HYDRA DLB-V0001-10 Wired DLB Dynamic Load Balancing Instruction Manual

Contents

HYDRA® ELECTRIC VEHICLE CHARGERS

HYDRA DLB-V0001-10 Wired DLB Dynamic Load Balancing

Specifications

- Product Name: Wired DLB
- Function: Dynamic Load Balancing
- Model Number: DLB-V0001
- Installation Date: 10/01/2023

Product Information

Introduction

This document provides installation guidelines for the Hydra Commercial Wired DLB. The DLB includes a Single/Three phase MID energy monitor, three split core current transformers (CT's), and MODBUS cable for connection to the nearest Hydra charge point transmitting readings to NEXUS Cloud.

Overview of Installation

The installation involves connecting the CTs, DLB, and EV charger in the specified order from the grid to the building.

How It Works

The meter connects locally to the Master Charge Point to send real-time load readings to NEXUS Cloud.

Location of the MID Meter

The output of the current transformers must be directly connected to the MID meter without using extension cables. Each CT is polarity sensitive and should be positioned according to the energy flow.

Connecting the MID Meter

The MID meter should be wired near the incoming supply before the main distribution board. Wiring diagrams are provided for single phase or three-phase circuits.

Installation of the Hydra Commercial DLB

The Hydra Wired DLB package includes a Single/Three Phase Din Rail Mounted Multifunction Meter, Split Core Current Transformers, and bespoke cut DTL645 MODBUS Cable.

Connecting the DLB

1. Wire and power up the energy monitor following the datasheet and wiring diagram.
2. Connect the DLB cable to the energy monitor by wiring the corresponding tails into the indicated terminals.
3. The Meter will automatically search for the Master charge point and connect to NEXUS Cloud for commissioning.

FAQ

Q: Can extension cables be used with the current transformers?

A: No, it is important to feed the output of the current transformers directly into the MID meter without using extension cables.

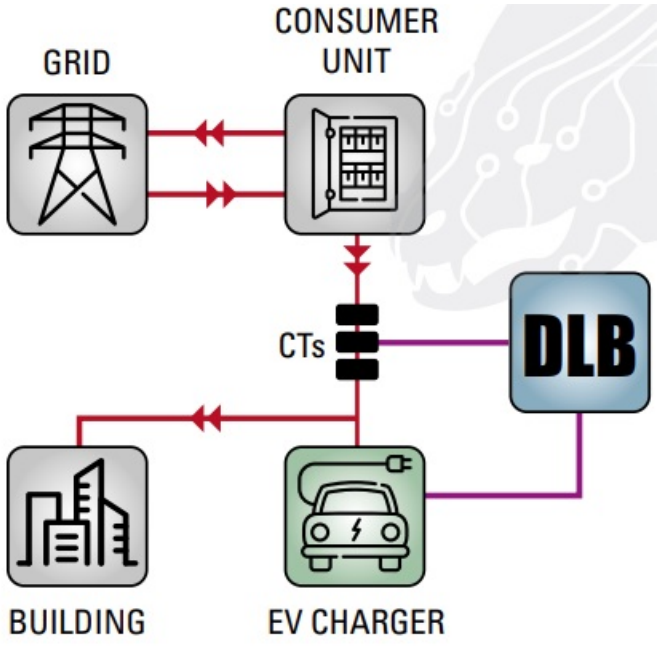
Q: How does the meter connect to NEXUS Cloud?

A: The meter connects to NEXUS Cloud through a local connection with the Master Charge Point.

INTRODUCTION

This document details the installation guidelines for the Hydra Commercial Wired DLB. The commercial DLB consists of a Single/Three phase (“SP/TP”) rated MID energy monitor, three split core current transformers (“CT’s”) rated at the buildings maximum amps and then wired using MODBUS cable directly into the nearest Hydra charge point transmitting readings to NEXUS Cloud.
This document details important information about how to install and commission the DLB and associated meter + CTs.

A brief overview of the installation is as follows,



Overview of the DLB installation

MID METERS – PHYSICAL INSTALLATION

- The Hydra Wired DLB will work with the following meter,
  Eastron SDM630MCTE-MID 1/5A CT Operated SP/TP Multifunction Meter
- Current Transformers for measuring site supply, one for each phase
  T24/T36 100/5A Up to 500/5A Split Core Current Transformer

HOW IT WORKS

The meter works on a local connect with the Master Charge Point in order to export real time load readings to our platform NEXUS Cloud.

