

# DIN 34

## Connection Diagrams

Diagram 1

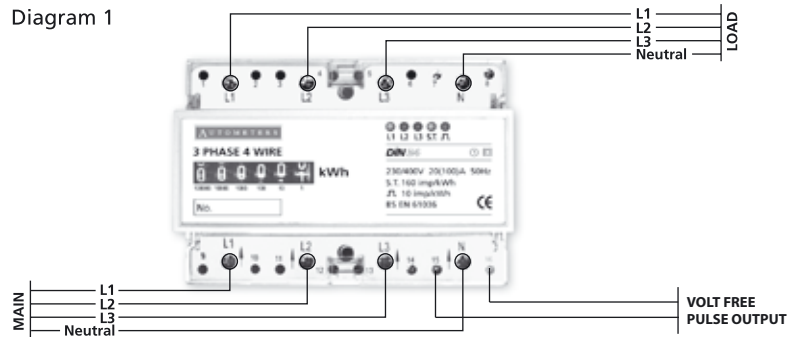
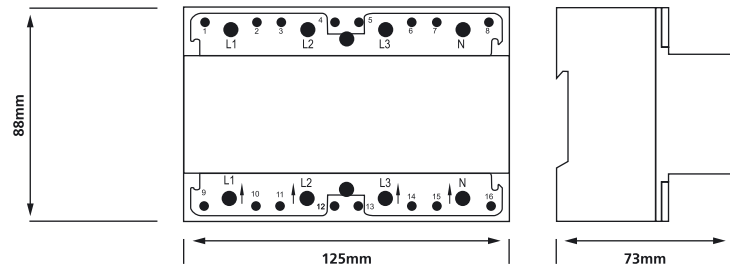


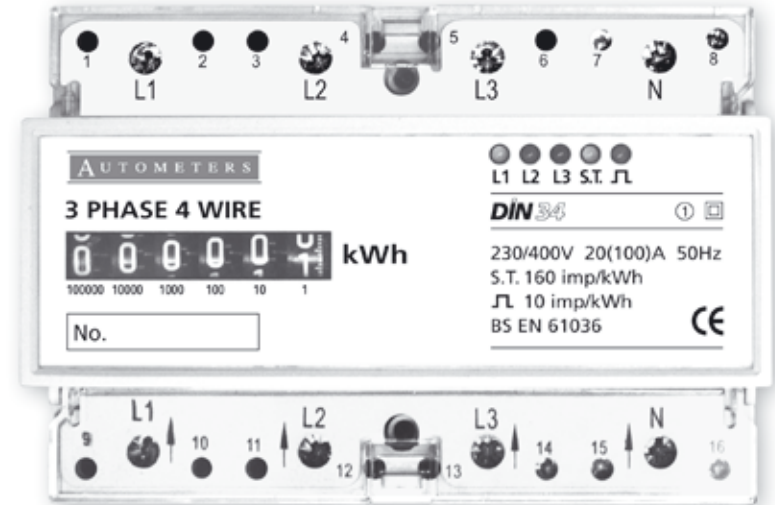
Diagram 2



## Guarantee

This product is guaranteed for 12 months as long as the meter has not been subject to willful damage and has been installed by a competent electrician who has installed the meter to the latest regulations concerning electricity meters.

Product development is continuous and Autometers Ltd reserves the right to make alterations and manufacture without notice. Products as delivered may therefore differ from the descriptions and illustrations in this publication.



**AUTOMETERS**  
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## Installation and operating manual

**AUTOMETERS**  
SYSTEMS

### 1. Characteristics and range of application

The DIN 34 three phase electronic meter has been designed to be used in panels on a 35mm din rail. It is reliable, light weight, compact and easy to install.

The meter uses advanced digital sampling technology and uses the latest micro electronics available. The meter is manufactured and complies to the relative requirements of the national standards GN/17215-2002 and international standards IEC 1036 (Class 1 or Class 2).

The meter is used for measuring active energy power consumption in a rated frequency of 50 Hz or 60 Hz three phase alternating current circuit.

Basic specifications and technical parameters:

#### 2.1 Specifications

Name	Model	Class of precision	Rated voltage $U_b$	Rated current (A)
3 phase 4 wire active energy electric meter	DIN34	1	230/400V	5(30), 10(50) 15(90), 20(100)

With balanced loads				
Current value		Power factor (COS $\phi$ )	Error rate of percentage %	
Direct connector	Connection through CT		Class 1	Class 2
0.05Ib	0.02Ib	1.0	$\pm 1.5$	$\pm 2.5$
0.1Ib	0.05Ib	0.5L	$\pm 1.5$	$\pm 2.5$
		0.8C	$\pm 1.5$	—
0.1Ib-1max	0.05Ib-1max	1.0	$\pm 1.0$	$\pm 2.0$
0.2Ib-1max	0.1Ib-1max	0.5L	$\pm 1.0$	$\pm 2.0$
		0.8C	$\pm 1.0$	—

With Single phase load				
Current value		Power factor (COS $\phi$ )	Error rate of percentage %	
Direct connector	Connection through CT		Class 1	Class 2
0.1Ib-1max	0.05Ib-1max	1.0	$\pm 2.0$	$\pm 3.0$
0.2Ib-1max	0.1Ib-1max	0.5L	$\pm 2.0$	$\pm 3.0$

#### 2.21 Starting

The meter will work accurately under the following conditions rated voltage, rated frequency and  $\cos = 1.0$  and when the current load is as the table below.

Connecting mode	Class 1	Class 2
Direct	0.004Ib	0.005Ib
With transformer	0.002Ib	0.003Ib

#### 2.22 Insulation performance

The meter has been tested at 6 kv for 1.2/50 us for circuit insulation.

2.23 All circuit interval of the meter can withstand impulse voltage with waveform 1.2/50  $\mu$  S, leak value 6KV, and it can not occur electric arc or rout as it is tested at the same pole.

2.24 Working voltage limit. 70-130%  $\mu$ b

2.25 Power consumption <2w and 10 va per phase

#### 3. Installation

3.1 Before installation the meter should be unpacked and checked carefully for any damage if the meter is found to be damaged then it should be re-packed and sent back to where you purchased the product from.

3.2 The meter should be installed in a dust free and dry atmosphere fitted securely and ensuring that all connections are correct and secure.

3.3 The meter has been designed to be installed in a cabinet on a 35mm din rail.

3.4 The meter must be installed by a competent and qualified electrician and proper care should be taken to study the wiring diagram. (Diagram 1).

#### 4 Meter Display (Diagram 2).

4.1 There are three phase failure voltage lights (L1 amber, L2 green, L3 red) which will illuminate when the correct voltage is applied to each phase. The individual lights will switch of when a voltage is not present.

4.2 A strobe light (160 imp/kwh) is provided for accuracy calibration checking (S.T. white).

4.3 An indicator light (10 imp/kwh) to indicate the volt free pulse relay contacts closing (P. green).

4.4 The meter is fitted with a mechanical step counter for indicating the kwh consumed.

#### 5 Pulse Output

5.1 Opto isolated volt free.

5.2 Rated Switching Current: 0.5A 125VAC / 1A30VDC  
 Max Switching Voltage: 220VDC 250VAC  
 Max switching current: 2A