

# AD3-5M

## Energy Meters Three-Phase

### Application

The AD3-5M is the latest in the Din rail meters range from Autometers with MID Approval appendix "B" and "D" making it acceptable for revenue collection.

The AD3-5M has been designed and manufactured where price and limited information is required. The meter is fitted with an LCD display showing various parameters the default register is "Import kWh rate 1" with icons L1,L2,L3 indicating individual phase voltage being present at the meter, an Arrow also illuminates indicating direction of power flow . By pressing the scroll button on the front the meter the display will change to the various optional displays. The current transformer setting and engineering displays are positioned as the last four displays.

The AD3-5M has two pulse outputs kwh pulse value 100 imp/kwh.  
The two rates are operated by an external time switch.

### Overview

The AD3-5M is a 3 phase 4 wire, 230/400 volt 50 Hz, 5 Amp current transformer operated kWh meter measuring active energy on import or export applications.

### Function

Display	Unit	ID	Indication
Active Energy	Tariff 1 (M)-(k)-Wh	-	Import Indication ←
	Tariff 2 (M)-(k)-Wh	-	Export Indication →
Voltage Indication	L1,L2,L3	Will illuminate when voltage is present	-
Tariff	T1, T2	Will illuminate indicating present tariff	-
Phased Disconnection		Phase Error	-



### Installation



The meter must be fitted in a suitable enclosure.  
(See Autometers full range of enclosures).

### 4 Standard Module Housing

Suitable for DIN Rail Mounting C.T Connection 5 Amp

LCD Display

MID Certification Number

Precision Control LED

Terminals 1-2 External Time Switch

Terminals 4-5 Import Pulse Terminals

Terminals 6-7 Export Pulse Terminals

Switch to step through display

Technical details of Meter

Supply Terminals  
5 Amp C.T Connection

## Technical Data

Data in compliance with EN 50470-1, EN 504470-3 and EN 62053-31

General Characteristics			Current Transformer 5 Amp
• Housing	DIN 43880	DIN	4 Modules
• Mounting	EN 60715	35mm	DIN Rail
• Depth		mm	70
• Reference Standard	Active Energy	-	EN 50470-1-3
	Pulse Output	-	EN62053-31
Operating Features			
• Connectivity	To Single/Three-phase Network	N° Wires	4
• Storage of Energy Values and Configuration	Digital Display (EEPROM)	-	Yes
• Display Tariffs Identifier	For Active & Reactive Energy	N° 2	T1 and T2
Supply			
• Rated Control Supply Voltage <b>Un</b>		VAC	230
• Operating Range Voltage		V	184 ... 276
• Rated Frequency <b>Fn</b>		Hz	50
• Rated Power Dissipation (Max for Phase) <b>Pv</b>		VA (W)	<8 (0.6)
Overload Capacity			
• Voltage Un	Continuous: Phase/Phase	V	480
	1 Second: Phase:Phase	V	800
	Continuous: Phase/N	V	276
	1 Second: Phase/N	V	300
• Current Imax	Continuous	A	6
	Momentary (0.5s)	A	120
	Momentary (10ms)	A	-
Display (Readouts)			
• Connection Errors & Phase Out	Discernible from Phase Sequence Indic.	-	Phase Err
• Display Type	LCD	No Digits	8 (1 decimal)
	Digit Dimensions	mm x mm	6,00 x 3
• Active Energy : 1 Display, 8 Digit	Taris 2	Wh	0.01
+ Display import or Export (Arrow)	Overflow	-	99999999.9
• Transformer Primary Current		A	5 ... 10,000
• Display Period Refresh		S	1
Measuring Accuracy			
• Active Energy and Power	Acc. to EN 50470-3	Class 1	B
Measuring Input			
• Type of Connection			Transformer/5A
• Voltage <b>Un</b>	Phase/Phase	V	400
	Phase/N	V	230
• Operating Range Voltage	Phase/Phase	V	319 ... 480
	Phase/N	V	184 ... 276
• Current <b>Iref</b>		A	-
• Current <b>In</b>		A	5
• Current <b>Imin</b>		A	0.05
• Operating Range Current ( <b>Ist ... Imax</b> )	Direct Connection	A	-
	Transformer Connection (CT)	A	0.003 ... 6
	Primary Current of the Transformer	A	5 ... 10,000
• Transformer Current	Smallest Input Step Adjus. in 5 A Steps	A	5
		Hz	50
• Frequency		-	Sinusoidal
• Input Waveform		mA	3
• Starting Current for Energy Measurement ( <b>Ist</b> )			
Pulse Output S0			
• Pulse Output	Acc. to EN 62053-31 for Act. and React. Energy T1 and T2	-	Yes
• Quantity Pulse Output	Depending on the Transf. Factor	Imp/kWh	<b>100-10-1</b>
		ms	30 ±2ms
• Pulse Duration	Min. (Max.)	VAC (DC)	5 ... 230 ±5% (5...300)
• Required Voltage	Pulse ON (Max 230V AC/DC)	mA	90
• Permissible Current	Pulse OFF (Leak Cur. Max. 230V AC/DC)	uA	1
• Permissible Current			

