(5)

(भारत सरकार) GOVERNMENT OF INDIA
(रेल मंत्रालय) MINISTRY OF RAILWAYS
(रेलवे बोर्ड) RAILWAY BOARD

No. 2022/Sig/17-SigEquip/DAC **New Delhi, As Signed**

Minutes of Meeting held for review of performance of M/s Eldyne make axle counters held on 29-07-2025

The meeting was attended by the following officials:

From Railway Board/ RDSO	From Zonal Railways	From Eldyne (OEM)
Smt Vijaylaxmi Kaushik, AM/Sig	Sh Rajeev Gangele, CSE/SCR	Debnath Kundu- AVP Design and Engineering Support
Sh Saurabh Bandopadhyaya, PED/S&T/Dev	Sh Debashish Bhattacharjee, CSE/SER	Tuhin Maitey- Sr. Manager/AMC Network
Sh Shyam Verma, ED/Sig Dev	Sh Ajay Kumar Sharma, CSE/CR	
Sh Rameshwer Meena, ED/Sig	Sh Gyan Prakash Shiv Narayan, CCE/WCR	
Sh Triambak Tiwari, Dir/Sig/ RDSO-II		
Sh Prabhakar Sharan, Dir/Sig		

The meeting began with a keynote address by the Additional Member (Signal), emphasizing the need to improve the performance of axle counters. To achieve this goal, it is imperative that Original Equipment Manufacturers (OEMs) and Zonal Railways collaborate effectively, ensuring high-quality installations, implementing robust maintenance practices, and conducting thorough analysis and resolution of field-level issues.

Zonal Railways were instructed to adhere to the Technical Advisory Notes (TAN) issued by RDSO, which cover axle counters, earthing,

File No. 2022/Sig/17-SigEquip/DAC (Computer No. 3411472)

bonding, lightning protection, and surge protection. Full compliance with these guidelines is crucial for maintaining installation standards and enabling efficient monitoring of axle counter performance.

The following points were discussed in details:

SN	Items	Action by
1	According to the FRPCPY data presented by RDSO, the failure rate of DACs is on higher Side. A detailed analysis of the specific cases reported by Zonal Railways is necessary. M/s Eldyne is advised to formulate an action plan aimed at improving DAC systems, installation practices, maintenance procedures, and related aspects.	RDSO, M/s Eldyne
2	M/s. Eldyne has informed that only failure reports are being received from the railways, with no accompanying log data for analysis. They have stated that if GDI data is provided along with the failure reports, a more thorough and effective analysis of the failure can be conducted. There seems to be a large communication gap between Zones and OEM regarding reporting of incidences. This need to be sreamlined. ZR should regularly conduct periodical review meetings with OEM to resolve minor issues.	M/s Eldyne, All Zonal Rlys
3	M/s. Eldyne is advised to provide their escalation matrix, along with an official mechanism for communicating failures for analysis. Additionally, a format for failure reporting, in the form of a Google Sheets link, should be shared with the Railways.	RDSO, M/s Eldyne, All Zonal Rlys
4	M/s. Eldyne mentioned that prolonged reset attempts are causing issues, and field staff needs to be advised against such actions. In response, it is advised to the firm that the prolonged reset scenario appears to originate from within their own system, as	RDSO, M/s Eldyne, All Zonal Rlys

	both the timer in the reset box and the RSTW relay are part of their system. Therefore, a critical analysis of this aspect should be conducted by the firm, and a clear advisory regarding the reset procedure should be issued.	
5	Zonal Railways shall ensure the availability of Complete tool kit of DAC at each station with prescribed torque wrenches for the installation and removal of axle sensor clamps. RDSO will publish a reference table detailing the specified torque requirements corresponding to each OEM and model. **Availability of DAC Toolkit at each Station/BS should be made a part of Quality Audit before commissioning any new installation.**	RDSO, M/s Eldyne, All Zonal Rlys
6	Zonal railways informed that the field-level staff of OEMs are not adequately skilled technically or sensitized to the importance of adhering to PCCL issued by RDSO. OEM must address this issue by enhancing the training and sensitization of their personnel. Only trained & certified staff of OEM shall be deputed for installation & testing/maintenance. Zonal Railways should ensure that properly certified OEM's Staff are permitted to work at Site. **Any deviation from PCCL observed at site should be viewed seriously and OEM should be made responsible for the same.**	M/s Eldyne, All Zonal Rlys
7	All officials at a particular location must be included in the training provided by the firm, before/after commissioning. To ensure comprehensive coverage, additional training sessions may be scheduled by the firm. Furthermore, the names of the officials who have undergone training should be recorded in the PCCL.	M/s Eldyne, All Zonal Rlys
8	M/s Eldyne has been advised to submit an analysis of system failures at locations where AMC is in effect.	RDSO,

