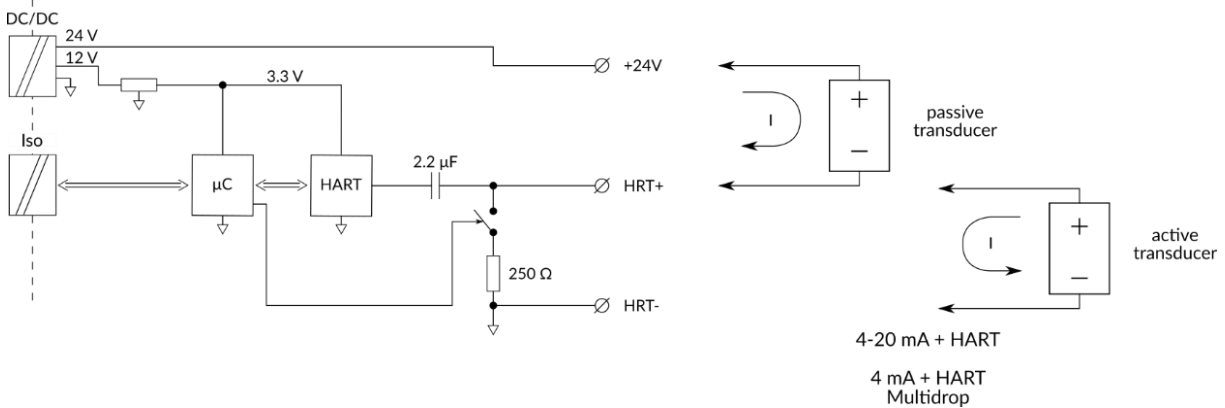


READING PROCESS DATA USING HART MODULE

- Basic information**

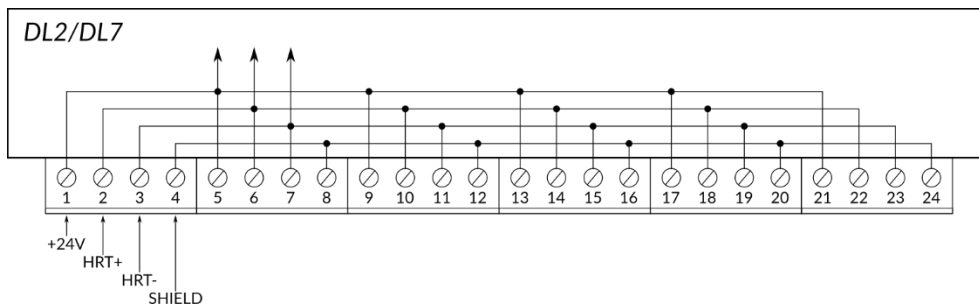
The HART module can be installed in the DL2 data logger or in the DL7 data logger. Passive transducers (powered by device or by an external power supply) and active transducers can be connected to the module. Transducers can operate in a multidrop mode. A block diagram of the module is presented below. The built-in R250 Ω internal resistor is in the OFF position by default (settings can be changed in the data logger I/O settings menu).

Note: Internal R250 Ω resistor is automatically disconnected during a power outage.



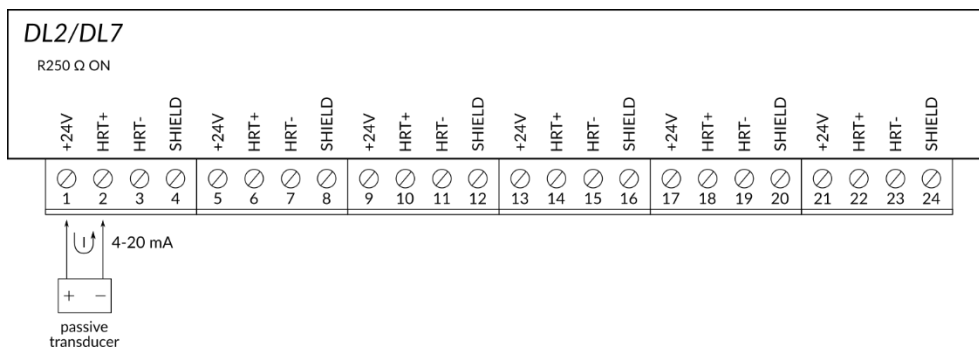
- Parallel connection between terminal blocks**

The module has 4-position plug-in terminal for signal connection. The terminal blocks are internally connected in parallel.



