CADEL™

POWER & ENERGY METERS

Series CD 5xx

MULTI PARAMETER METERS

Series CD 6xx

USER MANUAL

This User Manual includes programming and operating instructions and should be passed on to the end user along with the Password(s) set up

Every effort has been made to make this manual as comprehensive, easy to understand and accurate as possible. Cadel shall not be liable for errors contained herein. Cadel welcomes any comments or suggestions that would enhance the utility of this manual. You can contact Cadel at :

Cadel Technologies Pvt. Ltd.
147F, 8th Main, 3rd Block,
Koramangala
Bangalore 560 034, INDIA.

Tel: 91 (80) 5523071
Fax: 91 (80) 5523071 Extn. 25
Email: sales@cadeltech.com
Web: http:www.cadeltech.com

Thid manual can also be downloded in PDF Format from the Website

1. IMPORTANT INSTRUCTIONS

This meter is meant to be installed on panels for measurement / analysis / control of electrical / operational parameters. It should be installed only by qualified electricians / technicians.

Voltage inputs including Auxiliary Supply must be protected by fuses / isolating links in each circuit.

Under no circumstances should current inputs to the meter be disconnected while current is flowing in the primary circuit of the main Current Transformer (CT) on the LT / HT line.

The Meter contains no user serviceable parts inside. Do not remove back cover as hazardous voltages can exist inside even after the inputs are disconnected.

The meters are designed for 3 Element 3 Wire operation. Connection of the Earth Terminal of the meter to the Panel Earth enhances reliability.

This Manual covers the entire CD 5xx and CD 6xx Series. If your meter does not have some of the features, please ignore paras relating to them.

Please retain this Manual carefully for future reference.

2. FIELD CONFIGURATION

In all Models of CADEL Power and Energy Meters, all user definable parameters are configurable in the field. These vary with the model:

Parameter to be configured	Models to which applicable
CT Primary Amps	All models
HT / LT Line Input	All models
PT Primary kV	All models
Password	All models
Threshold parameter	CD 531, 532, 533, 534, 551, 552, 553, 554, 555, 556, 557, 558
Relay Control Parameter	CD 551, 552, 555, 556, 557, 558
Threshold Value	CD 531, 532, 533, 534, 551, 552, 553, 554, 555, 556, 557, 558
Threshold Crossing Direction	CD 531, 532, 533, 534, 551, 552, 553, 554, 555, 556, 557, 558
Time Delay	CD 551, 552, 555, 556, 557, 558
Pulse Width	All models incorporating Energy (kWH) parameter

3. POWER ON

When the Auxiliary Supply to the meter is energised the meter runs through a diagnostic routine during the which the electronic ID of the meter, all display segments and LEDs, model number of the meter and software version are displayed in that order. At the end of the routine, the meter will go into Initial Set Up mode if Initial Set Up has not been done. If the meter has been setup previously, it goes directly into Run Mode.

4. INITIAL SET UP

Before installing a meter on the Panel, Initial Set up must be done; otherwise the meter will not function. It involves configuring the following parameters. For procedure, see Appendix 3.

- CT Primary Amps
- HT / LT Input
- PT Primary kV
- Password “Pn1”

For the Initial Setup and subsequent editing of CT Primary Amps, HT / LT Input and PT Primary kV, only Auxiliary Supply should be connected but not Voltage and Current inputs. If any voltage or current input is present, the meter will display error message “Err 301”. Further at the time of editing these parameters, the accumulated data registers should have been cleared. If not, the meter will display error message “Err 201”. Initial Set Up is not required for PF Meters (Models CD 505 and CD 506)

5. INSTALLATION

The meter has a bezel of 96 x 96 mm. A panel cut-out of (90 +1 -0) x (90 +1 -0) mm is recommended. To install the meter :

a) Remove the side clamps by pulling the rear end of each clamp outwards till it disengages from the case, then pulling it back, keeping it disengaged, till it slides out of the case.
b) Insert the meter into the panel cut out from the front so that the bezel rests against the panel.
c) Insert each clamp from the rear end, making sure that both the lower and upper wedges of the clamp go into the triangular slots of the case. Holding the bezel against the Panel, push the clamp forward until the meter is firmly held against the Panel. You will hear the “click, click” sound of the teeth engaging.
d) If the clamp is not correctly inserted, there is danger of the meter falling out of the panel. If you are not sure of the procedure, try removing and inserting the clamps before mounting the meter on the panel.

6. WIRING

All models of CADEL Power and Energy Meters incorporate three elements. The meter must necessarily have three voltage inputs “VR”, “VY” and “VB” and three current inputs “IR”, “IY” and “IB” unlike two element meters that need only two current inputs.

The inputs to be connected to the meter are clearly indicated on the Rear Panel Sticker. The Voltage inputs can be either from an LT line at 415 Volts nominal or from the Secondary of a PT at 110 Volts nominal. Separate terminals are provided for the 415 Volts and the 110 Volt inputs. In a 4-wire system, the Neutral is connected to the terminal marked “N”. In a 3-wire system, terminal marked “N” is left unconnected. In a 4-Wire system, the Neutral may or may not be connected to the terminal marked “N”.

Connection of the terminal marked “E” to the Panel Earth enhances reliability of operation.

