

**Office Note**

**Sub:** Clarification regarding deviations for HT three phase four wire CT / PT operated 1 Amps or 5 Amps fully Static & AMR compatible Four Quadrant TOD Tri - vector Energy Meter as per Category B of IS: 15959 / 2011 amended upto date with Availability Based Tariff feature.

**Ref:**

1. NSC/ABT Meter/350 dtd. 25.06.2019
2. CE/QC-T/MS-C-II/ABT/83 dtd. 11.06.2019
3. CE/QC-T/MS-C-II/ABT/96 dtd. 20.06.2019

With respect to the above, M/s HPL Electric & Power Ltd have raised queries against technical specifications of HT three phase four wire CT / PT operated 1 Amps or 5 Amps with Availability Based Tariff feature. All the queries received from M/s Secure Meters Ltd and M/s Larsen & Toubro Ltd were already conveyed to MM Cell as per reference (2) & (3). The remarks in accordance with newly received queries from the representations of above respective meter manufacturers are as below.

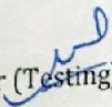
Sr. No.	Particulars (Clauses of Technical Specification)	Deviation received	Remark
1.	Clause no. 5.24, COMMUNICATION CAPABILITY of Technical Specifications (Page No. 53 of 100) vide which it is mentioned that the meter shall be provided with three ports for communication of the measured / collected data as per IS: 15959 / 2011, i.e. a hardware port compatible with RS-232 and 485 specifications of RJ - 11 type which shall be used for remote access through suitable Modem (GPRS / GSM / LPR and SCADA) and an Optical port complying with hardware specifications detailed in IEC - 62056 - 21. This shall be used for local data downloading through a DLMS compliant CMRI. RS-232 port or TCP / IP port as required on terminal block is also acceptable. Sealing arrangement for Optical & RS 232 port or TCP / IP port as required shall be provided. All the ports shall be able to communicate simultaneously	Kindly note that RS-485 port in meter is required at substations but for ABT meter same is not required. Hence it seems to be a typographical error. The RJ connector connections are also shown only for RS-232 port in the specs. In GTP at serial no. 69, Baud rate is asked only for Optical port & RS-232 port. We request you to kindly,  Remove the requirement of RS 485 port from technical spec Clause No. 5.24  Request you to also amend serial no.71 of GTP as 2 Ports for communication.	Not accepted.  Refer technical specifications, Clause no. 5.24 is partially modified as "Two of the above three ports shall be able to communicate simultaneously. (If one port is connected to SCADA, then it should be able to download data for billing purpose through other port without disturbing SCADA communication)"
2.	Clause no. 9.0,  Current Missing: The meter shall be capable of detecting and recording	As starting current is very less value, we request you to amend the threshold value for Current Missing	Not accepted

	occurrences and restoration of current below starting current value as a current missing event with phase identification for persistence time of 15 minutes. It shall also possess a current missing counter	as 1% Ib (at which accuracy of meter is specified) to avoid the false recording	
3.	<p>Clause no. 9.02, Serial No.3, Occurrence (With Occ. Time 5 Min.) of Technical Specifications (Page No. 58 of 100) vide which it is mentioned that:</p> <p>PT link Missing (Missing potential):</p> <p>Occurrence: &lt;70% of Vref and current in that phase is &gt;5% Ib</p> <p>Restoration: &lt;70 % of Vref</p> <p>Low voltage in any phase</p> <p>Occurrence: &lt;70 % of Vref</p> <p>Restoration: &lt;70 % of Vref</p>	The Voltage Threshold mentioned for 'Low Voltage' Event is same as 'PT link Missing'. We request you to kindly provide the Thresholds to differentiate both the Tamper conditions.	<p>Accepted.</p> <p>Clause is modified as PT link Missing (Missing potential):</p> <p>Occurrence: &lt;50% of Vref and current in that phase is &gt;5% Ib</p> <p>Restoration: &gt;50 % of Vref</p> <p>Low voltage in any phase</p> <p>Occurrence: &lt;70 % of Vref</p> <p>Restoration: &gt;70 % of Vref</p>
4.	Clause no. 9.02, The threshold values for various tampers as below., Serial No.8, 10 & 12 event Occurrence time of Technical Specifications (Page No. 59 of 100)	We request you kindly amend Occurrence of Current Reversal, Magnetic Influence and Power failure Persistence time as 15 seconds instead of immediate to avoid false recording	<p>Accepted.</p> <p>Persistence time of 5 seconds is added in clause no. 19.02</p>
5.	Clause no. 5.28 page no 54 of 100, the fundamental energy requirement from clause no 5.28 serial no (i) to (iv) is deleted in amendment-2 but same has not been deleted from the following clause	<p>Clause no 11.06 (A) default display parameters : serial no from 16 to 25, 43 to 52</p> <p>Clause no 12.01 Billing data : serial no 7 to 11, 17 to 21, 47 to 51, 57 to 61</p> <p>Our Submission: We request you kindly delete the same from above clause also in line with clause 5.28</p>	Not accepted
6.	Clause no. 11.06 (A), Serial No.65 to 67 of Technical Specifications (Page No. 64 of 100) vide which it is mentioned that: Instantaneous Signed Power Factor – R, Y, B Phases (Import / Export).	As per IS 15959 Standard PF sign indication is for lag/ lead instead of Import/Export. So, we request you kindly accept the PF sign same in line with IS 15959 as Lag/Lead	Not accepted