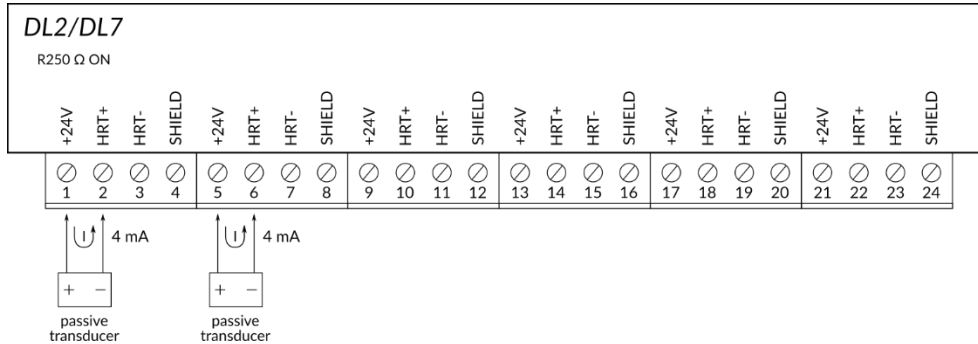
- Connecting the passive transducer supplied from the module**

A typical application involves connecting one transducer. The connection of one passive transducer with loop supply from the module is presented below. The R250 Ω internal resistor must be set to ON.

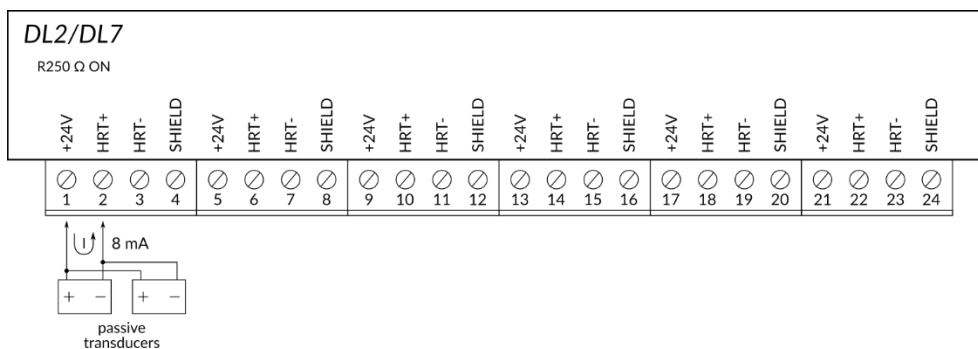


- **Multidrop application (passive transducers powered from the module)**

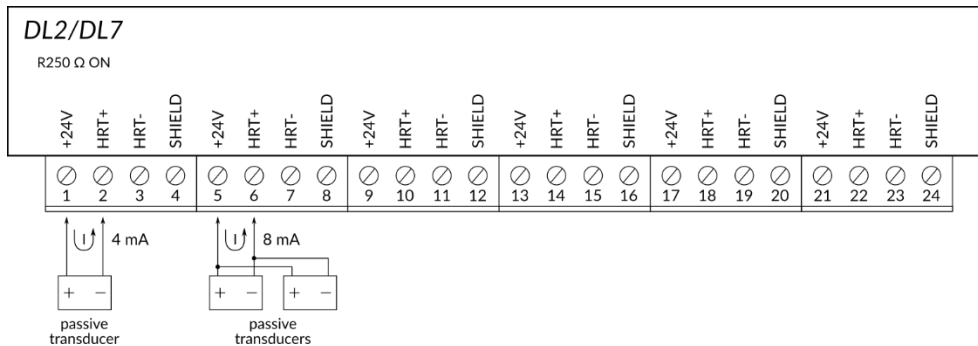
A multidrop application implemented using module terminals is presented below. The $R_{250\ \Omega}$ internal resistor must be set to ON.



A multidrop application implemented using a parallel connection on the line is presented below. The $R_{250\ \Omega}$ internal resistor must be set to ON.