While connecting the current inputs, it is important to maintain the direction of current flow from S1 to S2. If this is reversed in one or more phases, the Power computation will be negative in the corresponding elements and the “Reverse” LED will light up (in CD 5xx Series only). However, the computation will be internally corrected to an equivalent positive value. In the process, there could be marginal degradation of accuracy. It is therefore not advisable to leave a reversal of current flow uncorrected.
It is also important to adhere to the phase relationships. Current “IR” must correspond to the phase that has the voltage connected to the “VR” terminal. The same holds good for current inputs “IY” and “IB”. If the current and voltage inputs are swapped, the Power and Energy computations will be erroneous. Under certain conditions, the “Reverse” LED (in CD 5xx Series only) may also light up, but no correction takes place. It is, therefore, essential to correct the swapping.

The meter accepts an auxiliary supply between 85 to 150 Volts and 150 to 270 Volts, AC or DC. If

the Auxiliary Supply is from an AC source, connect Line to the terminal marked L/+ and the Neutral to the terminal marked “N/-“. If it is from a DC source, connect the Positive Side to the terminal marked L/+ and the Negative side to the terminal marked N/. If the connections are reversed, the meter will not power up.

⚠ **Remember that CT and PT accuracies affect the overall accuracy of measurement. Ensure that PT and CT accuracies are commensurate with the meter accuracy.**

⚠ **For reliable operation, establish input connections through spade lugs crimped to the wire ends. Tighten terminal screws so that the connections are firm. Over-tightening may damage the threads.**

7. PASSWORDS

Set up and editing functions are password protected. Invalid passwords display error “Err 101”. Display functions do not require password entry.

Provision exists for upto three passwords numbered Pn1 to Pn3, each of four digits. The digits 1 to 3 of the passwords form the first digit of the three respective passwords. The User can assign the remaining three digits. The three passwords can be allotted to three different persons.

No password is set at the time of dispatching the meter from the factory. The password Pn1 has to be assigned as part of the Initial Set up (para 4). Panel Builders and other non end users are advised to set up only one password Pn1 and convey this to the end user. End user can set up the other passwords as necessary.

All passwords can be edited as necessary to maintain security (Appendix 5 steps E11 to E14).

If all three passwords are forgotten, edit functions cannot be accessed. In such an event, a responsible representative of the end-user can request Cadel for a master password, which is unique for each meter. Such a request must be sent in the format prescribed in Appendix 8.

8. PASSWORD HISTORY

The Meter maintains a record of the four passwords last used and displays the corresponding password numbers (example, Pn3, Pn1, etc.).

9. PARAMETER DISPLAY

Parameters computed and displayed in different models are indicated in front panel layouts of different models in Appendix 7.

10. SCROLL / HOLD FACILITY

In models that display more than one parameter, the Scroll key enables toggling between Scroll and Hold modes. In the Scroll Mode, the display automatically advances to the next parameter every four seconds. Any parameter can be monitored continuously in the Hold Mode. This facility is not password protected. The parameter on display is indicated by corresponding LED(s).

11. ENERGY DATA UPDATE

The lower read-out displaying kWh increments in steps of 1 kWh if the Input Product (PT Primary kV x CT Primary Amps) is 500 or less. If this is more than 500 but not exceeding 5000, then kWH display increments in steps of 10 kWh. The meter will not accept an Input Product value higher than 5000, which corresponds to a Full Scale of 8.66 MW.

If an application involves an Input Product of more than 5000, then either the PT Primary kV or CT Primary Amps has be set to a value 10 times smaller and the power and energy reading, including that derived from the pulse output, multiplied by a factor of 10 to get the actual power or energy consumption.

12. INTEGRATE LED (in CD 5xx Series only)

The blinking of the “Integrate” LED indicates that the meter is integrating energy. The blink rate can be used as a rough cross check for the accuracy of energy computation, but not for calibration. Each blink represents 0.1 kWh if the Input Product is 500 or less and 1 kWH if this is more than 500.

13. OVERFLOW OF CUMULATIVE DATA REGISTERS

Energy registers will overflow and reset to 0 kWh and 0 MWH when the values of kWH and MWH reach 999.

The hours register in models CD 521, CD 522, CD 531, CD 532 will overflow and reset to 0 hours at 999999 hours. In models CD 553, CD 554, CD 555, CD 556 the overflow and resetting occurs at 999 hours and 59 minutes.

14. DATA RETENTION

Values of all user configured parameters as also accumulated values of Energy and Time are retained for an indefinite period of absence of auxiliary supply.

15. CLEARING OF ACCUMULATED DATA

Clearing of Energy, Time and Threshold registers is password protected. The CLR command clears both Energy and Time registers. This facility is particularly useful in monitoring batch operations. Once cleared that data is lost. To prevent inadvertent clearing, user is given an opportunity to abort the CLR command, if necessary.

The CTH command clears the Threshold registers.

16. PULSE OUTPUT

For remote monitoring or logging of energy data, models with Energy parameter provide a pulse output through an optically isolated, potential free NO contact, accessible through the rear terminal block. The contact is rated for 24 V DC, 50 mA maximum.

17. PULSE WIDTH

The pulse width is factory set to 200 mS. The user can configure it to either 400, 600 or 800 mS if necessary.

