DRM ENERGY-METERS
THREE-PHASE CT 5A/80A/125A

- Direct connection 80A/125A
- Connection through CT .../5A up to 10.000/5A

Digital meter to register active energy, both imported and exported, and to measure current, voltage, active and reactive power, frequency and power factor, with IR communication side port.

A three phase energy meter with an 8 digit, 2 decimal, display showing the total energy reading. The meters have 2 SO outputs generating pulses for remote processing of active and reactive energy and 2 Tariffs.

Parameters

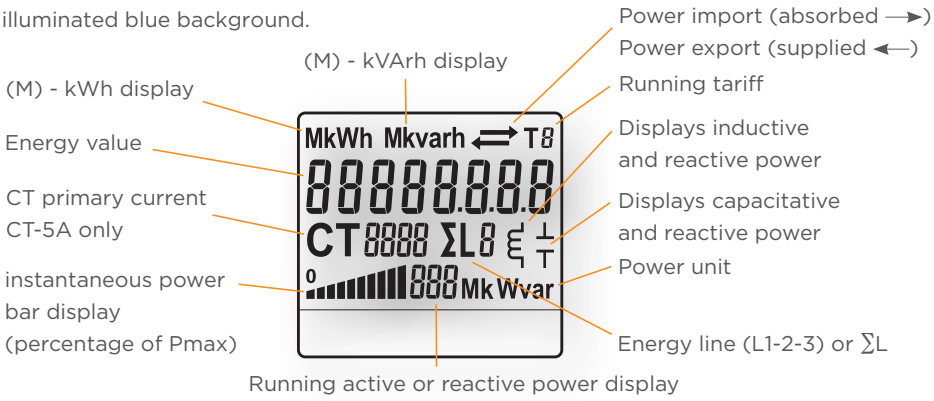
Display		Unit	ID
Active energy	Tariff 1 Tariff 2	kWh kWh	Energy imported and exported Energy imported and exported
Reactive energy	Tariff 1	kVArh	Energy imported and exported
	Tariff 2	kVArh	Energy imported and exported
Active power		(M-k)-W	Utilization and instantaneous value
Reactive power		(M-k)-VAr	Utilization and instantaneous value
Connection errors			Phase Err
Primary transformer	5 ... 9999	A	CT (current transformer) (CT 5A only)

Features

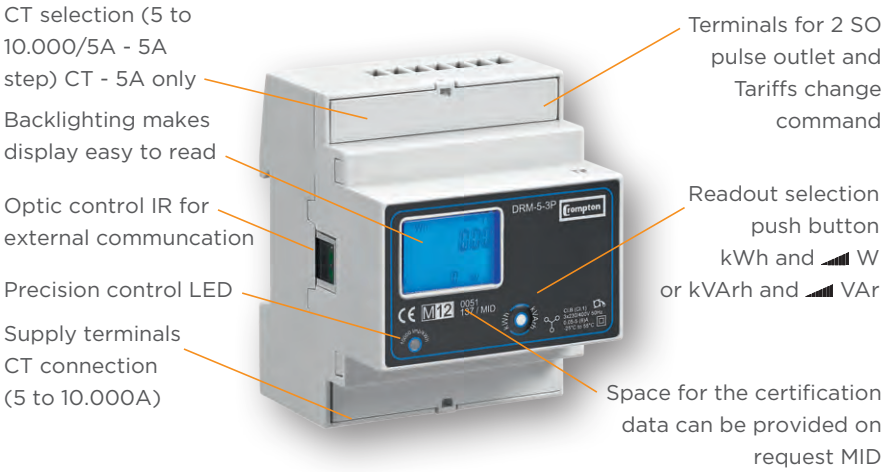
- Blue backlit LCD
- For direct connection 80A/125A, or for transformer .../5A
- For transformer primary current of 5A to 10.000/5A. Input is in 5A increments
- 8 digits - 8 display for eight energy values indication
- Detection of connection errors (phase transposition)
- Accuracy class 1 for active energy and power according to EN 50470-3 (B)
- Accuracy class 2 for reactive energy and power according to EN 62053-23
- Operating range current (Ist ... Imax.) for direct connection 80A = 0.015 ... 80A/125A - 0.020...125A for connection by CT .../5A = 0.003 ... 5A
- The standard versions are designed to be combined with the communication module
- Energy register for import and export
- Instantaneous active and reactive power display
- Sealable terminal covers
- 4 DIN modules wide (72mm) 5A/80A /6 DIN 108 modules wide 125A

Display

Liquid crystal display with illuminated blue background.