LOCATION OF THE MID METER FOR THE SITE SUPPLY

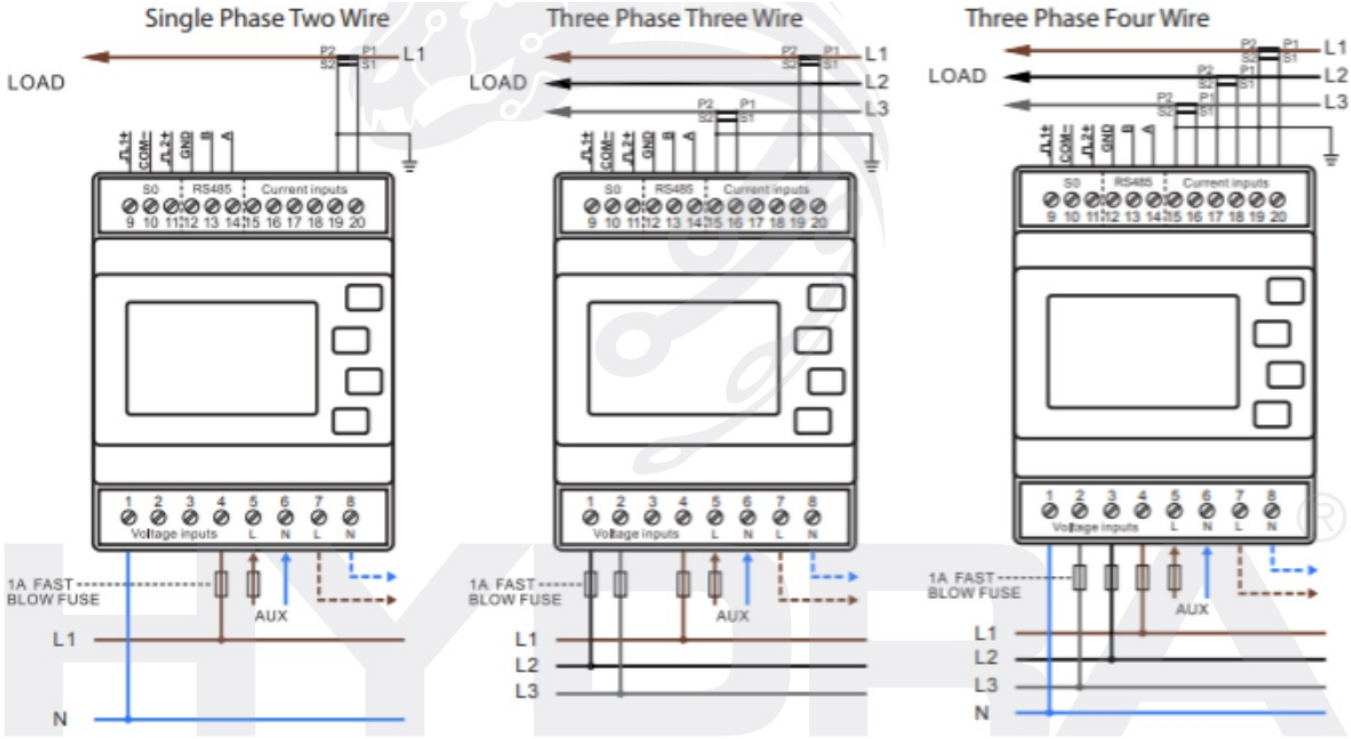
Due to the design of the meter it is important that the output of the T24 current transformers are fed directly into the three phase MID meter i.e. no extension cables.
Each CT is polarity sensitive and must be positioned in accordance with the flow of energy.

CONNECTING THE MID METER

Contained with the MID meter you should have received the following

- 1x SDM630MCT-LoRa-MID
- 3x T24/ T36 split Core Current Transformers

The MID meter needs to be wired in close proximity to the incoming supply before the main distribution board. Depending on the circuits rating either single phase or three phase you will need to wire the MID meter in accordance with the below wiring diagrams.