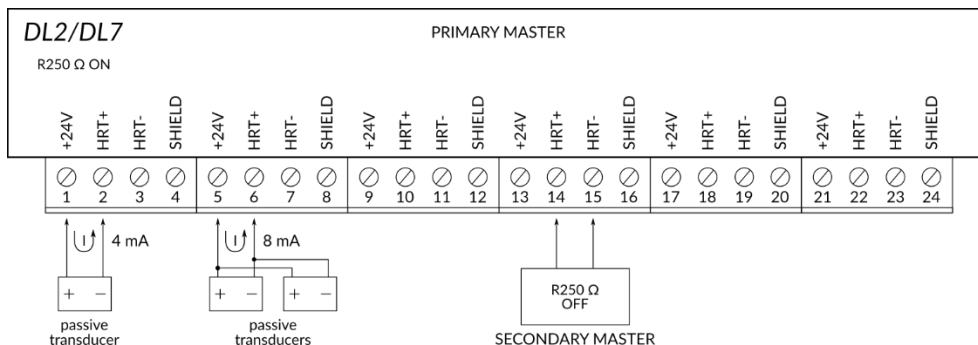
A multidrop application implemented using module terminals and parallel connection on the line is presented below. The $R_{250\ \Omega}$ internal resistor must be set to ON.



- **Connecting the device in Secondary Master mode, multidrop mode**

An application containing passive transducers supplied from the module (multidrop) and a device in *Secondary Master* mode is presented below. The *Secondary Master* device can be e.g. a service communicator or other DL2/DL7 data logger with HART module installed. In this application, for the device in *Primary Master* mode, the $R_{250\ \Omega}$ internal resistor must be set to ON, for the device in *Secondary Master* mode, the $R_{250\ \Omega}$ internal resistor must be set to OFF.

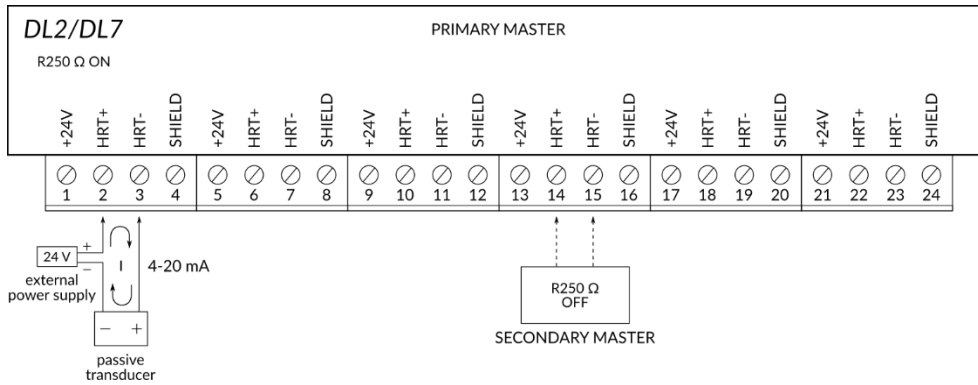
The device in *Secondary Master* mode should be connected to the HRT + and HRT- terminals of the module.



- **Connection of a passive transducer with external loop supply or connection of an active transducer**

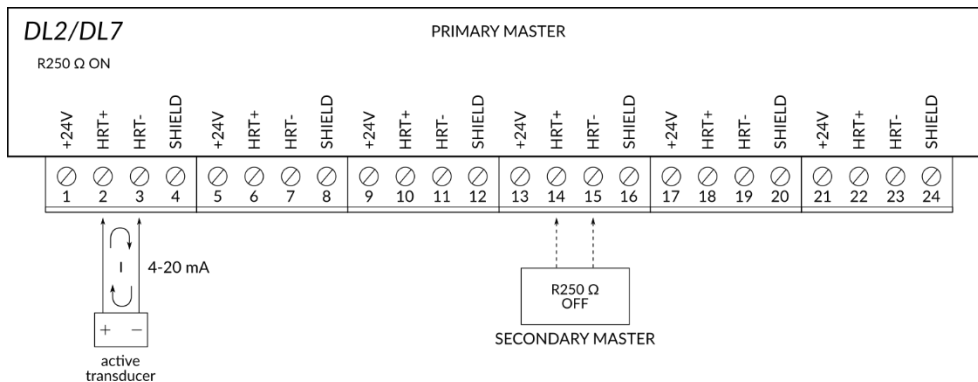
Connection of one passive transducer with external loop supply is presented below. The $R_{250\ \Omega}$ internal resistor must be set to ON.

It is possible to connect the device in *Secondary Master* mode (the device should be connected to the HRT + and HRT- terminals of the module). In this application, for the device in *Primary Master* mode, the $R_{250\ \Omega}$ internal resistor must be set to ON, for the device in *Secondary Master* mode, the $R_{250\ \Omega}$ internal resistor must be set to OFF.