4 standard module housing, suitable for DIN-rail mounting Connection through CT .../5A up to 10.000/5A



Technical Data

Display			DRM - 80 - 3P direct connection 80A	DRM - 5 - 3P CT connection up to 10.000/5A	DRM - 125 - 3P direct connection 125A
Supply Rated control supply voltage Un		V AC	230	230	230
Operating range voltage		V	184 ... 276	187 ... 276	184 ...276
Rated frequency fn		Hz	50	50	50
Rated power dissipation (max. for phase) Pv		VA (W)	≤8 (0.6)	≤8 (0.6)	≤8 (0.6)
Overload capability Voltage Un	continuous; phase/phase 1 second: phase/phase continuous; phase/N 1 second: phase/N	V AC V AC V AC V AC	480 800 276 300	480 800 276 300	480 800 276 300
Current Imax	continuous momentary (0.5 s) momentary (10 ms)	A A A	80 - 2400	6 120 -	125 - 3750
Display (readouts) Connection errors and phase out	discernible from phase-sequence indic.	-	Phase Err	Phase Err	Phase Err
Display type	LCD digit dimensions	n° digits mm x mm	8 (2 decimal) 6.00 x 3	8 (2 decimal) 6.00 x 3	8 (2 decimal) 6.00 x 3
Active energy: 1 display, 8 digit + display import or export (arrow)	tariffs 2 overflow	kWh kWh	0.01 999999.99	0.01 999999.99	0.01 999999.99
Reactive energy: 1 display, 8-digit + display import or export (arrow)	tariffs 2 overflow	kVArh kWh	0.01 999999.99	0.01 999999.99	0.01 999999.99
Instantaneous active power: 1 display, 3-digit		W, kW or MW	000 ... 999	000 ... 999	000 ... 999
Instantaneous reactive power: 1 display, 3-digit		VAr, kVAr or MVar	000 ... 999	000 ... 999	000 ... 999
Instantaneous tariff measurement	1 display, 1-digit	-	T1 or T2	T1 or T2	T1 or T2
Transformer primary current		A	-	5 ... 10.000	
Display period refresh		s	1	1	1
Measuring accuracy Active energy and power	acc.to EN 50470-3	class 1	B (1%)	B (1%)	B (1%)
Reactive energy and power	acc.to EN 62053-23	class 2	2%	2%	2%
Measuring type Type of connection			direct	transformer .../5A	direct
Voltage Un	phase/phase	V AC	400	400	400
	phase/N	V AC	230	230	230
Operating range voltage	phase/phase	V AC	319 ... 480	319 ... 480	319 ... 480
	phase/N	V AC	184 ... 276	184 ... 276	184 ... 276
Current Iref		A	5	-	5
Current In		A	-	5	-
Current Imin		A	0.25	0.05	0.25
Operating range current (1st ... Imax)	direct connection transformer connection (CT)	A A	0.015 ... 80 -	- 0.003 ... 6	0.02 ... 125
Frequency		Hz	50 ±2%	50 ±2%	50 ±2%
Operating frequency		Hz	44 ... 66	44 ... 66	44 .. 66
Differential		%	1	1	1
Input waveform		-	sinusoidal	sinusoidal	sinusoidal
Starting current for energy measurement (Ist)		mA	15	3	20

Technical Data

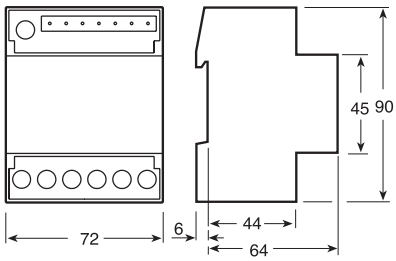
Display			DRM - 80 - 3P direct connection 80A	DRM - 5 - 3P CT connection up to 10.000/5A	DRM - 125 - 3P direct connection 125A
Pulse output SO Acc.to EN 62053-31					
Pulse output	for act. and react. energy T1 and T2	-	yes	yes	yes
Quantity pulse output	for direct connection 80A depending on the transf. factor.	Imp/kWh Imp/kWh	500 -	- 100-10-1	500 -
Pulse duration		ms	30 or 50 ±2	30 or 50 ±2	30 or 50 ±2
Required voltage	min. (max.)	VAC (DC)	5 ... 230 ±5% (5 ... 300)	5 ... 230 ±5% (5 ... 300)	5 ... 230 ±5% (5 ... 300)
Permissible current	pulse ON (max. 230V AC/DC)	ma	90	90	90
Permissible current	pulse OFF (leak. cur. max. 230V AC/DC)	µA	1	1	
Optical interface Front side (accuracy control)	LED	Imp/kWh	1000	10.000	1000
Safety acc. to EN 50470-1 Indoor meter		-	yes	yes	yes
Degree of pollution		-	2	2	2
Operational voltage		V AC	300	300	300
AC voltage test (EN 50470-3, 7.2)		kV	4	4	4
Impulse voltage test		1.2/50 µs-kV	6	6	6
Protection class (EN 50470)		class	II	II	II
Housing material flame resistance	UL 94	class	V0	V0	V0
Safety-sealing between upper and lower housing part (mod. 282331-282141)		-	yes	yes	yes

