

B Adams

T A Adlington

PRODUCT DEVELOPMENT MANAGER

SENIOR ENGINEER

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For sheets 100 onwards see issue cards for latest issues

AMENDMENT RECORD

DATE	PAGE	ISSUE	DETAILS
12/11/98	All	A	Original
09/03/99	All	B	Current ranges B, H & J removed. 480V removed from Note 2.
09/07/99	All	C	Current range J re-instated.
22/09/99	1	D	Service types options for 3ph 4w added Service Type symbols added Current Range IEC standard added to All ranges. Voltage Range changed to 63.5V-240V (L-N) (57.5V 3ph 4wire only) Service Type added to Works order info. Version A description change to Vietnam B added for Code of Practice 5 Sheet 100 added.
08/02/00	Sht1	E	Operational Mode E added. Version A identified as obsolete. Issue letter of Version B firmware removed.
01/03/00	Sht 2	F	Current Range K added and (Note 3) removed from J and F. Accuracy Class G and H added Works order information removed.

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TECHNICAL SPECIFICATION

01/08/03	All	Z	Hardware configuration 'F' added. PCB Design Suffix 'K' & 'L' added to Revision Suffix 'D'. Communications (Port B) option 'P' added. Version 'T' added.
21/11/03	All	ZA	Version 'W' added. Product/Terminal option 'PD' removed and Description of 'PB' to include DIN.
01/12/03	All	ZB	Version 'R' changed from 2-01166-A from 2-01164-A.
10/03/04	All	ZC	Hardware Configuration 'G' AND 'H' added All firmware issues updated. Additional design suffixes added to Revision suffixes 'D' and 'E' All firmware issues updated ECN E4497_0
12/05/04	All	ZD	Version 'U', 'X', 'Y' and 'Z' added Operational mode 'G' modified to read "Extended Memory(900 days Load Profile,36 Historical Registers) use with Version 'F','Q','X','Y' Firmware" Hardware Configuration 'J' added
15/07/04	All	ZE	Version 'I' added Version 'A' changed from 2-01146-T to Z Version 'T' changed from 2-01148-Y to AA Version 'U' changed from 2-01156-B to E Version 'V' changed from 2-01157-L to M Version 'Y' changed from 2-01146-X to AA Version 'Z' changed from 2-01146-Z to AB
16/08/04	All	ZF	Version Extension Letter added to code Version Extension 'D' and 'Da' added Additional design suffixes 'C','D' and 'E' added to Revision suffix 'E'.
27/08/04	All	ZG	Hardware Configuration 'K' and 'L' added
15/10/04	All	ZH	Hardware Configuration 'M'

No Time of use registers _____ N
ACCESS
 Password protection (4 levels, code 5 issue 6) _____ P
 No passwords _____ N

P B 3 A A B R C T P R A - 1 A

COMMUNICATIONS (PORT B)

RS232 interface board _____ R
 Internal Modem UK only _____ I
 Internal Modem non UK _____ J
 RS485 interface board RJ45 Connection _____ K
 RS485 interface board RJ11 Connection _____ L
 No comms board _____ N
 IEC 870 Module _____ P

AUXILIARY I/O (PORT A)

4 External Outputs Module _____ A
 4 External Outputs Module including 5A relay _____ B
 1 External Output Module _____ C
 Input Data module (External Data Collection) _____ G
 No I/O board _____ N

VERSION

R= IEC 870 code. _____ R
 T= Code of Practice 5 M-UC with 32 registers with DSM Communications Facility _____ T
 U= M-UC with Transformer Loss Compensation _____ U
 V= M-UC with Password Protected Register Zeroing and DSM Communications Facility _____ V
 W= Russia _____ W
 X = Code of Practice 5 M U Compatible, 32 registers, 900 days LP and DSM Comms Facility _____ X
 Y= Vietnam with 36 billing days, 36 Historical Registers and 16 TOU _____ Y
 Z= Code of Practice 5 Multi-Utility Compatible _____ Z
 1 = Code of Practice 5 with instrumentation profiling (No I/O Modules) _____ 1
 2 = Code of Practice 5 with instrumentation profiling, Multi Utility Compatibility _____ 2
 3 = Code of Practice 5 instrumentation profiling, Multi Utility Compatibility and password protected register zeroing _____ 3
 4 = Code of Practice 5 instrumentation profiling, Multi Utility Compatibility, 18 historical sets and 100 programming events _____ 4
 5 = Code of Practice 5 with instrumentation profiling, Multi Utility Compatibility (Vietnam) _____ 5

REVISION SUFFIX

PCB JG0520 0** and JG0520 1** Design Suffix A', 'B', 'C', 'D', 'E', 'F', 'G' _____ E
 PCB JG0520 2** and JG0520 3** Design Suffix A', 'B' _____ F

Note 1:- Ref currents (In) CT operated Std values 1, 2,5A
 Exceptional value 2.5A
 Maximum current 1.2In, 1.5In or 2In

Meters with Ref currents outside these values are not to be marked with IEC62053-21 or IEC62053-23 Std

Note 2: Ref Voltage for Direct **connected** Std values 120,230,277,400V
 Exceptional values 100,127,200,220,240,380,415V
 Ref Voltage for **VT operated**(connection via VT only) Std values 57.7,63.5,100,110,115,120,200V
 Exceptional values 173,190,220V

Meters with Ref voltages outside these values are not to be marked with IEC Std

Note 3 :- IEC 62053-22 class 0.5 and class 0.2 may only be marked as 1-1.2 and 5-6A variants.