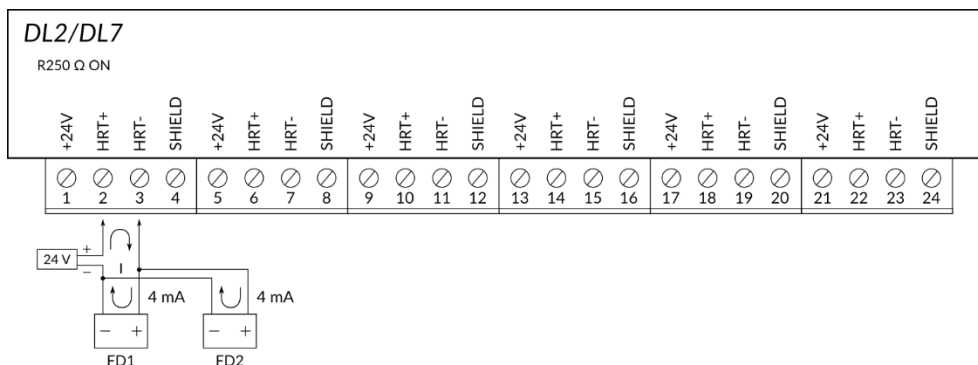
Connection of one active transducer is presented below. The $R_{250\ \Omega}$ internal resistor must be set to ON.

It is possible to connect the device in *Secondary Master* mode (the device should be connected to the HRT + and HRT- terminals of the module). In this application, for the device in *Primary Master* mode, the $R_{250\ \Omega}$ internal resistor must be set to ON, for the device in *Secondary Master* mode, the $R_{250\ \Omega}$ internal resistor must be set to OFF.



- **Multidrop application (passive transducers with external loop supply or active transducers)**

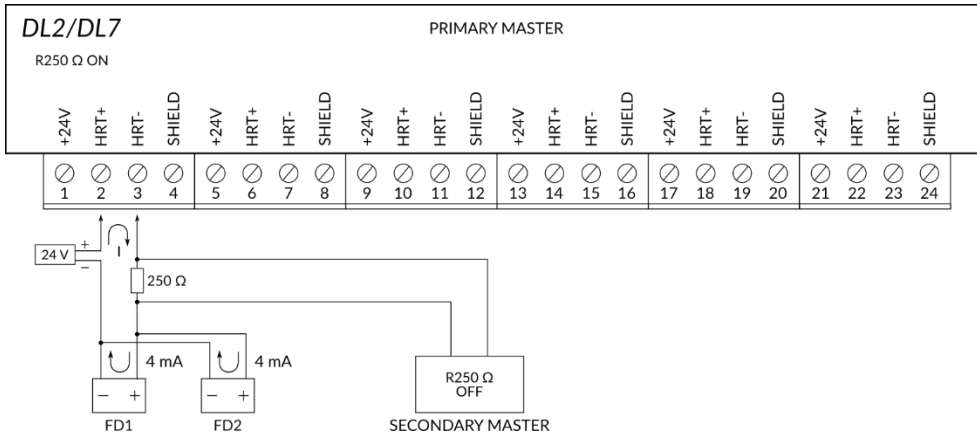
A multidrop application implemented using a parallel connection on the line is presented below. Transducers with external loop supply or active transducers can be connected. The $R_{250\ \Omega}$ internal resistor must be set to ON.



• Connection of device in Secondary Master mode, multidrop application (passive transducers with external loop supply or active transducers)

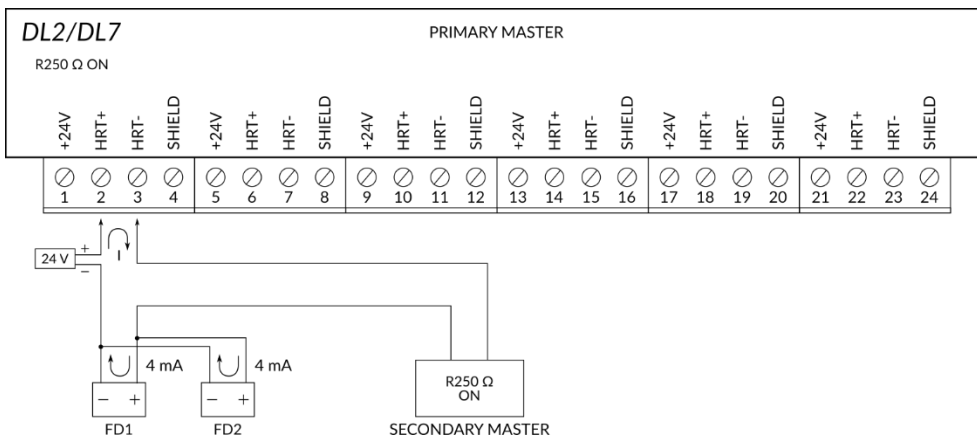
A multidrop application and the device in *Secondary Master* mode is presented below. The application includes an external resistor R250 Ω. In this application, for the device in *Primary Master* mode, the R250 Ω internal resistor must be set to ON, for the device in *Secondary Master* mode, the R250 Ω internal resistor must be set to OFF.

