RI-F421 - 1 slot for plug in module

Multifunction Power Meter – Panel Mounting - Built-in Pulse and RS485 Output

- 96 x 96mm flush mounting
- Single phase or 3 phase (3 or 4 wire) network unbalanced load
- Built-in energy pulse output
- Built-in RS485 Modbus output
- Single slot for plug in module (RS232, PROFIBUS, LonWorks, M-Bus , MEMORY + RS485, BACNET, Ethernet and RS485 modules available)
- Customisable display page
- Backlit LCD display
- Wide range of measured parameters - see table below
- –/1A or –/5A current transformer operated
- Active energy class 0.5 (EN61557-12)
- Reactive energy class 1 (EN61557-12)
- 3-phase - 80…500V 50/60/400Hz measured voltage
- Single phase - 50…290V 50/60/400Hz measured voltage
- Auxiliary 80…265Vac, 110…300Vdc
- Field updatable firmware
- Programmable CT ratio 1…9999 (max CT primary 50kA/5A or 10kA/1A)
- Programmable VT ratio 1…10 (max VT primary 1200V)
- Programmable display contrast and backlight intensity
- Resettable parameters - min + max voltage, current demand, current max demand, active, reactive, apparent power max demand, hours run, partial active energy, partial reactive energy

Function Diagram

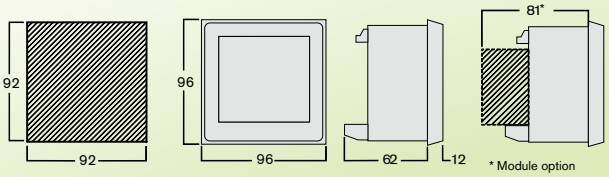
Module Options:-
RS485, RS232, M-Bus, PROFIBUS, LonWorks, MEMORY + RS485, BACNET, Ethernet

U	I	PQS	ET
Voltage *phase and linked*	Current *phase and neutral*	Three Phase Power *active, reactive, apparent, distorting*[1]	Power Factor *phase and 3-phase*
Minimum Voltage *phase*	Current Demand *phase*	Phase Power *active, reactive, apparent*	Frequency
Maximum Voltage *phase*	Max. Current Demand *Phase*	Power Demand *active, reactive, apparent*	Hours Run
Voltage Harmonic Distortion *phase or linked*	Average Current *(I1 + I2 + I3) / 3*	Max. Power Demand *active, reactive, apparent*	Positive Active Energy *partial and total*
Harmonic Analysis* H03/05/07/09 *phase or linked*	Current Harmonic Distortion *phase*		Positive Reactive Energy *partial and total*
Crest Factor	Harmonic Analysis* H03/05/07/09 *phase or linked*		Negative Active Energy
	Crest Factor		Negative Reactive Energy

* The calculation of the harmonic contents of the incoming signal keeps in account the possible presence of inter-harmonics that normally is found when the waveform is cyclically interupted (burst fired). In these cases, there aren't any harmonics at frequencies multipleof the fundamental but in the middle of the ranges between two consecutive values **eg 50Hz (fundamental) Inter harmonics: 87.5Hz (50-100Hz) or 112.5Hz (100-150Hz)**. To show the results in a standard way, the harmonic contents, as in the example, is correctly attributed to the nearest central harmonic in the range 50…150Hz that is 100Hz (second harmonic).

[1] In normal 3-phase systems, usually the relationship between P, Q and S is as in the following: $S = V \times I = \sqrt{P^2 + Q^2}$. This is true when no distortions are present in the currents. When the currents have some harmonic content, the formula must be corrected to: $S = V \times I = \sqrt{P^2 + Q^2 + D^2}$ where D had the meaning "deforming power".

Dimension Diagrams



How to Order / Model Reference

eg **RI-F421** □□□□□□□□

Model	RI-F421
Auxiliary Voltage	
80…265Vac/110…300Vdc	