18. PULSE VALUE

The pulse value is dependent on the Input Product set by the user. If the Input Product is 500 or less, each pulse corresponds to 1 kWh. If this is more than 500, then each pulse corresponds to 10 kWh.

19. PULSE OUTPUT MONITORING

For guidance on Pulse Output Monitoring, refer Cadel's Application Notes.

20. THRESHOLD SETTING

Threshold setting governs two functions:

a) Analysis of Energy or Run Time data into productive and unproductive portions. This is a powerful feature that helps energy optimization.
b) Operation of the control relay

Threshold setting includes:

i) Assigning the parameter for which the threshold is to be set.
ii) Setting threshold value for the selected parameter. If this is a value higher than full scale, error message “Err 603” will be displayed.

Unless both are set, function (a) above is inoperative. The display menu will show error message “Err 601” if parameter is not assigned and “Err 602” if threshold value is not set.

For applications involving threshold setting, refer Cadel's Application Notes.

21. RELAY OUTPUT

In models providing a relay output the parameter assigned to threshold setting also controls the relay operation. For the relay to operate, the parameter must cross and remain above or below the threshold (as set by the Threshold Crossing Direction) continuously for the duration of the set delay period.

For relay operation, apart from assigning the parameter and threshold value, the direction of threshold crossing must also be set. Unless all three are set, the relay function is inoperative. The display menu will show error message “Err 604” if threshold crossing direction is not set.

22. DIRECTION OF THRESHOLD CROSSING

Depending on the application, the relay may be required to operate when the selected parameter crosses the threshold either from low to high (example, overload monitoring) or from high to low (example, PF monitoring). Direction of threshold crossing can be set to suit the application.

23. DELAY SETTING

In certain applications, a delay may be needed between the threshold crossing and the relay operation. The relay operate and release delays can be separately set in minutes (range 0 to 59) to suit the application.

24. CALIBRATION

Each meter is factory calibrated. Subsequent calibration can be done by a Calibration Agency having a Calibrator that can deliver necessary voltage and current outputs. These Agencies can get in touch with Cadel for detailed calibration procedure.

The Calibration is entirely through software built into the meter. The meter is capable of self-calibration once the appropriate voltage and current inputs from the Calibrator are connected. Calibration takes about 5 seconds at the end of which the upper read out will display “don” and the lower readout will display the correction (in percentage) that was necessary to bring the

accuracy within limits. If the correction required goes beyond 5%, there is likelihood of a fault. The software will then treat the meter as beyond calibration and display error message “Err 501”. In such a case the meter may require servicing.

25. KEY OPERATING CONVENTIONS

At all stages of key operation, the user is guided by appropriate prompts. Key operating sequences are based on the following conventions (see Appendices 1 to 5 for illustrations):

- Numeric values are entered calculator style. See Appendix 1. The numeral to be entered is always the right most. Starting with 0, the numeral auto increments to 1, 2, etc. When the required value is displayed, it can be selected using the NEXT or ENTER key as necessary. In Appendices 1 to 5, the digit selected for entry is shown in grey
- In the case of fractional values, numerals ignoring decimal point are entered first and the decimal point is placed thereafter as required. See Appendix 2
- NEXT key advances entry to the next digit or option in the sequence. ENTER key terminates the entry. It also selects the displayed option.
- Where a menu has two or more selectable options NEXT key will toggle between these options until one of them is selected.
- CANCEL key has the following effect:
  - If in data entry mode, it returns to the start of data entry.
  - If in a Sub-menu, it returns to the Main Menu
  - If in Main Menu, it returns to Run Mode.
- If after a key operation, no further key operation takes place for more than 1 minute, the meter returns to Run Mode.

26. KEY OPERATING SEQUENCES

Key operating sequences are explained and illustrated in Appendices 1 to 5.

27. DIAGNOSTIC ROUTINE

At initial power up and thereafter at periodic intervals, the meter runs an internal diagnostic routine. If during this routine, it encounters a non-recoverable error which can result in invalid computations, the meter will display error message “Err 901”. The meter needs servicing. If an error encountered is recoverable, the meter recovers with or without resetting, but without corruption or loss of data.

APPENDIX - 1

Entry of Numerals - say, CT Primary Amps as 1200

Entry starts with display as at A1. Starting with 0, lower right digit increments every 1½ seconds. When the digit displays required value, press NEXT to continue further entry of numerals or ENTER to terminate entry of numerals. Accordingly, when the lower right digit displays 1, press NEXT. Digit 1 gets selected, moves one place to the left for entry of the second numeral at the right lower digit. A numeral can have a maximum of 4 digits. On entry of fourth digit in a four digit number, first digit moves to upper right display. Key operations below illustrate the sequence.

Step	Display	Key Operation	Comments
A1	CtP 1	NEXT	Entry of first digit.
A2	CtP 12	NEXT	Entry of second digit
A3	CtP 120	NEXT	Entry of third digit
A4	Ct 1 200	ENTER	Entry of fourth digit. Completes entry of numeral 1200.

APPENDIX - 2

Placement of Decimal Point, say, PT Primary kV as 11.0

Enter numerals 110 as above. Display will be as at B1 and Decimal Point between the first and second digit will blink. Proceed as illustrated.