	This will aid in developing an action plan to further enhance system reliability. Additionally, the study of system logs during AMC visits should be utilized for preventive maintenance. The firm is expected to report any preventive measures taken by AMC engineers. Furthermore, any failures that were resolved through resetting should also be analyzed by the AMC staff.	M/s Eldyne, All Zonal Rlys
9	The following corrective measures have been suggested by M/s. Eldyne for improving the performance of the system: (i) Teflon back plate (ii) Removal of E3 connection in mushroom box (iii) Use of crocodile clip in mushroom box (iv) Use of rail earth at DP location and its repercussions in case of open TRD bonds (v) Introduction of diagnostic software GDI 3.7 (vi) Cover for dip switch and sealing of cable entry in field unit (vii) A letter to all zonal railways to communicate Google link for reporting failures, with a format for failure reporting and an escalation matrix (viii) Procedure for CPU log storing to be implemented by railways for failure analysis (ix) Plan for technical audit and training in sections with no AMC (x) List of maintenance kits (xi) As informed about a trial done at Benapur/SER, the time delay increased from 500 m.sec to 700 m.sec to accommodate more deterioration in the cables. (x) Use of filter Circuit to address Ripple issue in DP Power Supply A detailed proposal with justifications and modalities, such as the total quantum of work and timelines, is to	RDSO, M/s Eldyne

	be submitted to RDSO for approval of these corrective measures and to advise zonal railways accordingly. RDSO should review the modifications proposed. Prior authorization/approval should be taken by OEM from RDSO before carrying out any modification/ updation of any hardware/software at site.	
10	Progress of implementation of revised configured program in MSDAC (AzLM) systems is very slow, it needs to be expedited. Also, railways may be advised to include this activity in rolling block program.	M/s Eldyne, All Zonal Rlys
11	M/s Eldyne is advised to create a video demonstrating maintenance activities, such as the sensor uninstallation and installation process, parameters readings and adjustments, etc which would be highly beneficial for field staff. The firm is requested to submit links to these videos for the information of the zonal railways.	RDSO, M/s Eldyne, All Zonal Rlys
12	As DACs are being proliferated on large scale in ABS/IBS/BPACs/etc, NMS (Network Monitoring System) for DACs should be developed to facilitate remote monitoring of event logs. Soft reset/Auto reset Count should be provided in event log. RDSO should Co-ordinate with all OEMs to develop NMS for DACs. Also, cyber security aspect must be duly taken care in this regard alongwith limiting the interaction of NMS to accessing event log only without any feature to alter/modify any configuration remotely.	RDSO, M/s Eldyne
13	The cases of frequent resetting reported by Zonal railways should be technically analyzed to identify the root cause and submit technical corrective measures to address the issue, along with action plan as well as supporting documents. OEMs should develop Failure reporting and Analysis system for tracking equipments performance.	M/s Eldyne, All Zonal Rlys

14	In order to overcome Issues arising due to quality of installation, it is advised that the PCCL should be filled by Quality Control Engineer of OEM after independent quality control inspection and not by the executing Supervisor/engineer. Zonal railways to implement such a Quality Control mechanism.	M/s Eldyne, All Zonal Rlys
15	Implementation of TSAA for DAC systems to ensure quality of installations.	M/s Eldyne, All Zonal Rlys

Digitally signed by
PRABHAKAR SHARAN
Date: 28-08-2025
15:59:43
(प्रभाकर शरण) /(Prabhakar Sharan)
निदेशक(सिगनल) / Director(Sig)

Copy forwarded for information & necessary action to:

1. PCSTEs/All Indian Railways,
2. PED/S&T/RDSO, Manak Nagar, Lucknow – 226 011
3. M/s Eldyne Electro Systems Pvt Ltd., Kolkata