ... 276	184 ... 276
• Current <i>I_{ref}</i>		A	5	5
• Current <i>I_{min}</i>		A	0.25	0.25
• Operating range current (<i>I_{st} ... I_{max}</i>)	direct connection	A	0.02 ... 32	0.02 ... 40
• Frequency		Hz	50 ±2%	50 ±2%
• Input waveform		-	alternating	alternating
• Starting current for energy measurement (<i>I_{st}</i>)		mA	20	20
Pulse output S0				
• Pulse output	acc.to EN 62053-31 for active energy	-	yes	yes
• Pulse quantity		imp/kWh	1000	1000
• Pulse duration		ms	90 ms	90 ms
• Required voltage	min. (max.)	VAC (DC)	5 ... 230 ±5% (5 ... 300)	5 ... 230 ±5% (5 ... 300)
• Permissible current	pulse ON (max. 230 V AC/DC)	mA	90	90
• Permissible current	Impuls OFF (leakage cur. max. 230 V AC/DC)	µA	1	1
Optical interface				
• Front side (<i>accuracy control</i>)	LED	imp/kWh	5000	5000
Safety acc. to EN 50470-1				
• Indoor meter		-	yes	yes
• Degree of pollution		-	2	2
• Operational voltage		VAC	300	300
• AC voltage test (EN 50470-3, 7.2)		kV	4	4
• Impulse voltage test		1.2/50 µs-kV	6	6
• Protection class (EN 50470)		class	II	II
• Housing material flame resistance	UL 94	class	V0	V0
Lateral IR interfaces				
• For communication moduls connection (DRM-M / DRM-MOD / DRM-KNX / DRM-LOG)		-	yes	yes
Connection terminals				
• Type cage main current paths	screw head Z +/-	POZIDRIV	PZ1	PZ1
• Type cage pulse output	blade for slotted screw	mm	PZ0	PZ0
• Terminal capacity main current paths	solid wire min. (max.)	mm ²	16	16
	stranded wire with sleeve min. (max.)	mm ²	16	16
• Terminal capacity pulse outlet	solid wire min. (max.)	mm ²	0.15 (4)	0.15 (4)
	stranded wire with sleeve min. (max.)	mm ²	0.15 (2.5)	0.15 (2.5)
Environmental conditions				
• Mechanical environment		-	M1	M1
• Electromagnetic environment		-	E2	E2
• Operating temperature		°C	-25 ... +55	-25 ... +55
• Limit temperature of transportation and storage		°C	-25 ... +70	-25 ... +70
• Relative humidity (not condensation)		%	≤80	≤80
• Vibrations	50 Hz sinusoidal vibration amplitude	mm	±0.075	±0.075
• Degree protection	housing when mounted in front (terminal)	-	±0.075	IP51(*)/IP20

(*) For the installation in a cabinet at least with IP51 protection.

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