Step	Display	Key Operation	Comments
B1	PtP 110	ENTER	Completes entry of the numeric value of Primary kV, in this case 110.
B2	PtP 1.10	NEXT	Starts entry of decimal point. Press NEXT to shift blinking decimal point one digit to the right as at B3
B3	PtP 11.0	ENTER	Press ENTER to completes placement of decimal point. Blinking ceases and LED stays lit.

APPENDIX - 3

KEY OPERATING SEQUENCES - INITIAL SET UP

On Power up and completion of diagnostics, the meter goes into Run Mode if the Initial Set up had been done. Else goes to Initial Set up. Initial Step up sequence is illustrated at Steps C1 to C11

C1		NEXT	Initial Set up starts with entry of CT Primary Amps, say 800. Proceed as in Appendix 1
C2		ENTER	Completes entry of CT Primary Amps and goes to next step C3 - entry of voltage input
C3		ENTER	Press ENTER if input is from HT Line at 110 V through PT. PT Secondary Volts is always taken as 110 V nominal. If input is from a 415 V LT Line, press NEXT. This takes to step C8.
C4		NEXT	Starts entry of PT Primary kV, say 11.0 kV. Proceed with numeral entry as in App. 1
C5		ENTER	Completes numeral entry
C6		NEXT	Initiates placement of decimal point. Proceed with decimal placement as in App. 2
C7		ENTER	Completes placement of decimal point. Takes to entry of Password Pn1 at step C9
C8		ENTER	Press ENTER if input is LT at 415 V. NEXT toggles back to step C3. LT is always taken as 415 V nominal
C9		NEXT	Starts entry of Password Pn1, say 1324. Password number is automatically taken as the first digit of the password. Only the second, third and fourth digits need to be entered
C10		NEXT	
C11		ENTER	Completes entry of password. Also completes Initial Set up. Meter goes into Run Mode.

APPENDIX - 4

KEY OPERATING SEQUENCES - DISPLAY FUNCTIONS

When in Run Mode, Display and Edit functions are accessed through MODE key followed by password entry in the case of Edit functions. Display functions do not need password entry.

NOTE: In models which do not include one or more of the features listed, corresponding key operations are automatically by-passed

D1		MODE	
D2		ENTER	Allows access to Display functions. Press NEXT for Edit functions. See Appendix 5.
D3		ENTER	Selects display of Password History - last four passwords used for access, going back from the one presently used. Each password is displayed for 1½ seconds in succession. Press NEXT to skip and go to next option - step D8
D4			Pn2 is the password used presently
D5			Pn3 is password used one prior to present
D6			Pn1 is password used two prior to present
D7			Pn2 is password used three prior to present. After 1½ seconds, advances to step D8
D8		ENTER	Selects display of CT Primary Amps. Press NEXT to skip and go to next option - step D10
D9			Displays present value of CT Primary Amps - 800 A. After 1½ seconds, advances to step D10
D10		ENTER	Selects display of input voltage setting. Press NEXT to skip and go to next option - step D13
D11		For LT OR	Displays present setting as 415 V LT. After 1½ seconds, advances to step D13.
D12		For HT	Displays present setting of PT Primary kV as 11.0. After 1½ seconds, advances to step D13

D13		ENTER	Selects display of parameter presently assigned for threshold setting. This parameter also governs relay operation. The parameter is indicated by blinking of corresponding LED to the right of display window. Advances to step D14 after 3 seconds. Press NEXT to skip and go to next option - step D14
D14		ENTER	Selects display of present threshold setting. Press NEXT to skip and go to next option - step D16.
D15			Blinking LED indicates parameter and display shows present threshold setting. For example, kW LED blinks, display shows present threshold setting as 600 kW. Advances to step D16 after 3 seconds
D16		ENTER	Selects display of direction of threshold crossing for relay operation. Press NEXT to skip and go to next option - step D18.
D17			Indicates that relay operates when threshold is crossed from a value above threshold to a value below threshold. Advances to step D18 after 1½ seconds
D18		ENTER	Selects display of present setting of time delay, in minutes, from threshold crossing to relay operation. Press NEXT to skip and go to next option - step D20.
D19			Indicates present delay setting as 12 minutes. Returns to step D20 after 1½ seconds
D20		ENTER	Selects display of present setting of width in milliseconds for energy output pulses. Pressing NEXT returns to Run Mode.
D21			Indicates present setting of width of energy output pulses is 400 mS. Returns to Run Mode after 1½ seconds

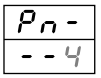
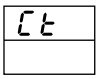
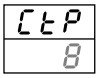
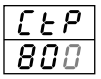
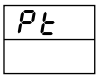
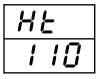
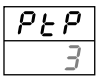
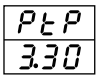
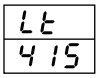
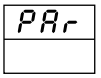
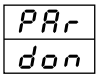
APPENDIX - 5

KEY OPERATING SEQUENCES - EDIT FUNCTIONS

When in Run Mode, Display and Edit functions are accessed through MODE key followed by password entry in the case of Edit functions.