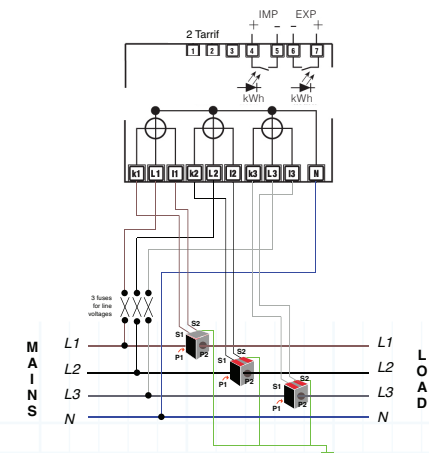
## Technical Data Continued

Optical Interfaces			
• Front Side ( <b>Accuracy Control</b> )	LED	imp/kWh	10,000
Safety Acc. to EN50470-1			
• Indoor Meter		-	Yes
• Degree of Pollution		-	2
• Operational Voltage		V	300
• AC Voltage Test (EN 50470-3, 7.2)		kV	4
• Impulse Voltage Test		1.2/50 $\mu$ s-kV	6
• Protection Class (EN 50470)		Class	ii
• Housing Material Flame Resistance	UL 94	Class	V0
• Safety-sealing between upper and lower housing part		-	Yes
Connection Terminals			
• Type Cage Main Current Paths	Screw Head Z +/-	POZIDRIV	PZ1
• Type Cage Pulse Output	Blade for Slotted Screw	mm	0.8 x 3.5
• Terminal Capacity Main Current Paths	Solid Wire Min. (Max.)	mm <sup>2</sup>	1 (4)
• Terminal Capacity Pulse Outlet	Stranded Wire with Sleeve Min. (Max.)	mm <sup>2</sup>	1 (4)
	Solid Wire Min. (Max.)	mm <sup>2</sup>	1 (4)
	Stranded Wire with Sleeve Min. (Max.)	mm <sup>2</sup>	1 (4)
Environmental Conditions			
• Mechanical Environment		-	M1
• Electromagnetic Environment		-	E2
• Operating Temperature		°C	-10 ... +55
• Limit Temperature of Transportation/Storage		°C	-25 ... +70
• Relative Humidity (Not Condensation)		%	≤80
• Vibrations	50Hz Sinusoidal Vibration Amplitude	mm	±0.075
• Degree Protection	Housing when mounted in front (term.)	-	IP51(*) / IP20

## Circuit Diagrams

### 5 Amp CT Connection Diagram

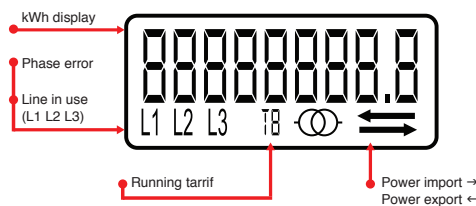
Terminals 1+2 (230 volt) are used when you are using more than one tariff



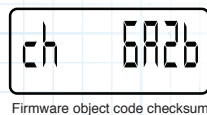
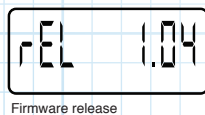
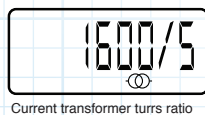
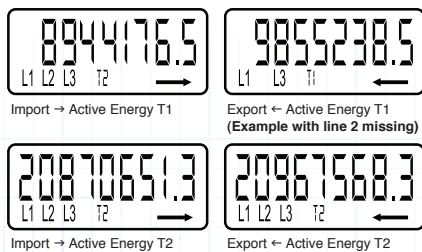
## Display Registers

### Display

Liquid crystal display

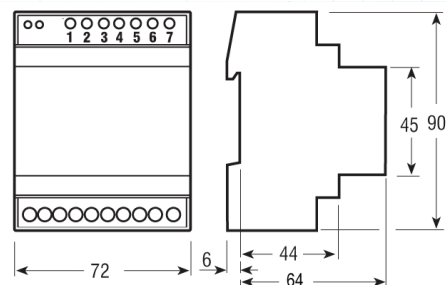


### Main Pages



## Dimensions

All dimensions in mm



### Autometers Systems Limited

4B Albany Road, Chorlton-cum-Hardy, Manchester, M21 0AW

Tel: +44 (0) 161 861 9056 Fax: +44 (0) 161 881 3745

www.autometers.co.uk Email: sales@autometers.co.uk

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