NB:- Please note the different voltages for **Direct connected (CT) operated** and **Voltage transformer operated (VT) (CT) meters.**

Note 4:- Basic currents (Ib) **Direct Connected** Std values 10, 15, 20, 30, 40,50A
 Exceptional value 80A
 Maximum current shall preferably be an integral multiple of Ib up to a maximum of 100A (e.g. 5 X basic current)

Note 5: **IEC 62053-23 (reactive meter Std) are class 2 and class 3**
2 METERS TO BE MARKED A CLASS GREATER THAN THE KWH CLASS
3 EG EN 62053-21 CLASS 2 EN 62053-23 CLASS 3

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METERS APPROVED TO IEC 61036
APPENDIX B SMALL AND LARGE CHARACTER DISPLAY

Nameplate Rating _____ Model (Factory use only) _____
Not model code specific _____ Type (Nameplate) _____

Voltage	Ib (In)	Imax	Service Type for 3ph 4w	

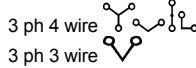
P B 3 A A B R C T P R A - A A

PRODUCT/TERMINAL

1.1.1

1.1.2 Polyphase A1700 Vision BS/DIN termination
See Sheet 4

SERVICE TYPE



CURRENT RANGE

- Direct Connected 10A – 100A IEC 61036(See note 4) _____ **A**
- CT Operated 5A - 6A or 5A - 10A IEC 61036 (See note 1) _____ **C**
- CT Operated 1A - 2A IEC 61036 (See note 1) _____ **D**
- CT Operated 5A - 6A IEC 60687 _____ **F**
- Operated 1A - 1.2A IEC 60687 3ph 4w only Obsolete _____ **J**
- CT Operated 1A - 1.2A IEC 60687 3ph 4w only or 3ph 3w only _____ **K**

VOLTAGE RANGE

- 63.5V - 240V (L--N) (57.5V 3ph 4wire only) (See note 2 for Ref voltage ranges) _____ **A**
- 100V- 415V (L—L) (See note 2 for Ref voltage ranges) _____ **B**

ACCURACY CLASS

- Class 0.5 50 Hz (IEC 60687 & 61268 see note 3) _____ **A**
- Class 1 50 Hz (IEC 61036 & 61268 see note 1) _____ **B**
- Class 2 50 Hz (IEC 61036 & 61268 see note 1) _____ **C**
- Class 0.5 60 Hz (IEC 60687 & 61268 see note 3) _____ **D**
- Class 1 60 Hz (IEC 61036 & 61268 see note 1) _____ **E**
- Class 2 60Hz (IEC 61036 & 61268 see note 1) _____ **F**
- Class 0.2s 50 Hz (IEC 60687 & 61268 see note 3) _____ **G**
- Class 0.2s 60 Hz (IEC 60687 & 61268 see note 3) _____ **H**

HARDWARE CONFIGURATION

- Std PCB: No Relays : Extended Terminal Cover _____ **N**
- Std PCB: 4 Relays : Extended Terminal Cover _____ **R**
- Std PCB: 4 Relays : Extended Terminal Cover with Cutout _____ **S**
- Std PCB: 4 Relays : Short Terminal Cover _____ **T**
- Std PCB: 4 Relays : Short Terminal Cover Data Logging _____ **V**
- Std PCB: 4 Relays : Ext Term Cover: Voltage Protector: Modified Cover (Direct Connected Only) _____ **W**
- Std PCB: 4 Relays : Short Term Cover: Term Block with Cutout,Modified Coverplate & Dust Seal _____ **X**
- Std PCB: 4 Relays : Extended Terminal Cover with Large Character Display _____ **Y**
- Std PCB: 4 Relays : Extended Terminal Cover with Large Character Backlit Display _____ **Z**
- Std PCB: 4 Relays : Short Terminal Cover with Large Character Display _____ **D**
- Std PCB: 4 Relays : Short Terminal Cover with Large Character Backlit Display _____ **E**
- Std PCB: 4 Relays : Extended Terminal Cover: Cover with ANSI Port with Large Character Display _____ **F**
- Std PCB: 4 Relays : Extd Terminal Cover, Large Character Display, additional Voltage Screw _____ **G**
- Std PCB: 4 Relays : Extd Terminal Cover Large Character Backlit Display, additional Voltage Screw _____ **H**
- Std PCB: 4 Relays : Extended Terminal Cover with Cutout with Large Character Display _____ **J**
- Std PCB: 4 Relays : Ext Term Cover ,Mains Powered Modem Connection _____ **K**
- Std PCB: 4 Relays : Ext Term Cover with Cutout and Mains Powered Modem Connection _____ **L**
- Std PCB: 4 Relays : Ext Term Cover,ANSI Port , Large Character Display M.P.M. Connection _____ **M**
- Std PCB: 4 Relays : Extd Terminal Cover, Aux PS, Large Character Display, additional Voltage Screw _____ **B**

OPERATIONAL MODES

- kWh kVARh kVAh & Demand(Import/Export) _____
- Load profiling (40 days Direct connected) _____ **D**
- Load profiling (450 days CT & CT- VT operated variant) _____ **C**
- Load profiling (450 days Direct Connected) _____ **E**
- Load profiling (450 days CT & CT- VT operated variant) with Transformer Loss Compensation _____ **F**
- for Class 0.2s and 0.5s meters.
- Extended Memory(900 days Load Profile,36 Historical Registers) use with Version 'F','Q', 'X','Y' Firmware _____ **G**

TARIFFS

- Time of use registers _____ **T**
- No Time of use registers _____ **N**

ACCESS

- Password protection (4 levels, code 5 issue 6) _____ **P**
- No passwords _____ **N**

COMMUNICATIONS (PORT B)

- RS232 interface board _____ **R**
- Internal Modem UK only _____ **I**
- Internal Modem non UK _____ **J**
- RS485 interface board RJ45 Connection _____ **K**

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