NOTE: In models which do not include one or more of the features listed, corresponding key operations are automatically by-passed

E1		MODE	
E2		NEXT	Skips Display functions and goes to Edit functions
E3		ENTER	Selects Edit functions. Edit also includes first time set up.
E4		NEXT	Start of password entry, say 1324
E5		NEXT	Password digits already entered are displayed as “-” for security reasons.
E6		NEXT	
E7		ENTER	Completes password entry and goes to Edit
E8		ENTER	Allows clearing of accumulated data registers. Press NEXT to skip and go to next option - step E11.
E9		ENTER	Seeks confirmation that the registers should be cleared since it involves loss of data
E10			Confirms that registers have been cleared. Advances to step E11 after 1½ seconds.
E11		ENTER	Allows editing of passwords. Press NEXT to skip and go to next option - step E15.
E12		ENTER	Select password number Pn1 for editing, to say 1654. Use NEXT to go to Pn2, Pn3. Password number is automatically taken as the first digit of the password. Only second, third and fourth digit need to be entered.
E13		NEXT	Start entry of password. Follow procedure as in steps C9 to C11

E14		ENTER	Completes editing and advances to step E15.
E15		ENTER	Allows editing of CT Primary Amps. Press NEXT to skip and go to next option - step E18.
E16		NEXT	To enter CT Primary Amps, say 800 Amps, proceed as in Appendix 1
E17		ENTER	Completes editing and advances to step E18.
E18		ENTER	Allows editing of Voltage Input. Press NEXT to skip and go to next option - step E22.
E19		ENTER	Press ENTER if input is from HT Line at 110 V through PT. PT Secondary Volts is always taken as 110 V nominal. If input is from a 415 V LT Line, press NEXT. This takes to step E21.
E20		NEXT	Starts entry of PT Primary kV, say 3.30 kV. Proceed with numeral entry as in Appendix 1 and with placement of decimal point as in Appendix 2
E21		ENTER	Completes editing and advances to step E22.
E22		ENTER	Press ENTER if input is from LT Line at 415 V. Advances to step E23. NEXT toggles back to step E18.
E23		ENTER	Allows editing of parameter to be assigned for threshold setting and relay operation. Press ENTER to select. Press NEXT to skip and go to next option - step E24. On pressing ENTER blinking LED indicates parameter presently selectable. Press NEXT to advance to next parameter. Press ENTER when desired parameter starts blinking.
E24			Confirms assignment of parameter. Advances to step E25 after 1½ seconds

E25		ENTER	Allows threshold setting for selected parameter which is indicated by lit LED. Press NEXT to skip and go to next option - step E28.
E26		NEXT	To set a threshold of, say 380, proceed as in Appendix 1
E27		ENTER	Completes editing of threshold. Advances to step E28
E28		ENTER	Allows setting of direction of threshold crossing for relay operation. Press NEXT to skip and go to next option - step E31.
E29		NEXT	Press ENTER if relay should operate when threshold is crossed from a value above to a value below threshold. Advances to step E31. Else Press NEXT which takes to step E30
E30		ENTER	Press ENTER if relay should operate when threshold is crossed from a value below to a value above threshold. Advances to step E31. NEXT toggles back to step E29.
E31		ENTER	Allows setting of time delay in minutes from threshold crossing to relay operation. Press NEXT to skip and go to next option - step E33.
E32		ENTER	To set a threshold of, say 6, proceed as in Appendix A. Advances to step E33.
E33		ENTER	Allows setting of width in milliseconds for energy output pulses. Press NEXT to skip this option and return to step E8.
E34		NEXT	Press ENTER to set width to 200 mS. Else press NEXT.
E35		NEXT	Press ENTER to select 400 mS. Else press NEXT.
E36		NEXT	Press ENTER to select 600 mS. Else press NEXT.
E37		ENTER	Press ENTER to select 800 mS. ENTER at any stage in this sequence returns to step E8

APPENDIX - 6

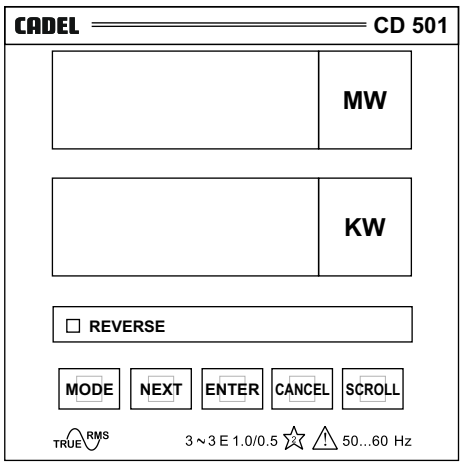
ERROR CODES

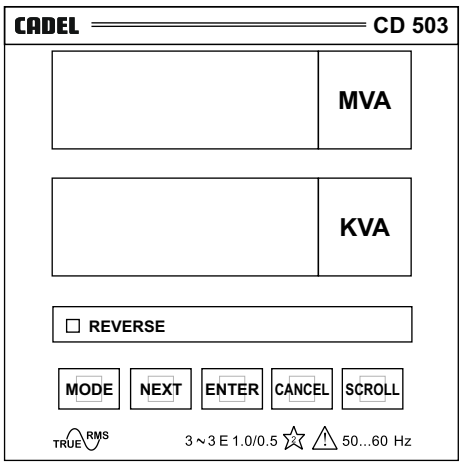
Error Code	Meaning	Refer Para
Err 101	Password entered is invalid	7
Err 201	Data Registers not cleared	4
Err 301	Voltage / Current Input is present	4
Err 401	Out of Range	11
Err 501	Meter out of calibration range	24
Err 601	Parameter for threshold setting not	20
Err 602	Threshold value not set	20
Err 603	Threshold value set is greater than Full Scale	20
Err 604	Threshold crossing direction not set	21
Err 901	Non-recoverable error.	27