Product Codes

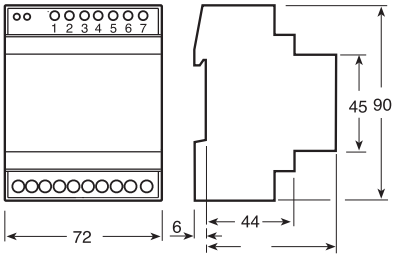
Description	Comm	DIN mod.	Part number
LCD kWh/kVArh ../5A, 2 tariffs, 2S0 - MID	pulse	4	DRM-5-3P
LCD kWh/kVArh 80A, 2 tariffs, 2S0 - MID	pulse	4	DRM-80-3P
LCD kWh/kVArh 125A, 2 tariffs, 2S0 - MID	pulse	6	DRM-125-3P
Optional communication Interfaces	M-BUS	1	DRM-M
	EIB-KNX	1	DRM-KNX
	Modbus-RTU RS485	1	DRM-MOD
	SD card datalogger	1	DRM-LOG
	Power supply transformer for datalogger	1	DRM-LOG-PS

Dimensions

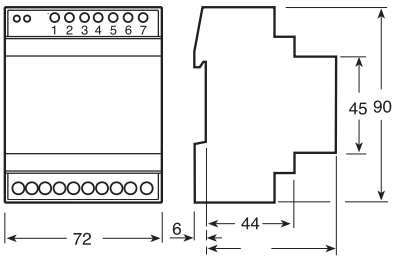
DRM-80-3P



DRM-5-3P

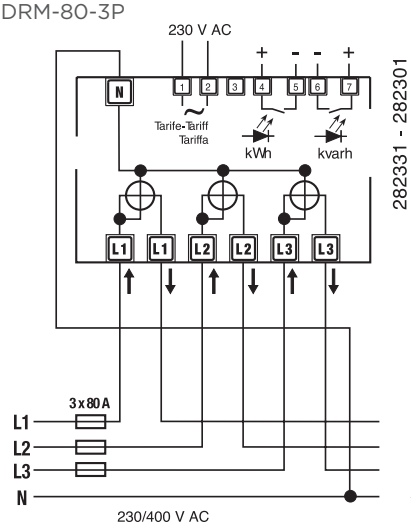


DRM-125-3P



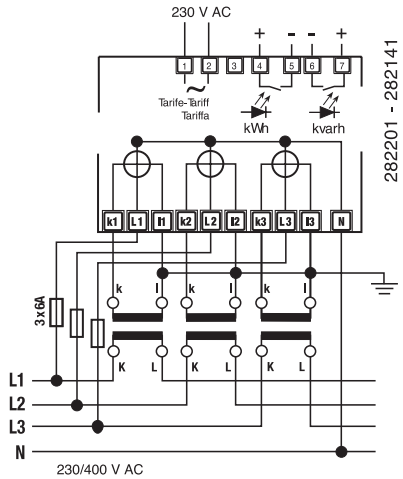
Circuit diagrams

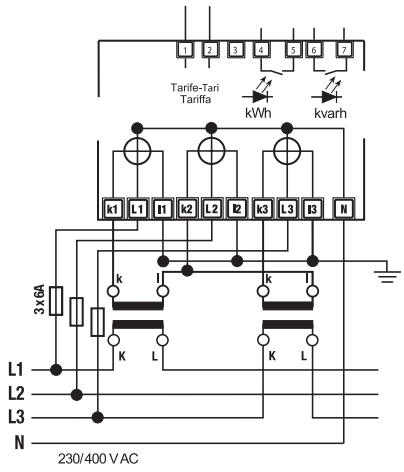
DRM-80-3P



A fuse of 80A is recommended for the line protection.

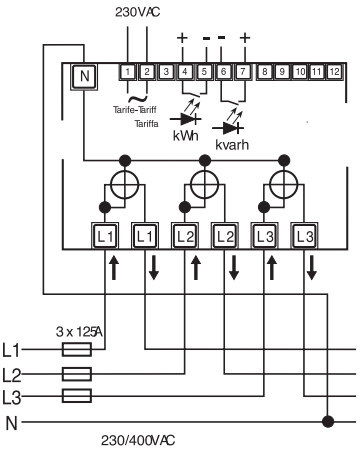
DRM-5-3P





A fuse of 6A is recommended for the line protection. Current transformers must not be operated with open terminals since dangerous high voltages might occur which may result in personal injuries and property damage. In addition to this, the transformers are exposed to thermal overload.

DRM-125-3P



A fuse of 125A is recommended for the line protection. Wire N needs to be connected to the meter.

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