INSTALLATION OF THE HYDRA COMMERCIAL DLB

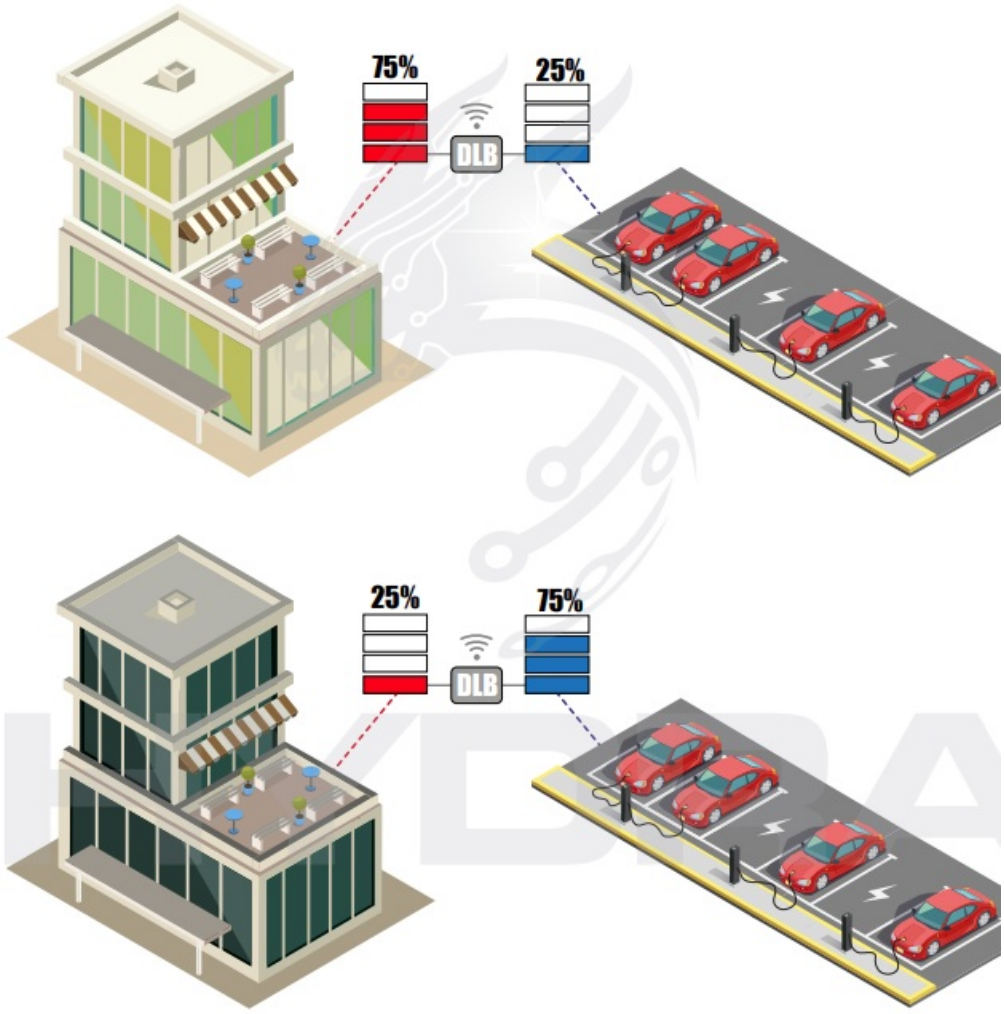
The Hydra Wired DLB will come with

- 1x SDM630MCTE-MID Single/ Three Phase Din Rail Mounted Multifunction Meter
- 3x Split Core Current Transformers
- Bespoke cut DTL645 MODBUS Cable

CONNECTING THE DLB

- a) Firstly you will need to wire and power up the energy monitor. In conjunction with the energy monitor datasheet and wiring diagram you will need to complete this step first.
- b) The next step is to connect the DLB cable into the energy monitor. The DLB cable will already come prewired into the charge point, the next step is to wire the corresponding tails into the energy monitor into the terminals indicated:

Once powered up the Meter will automatically search for the Master charge point and connect to NEXUS Cloud . The Meter and Charge Point will automatically connect and from there commissioning is completed via NEXUS Cloud.



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Documents / Resources

	HYDRA DLB-V0001-10 Wired DLB Dynamic Load Balancing [pdf] Instruction Manual DLB-V0001-10 Wired DLB Dynamic Load Balancing, DLB-V0001-10, Wired DLB Dynamic Load Balancing, DLB Dynamic Load Balancing, Dynamic Load Balancing, Load Balancing

References

- Hydra EVC - The Fast Charging Specialists - Hydra EVC
- User Manual

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