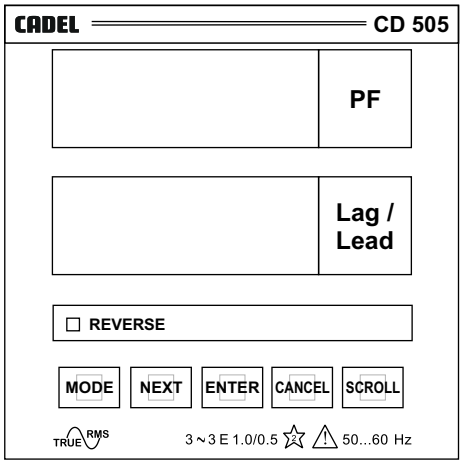
APPENDIX - 7

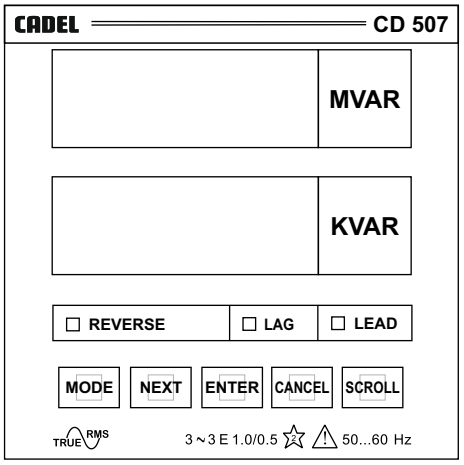
FRONT PANEL LAYOUTS

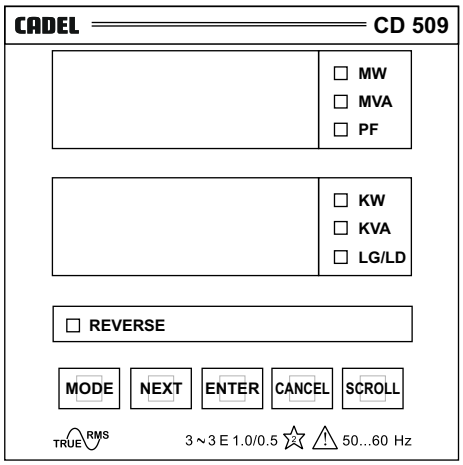
The front panel layouts of CADEL's range of Power and Energy Meters are shown below to give a visual feel of the products. This should help in choosing the right Meter having a combination of features best suited to each specific application.