Note: Internal R250 Ω resistor is automatically disconnected during a power outage.

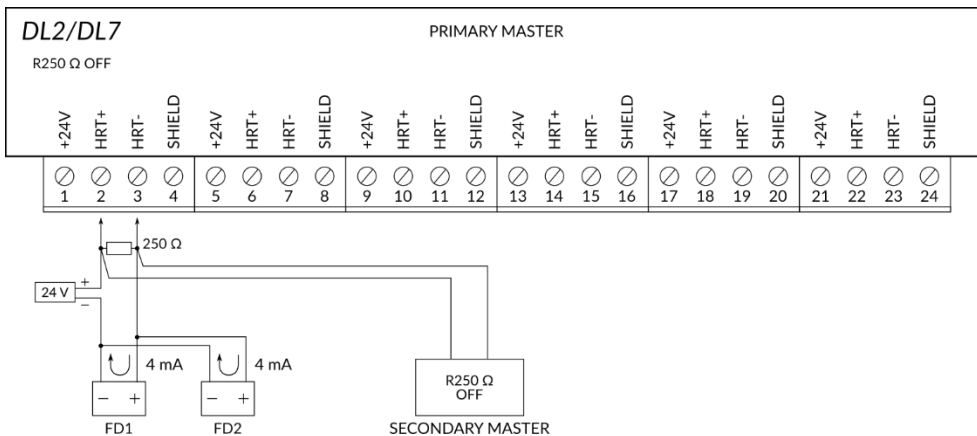


A multidrop application and the device in *Secondary Master* mode is presented below. The application includes an internal R250 Ω resistor provided by the *Secondary Master* device. In this application, for device in the *Primary Master* mode and device in the *Secondary Master* mode the R250 Ω internal resistor must be set to ON.

Note: Internal R250 Ω resistor is automatically disconnected during a power outage.



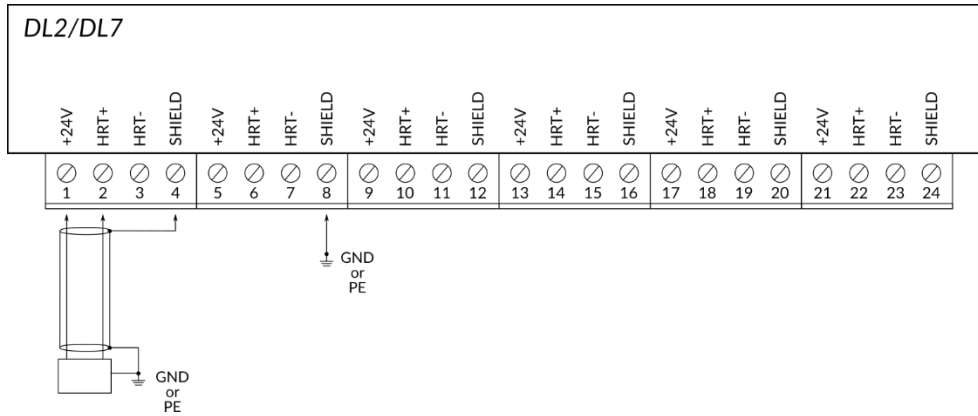
If it is necessary to maintain the loop current in the event of a power outage, an external resistor R250 Ω should be used. The multidrop application and the device in *Secondary Master* mode is presented below. In the presented application for the device in the *Primary Master* mode and for the device in the *Secondary Master* mode the R250 Ω internal resistor must be set to OFF.



- **Connecting the cable shield**

It is possible to connect the cable shield to the module terminal blocks. If the device is mounted in a metal cabinet, it is recommended to connect the screen directly to the cabinet, by passing the module connector.

The screen must be connected to GND at both ends of the cable. If there is a risk of equalizing current flowing through the screen, the screen should be grounded on one side only (at the device).



- **Information from the Manufacturer**

All functions of the recorder are subject to modifications for the benefit of technical progress.

Manufacturer: METRONIC AKP sp. z o.o. sp. k.
 PL 31-426 Kraków, Żmujdzka 3
 T: (+48) 12 312 16 80
www.metronic.pl

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