7.	Clause no. 11.06 (B), Serial No.35 of Technical Specifications (Page No. 65 of 100) vide which it is mentioned that: Net kWh and kVAh transmittal during each successive 15 min block upto second decimal with plus / minus sign (PLUS sign when there is net kWh and kVAh IMPORT to the beneficiary and NEGATIVE sign when there is net kWh and kVAh EXPORT from the beneficiary).	From above requirement we understand that it is last block IP Data i.e. net kWh & Net kVAh. Kindly confirm.	Accepted.  Clause is modified as "Net kWh and kVAh transmittal during previous 15 min block upto second decimal with plus / minus sign (PLUS sign when there is net kWh and kVAh IMPORT to the beneficiary and NEGATIVE sign when there is net kWh and kVAh EXPORT from the beneficiary)".
8.	Clause no. 11.06 (B), Serial No.36 of Technical Specifications (Page No. 65 of 100) vide which it is mentioned that: Cumulative kVArh transmitted for Voltage HIGH condition at each midnight in eight digits including one decimal.	The above Data is daily data which shall be available in BCS end instead of Display Parameter. Kindly accept the same.	Not accepted
9.	Clause no. 15.05 COMPUTER SOFTWARE: The total time taken for downloading Billing, Tamper and Load Survey Data for 60 days shall be less than or equal to 15 minutes	Kindly note that the downloading parameters are huge size hence shall take more time to download the complete Data. So, we request you to kindly remove the requirement of Data downloading time from the specifications and Meters Data downloading speed may kindly be accepted at 9600 bps Baud Rate	Not accepted
10.	clause no. 11.06 (B), Serial No.37 of Technical Specifications (Page No. 65 of 100) vide which it is mentioned that: Cumulative kVArh transmitted for Voltage LOW condition at each midnight in eight digits including one decimal.	The above Data is daily data which shall be available in BCS end instead of Display Parameter. Kindly accept the same	Not accepted
11.	Clause no.11.07 (vi): The display of various parameters in Normal Mode & Alternate mode shall be as per table 24 (except 2) & 26 (except 4 & 5) of Annex D of IS:15959/2011 AMENDED UP TO DATE in the sequence as below	The Display Parameters are already provided in clause 11.6. Kindly remove this requirement or modify the display parameter list mentioned under clause 11.06	Accepted.  Clause no.11.07 (vi) is modified as "The display of various parameters in Normal Mode & Alternate mode shall be as per table 24 (except 2) & 26 (except 4 & 5) of Annex D of IS:15959/2011

			AMENDED UP TO DATE and as per MSEDCL requirements in the sequence as below"
12.	Clause no. 12.01: The billing data parameters shall be as per table 26 (except 4 & 5) of Annex D of IS: 15959 / 2011 AMENDED UP TO DATE for category B and is summarized as below	The Table No. 26 is for Daily Load Profile of Cat B type Meter. We request you kindly correct the Table No.	Accepted.  Clause no. 12.01 is modified as The billing data parameters shall be as per table 26 (except 4 & 5) of Annex D of IS: 15959 / 2011 AMENDED UP TO DATE and as per MSEDCL requirements for category B and is summarized as below
13.	Clause no.12.04LOAD SURVEY DATA: Load survey parameters: (for 15 min block or 5 min block If required in future) (As per recent CEA & SAMAST guidelines).	Kindly note that as per IS 15959 Standard Load Profile capture period is either 15 minutes or 30 minutes only. We request you kindly amend the time as 15/30 minute in line with IS 15959 and remove 5 minute.	Not accepted
14.	Clause no.12.04 LOAD SURVEYDATA Serial No.16 to 23of Technical Specifications (Page No. 72 of 100) vide which it is mentioned that: Import & Export kVA, kW, kVAr demands & PF.	Kindly note that parameters from serial no. 16 to 23 are derived parameters and will be available at BCS end. We request you kindly accept the same at BCS end.	Not accepted

Submitted for needful, please.

Chief Engineer (Testing) 

Chief Engineer (MM Cell)

Copy s.w.r.to:

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2. Executive Director (Dist-II), MSEDCL, Prakashgad, Mumbai