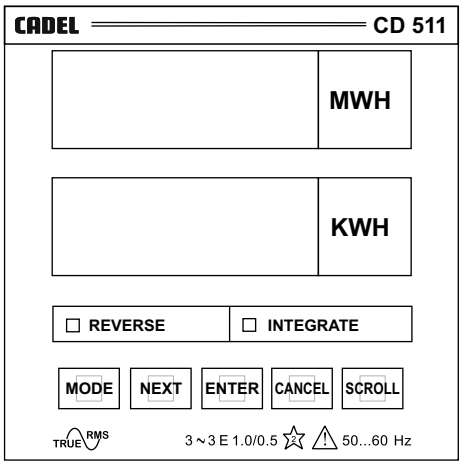


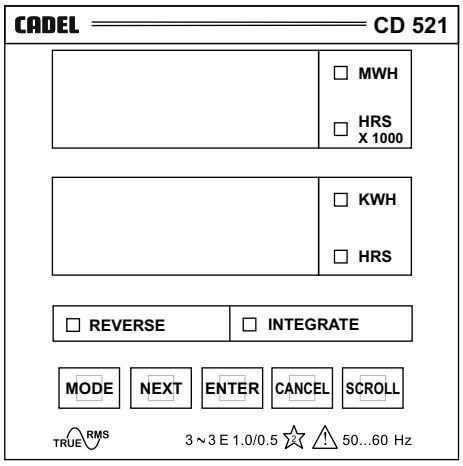


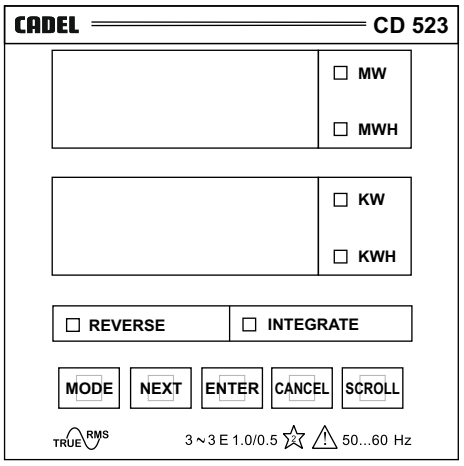


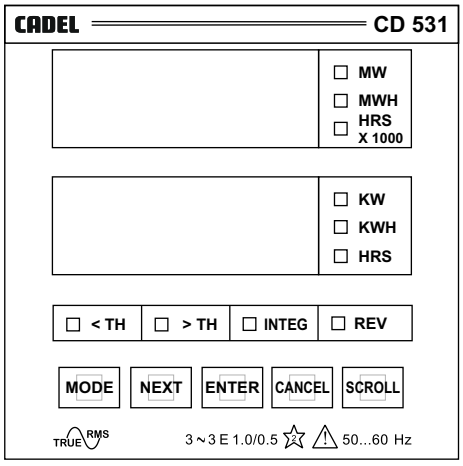


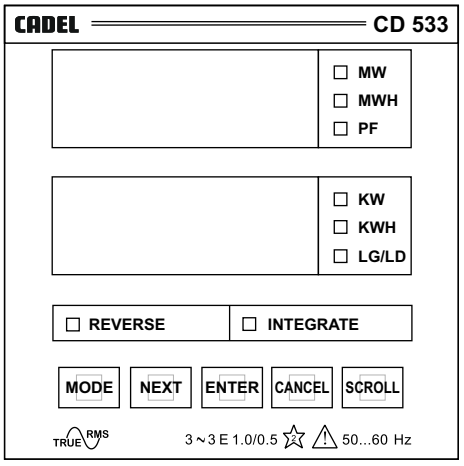

CADEL
CD 509
☐ MW
☐ MVA
☐ PF
☐ KW
☐ KVA
☐ LG/LD
☐ REVERSE
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

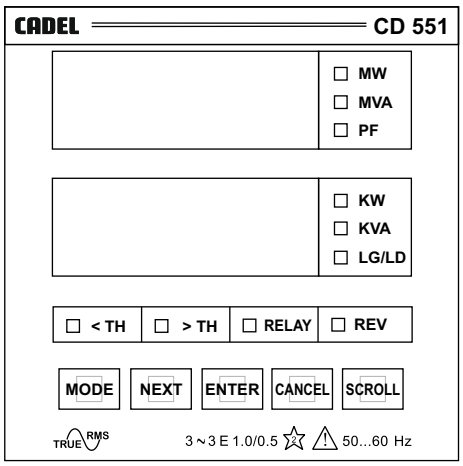

CADEL
CD 511
MWH
KWH
☐ REVERSE
☐ INTEGRATE
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

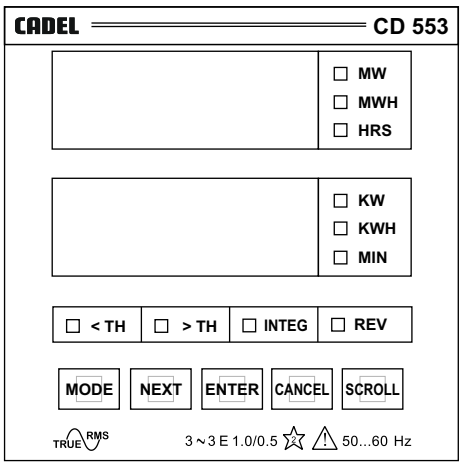

CADEL
CD 521
☐ MWH
☐ HRS X 1000
☐ KWH
☐ HRS
☐ REVERSE
☐ INTEGRATE
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

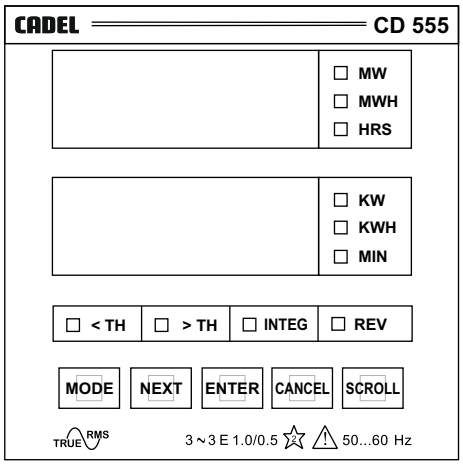

CADEL
CD 523
☐ MW
☐ MWH
☐ KW
☐ KWH
☐ REVERSE
☐ INTEGRATE
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

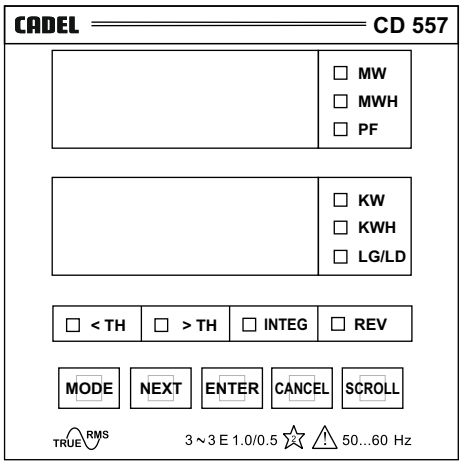

CADEL
CD 531
☐ MW
☐ MWH
☐ HRS X 1000
☐ KW
☐ KWH
☐ HRS
☐ < TH
☐ > TH
☐ INTEG
☐ REV
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

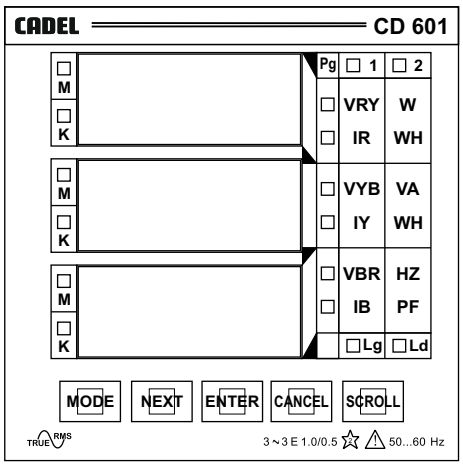

CADEL
CD 533
☐ MW
☐ MWH
☐ PF
☐ KW
☐ KWH
☐ LG/LD
☐ REVERSE
☐ INTEGRATE
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

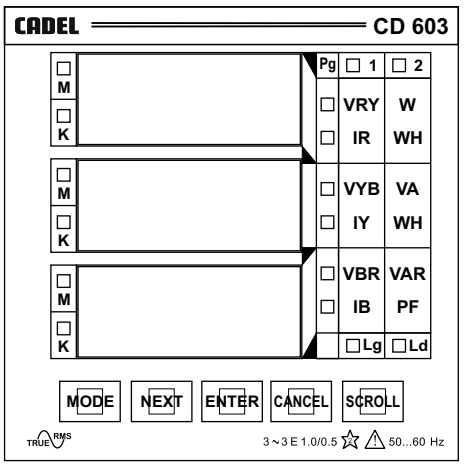

CADEL
CD 551
MW
MVA
PF
KW
KVA
LG/LD
< TH
> TH
RELAY
REV
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

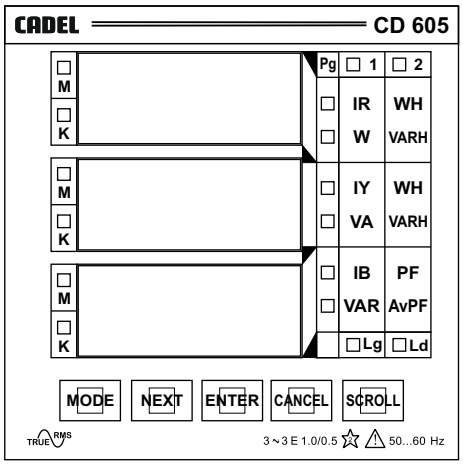

CADEL
CD 553
MW
MWH
HRS
KW
KWH
MIN
< TH
> TH
INTEG
REV
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

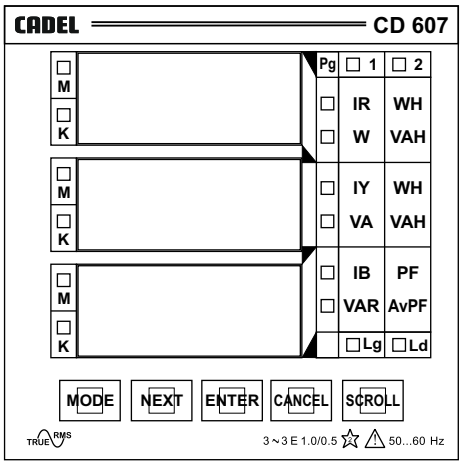

CADEL
CD 555
MW
MWH
HRS
KW
KWH
MIN
< TH
> TH
INTEG
REV
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz


CADEL
CD 557
MW
MWH
PF
KW
KWH
LG/LD
< TH
> TH
INTEG
REV
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz


CADEL
CD 601
Pg
1
2
M
K
VRY
W
IR
WH
VYB
VA
IY
WH
VBR
HZ
IB
PF
Lg
Ld
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz


CADEL
CD 603
Pg
1
2
M
K
VRY
W
IR
WH
VYB
VA
IY
WH
VBR
VAR
IB
PF
Lg
Ld
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz


CADEL
CD 605
Pg
1
2
M
K
IR
WH
W
VARH
IY
WH
VA
VARH
IB
PF
VAR
AvPF
Lg
Ld
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz


CADEL
CD 607
Pg
1
2
M
K
IR
WH
W
VAH
IY
WH
VA
VAH
IB
PF
VAR
AvPF
Lg
Ld
MODE
NEXT
ENTER
CANCEL
SCROLL
TRUE RMS
3 ~ 3 E 1.0/0.5
50...60 Hz

APPENDIX - 8

FORMAT FOR LETTER REQUESTING MASTER PASSWORD

Date :

From

To,
The Director Marketing
Cadel Technologies Pvt. Ltd.
147F, 8th Main, 3rd Block
Koramangala
BANGALORE - 560 034

Dear Sir,

We are the owner of the following Cadel Meter

Model No. CD ☐☐☐

bearing Sl. No. ☐☐☐/☐☐☐☐/☐☐☐☐☐

We are unable to trace the passwords set for the access to Edit Functions. Please let us have the Master Password. I authorise you to send it confidentially to the person designated below.

We understand that responsibility for security of Passwords, including Master Password, lies with us and that CADEL TECHNOLOGIES PVT. LTD. will in no way be responsible for loss or misuse of the passwords and any incidental or consequential damages arising out of it.

Authorised Signatory (with stamp)

Person authorised to receive Password

Name

Designation

Address