

d-flux Series

This Quick Start Guide is for the d-flux Multiparameter Mass Flow Meters and Controllers and provides easy setup and installation instructions.

IMPORTANT! Before installing and using your flow device, please read this document carefully and follow the steps below.

Step 1. Download Instruction Manual

Please download and read the [d-flux Instruction Manual](#) before installing your meter.

Step 2. Download the Sierra Flow Connector App

The [Sierra Flow Connector App](#) allows you to conveniently and securely connect to your d-flux instrument with an Android mobile device.



Download the app
from Google Play



Safety and General Information

1. For safe operation, please consider the process and conditions for which the device is designed and specified at the time of delivery. This information can be found on the data label on the instrument housing and in the instruction manual.

⚠ Note d-flux flow meters and controllers are intended for dry clean gases only.

2. Do not remove the electronics housing to prevent damage to the unit. A damaged hologram seal will void the warranty.

3. There are no serviceable parts inside the unit. Repairs must be performed by qualified personnel only.

Installation and Electrical Connection

1. Do not use Teflon® tape or liquid sealing on the process connections.

2. Please ensure that the piping is clean and purged before you connect the flow meter.

3. The gas used must be clean and dry. Please note that two filters have been installed to protect against particle contamination.

4. It is recommended that the user checks the device on a regular schedule to ensure that it is leak free as both metal and elastomeric seals, gaskets, O-rings and valve seats may change with age and exposure to process gas.

⚠ Note Your Sierra sales representative can help you to source suitable O-rings, elastomeric seals, fittings and filters.

5. Please refer to the d-flux Instruction Manual for detailed instruction on mounting orientation and location.

6. Please verify a proper electrical connection. The device must be grounded. The supply voltage is the following:

Meter: Supply voltage 18-36Vdc (200mA@24VDC, regulated, typical ±50mV)

Controller: Supply voltage 24VDC (2A@24VDC, regulated, typical ±50mV)

⚠ Note The current consumption depends on the instrument version. Please refer to the information in the d-flux Instruction Manual.

Default Factory Settings

Modbus RTU

Communication speed	9600 Baud
Data bits	8
Stop bits	1
Parity	None
Node address	247

PROFINET / EtherCAT (optional)

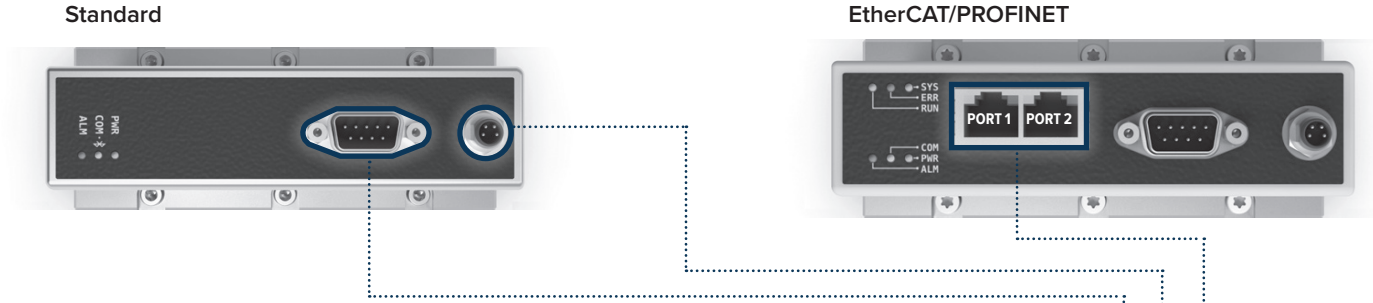
Name	d-flux
IP address	0.0.0.0 or 192.168.0.50

Further information on the device configuration can be found in the instruction manual.

Pin Assignment

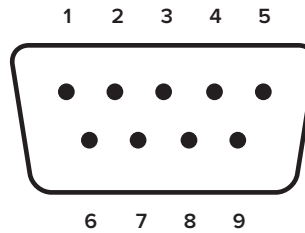
All connection diagrams can be found in the operating instructions. Please also refer to the “Digital Communication” chapter in the d-flux Instruction Manual.

Warning! Always disconnect the power supply before working on the plugs!



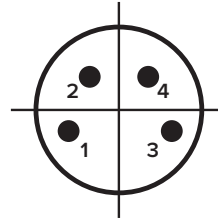
Sub D Plug Pin Assignments Modbus RTU, Power Supply & Analog Signals (Male)

PIN	Assignment
1	Analog GND
2	Supply GND
3	Supply Power
4	Analog Out Voltage
5	Analog In (setpoint MFC)
6	Valve Mode (MFC only)
7	Analog Out Current
8	RS485-A
9	RS485-B



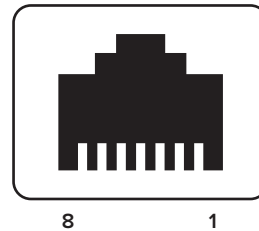
M8 Plug Pin Assignments (male)

PIN	Assignment
1	Supply Power
2	Not Connected
3	Supply Ground
4	MosFet OutPut
Enclosure	Protective Earth



RJ45 Socket Pin Assignments PROFINET/EtherCAT/Ethernet IP (female)

PIN	Assignment	Wire Color
1	Data (Tx+)	Yellow
2	Data (Tx-)	Orange
3	Data (Rx+)	White
4	Not Connected	-
5	Not Connected	-
6	Data (Rx-)	Blue
7	Not Connected	-
8	Not Connected	-



LED Operating Status

PWR - Power

The green LED lights up when the unit is supplied with the correct power supply voltage and is ready for operation.

COM - Modbus/Bluetooth Communication

The yellow LED flashes when the device is communicating on the digital Modbus RTU interface. LED is flashing blue when ready to connect to Bluetooth and constant blue when connected to Bluetooth.

Warnings and Alarms


The red LED is flashing fast: There is a process issue*

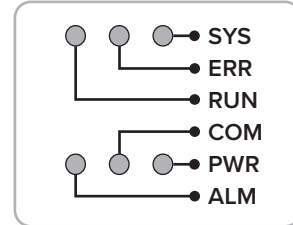
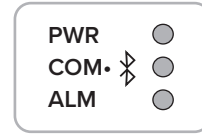
The red LED is flashing slowly (every 3 sec): Process problem in the past that is no longer active*.

The red LED lights up permanently: There is a device failure*

*More details can be found through the Sierra Flow Connector App.

More light status explanations in the Instruction Manual.

 **Note** The EtherCAT/PROFINET devices have an extended LED operating status. Please refer to the Instruction Manual.




Option for Ethernet devices only

Tare Information

1. Please tare the device before operating the meter to obtain the best accuracy. Tare is NOT always needed. Please check the instruction manual on how and when to tare.


Toxic, Flammable Gases and ATEX

 **Warning!** In the case of toxic and flammable gases, the respective safety guidelines in each country must be followed. The d-flux devices are not approved for use in Ex-zones. In the case of flammable and toxic gases, fittings and pipes intended for that purpose must be used. The responsibility for safe operation lies with the designer/operator of the installation. The devices must not be used for explosive mixtures (for ex. CH₄ + Air, H₂ + Air, or detonating gas consisting of O₂ and H₂). Consider primary explosion protection when operating a d-flux with a flammable gas.

Limited Warranty Policy – Register Online

All Sierra products are warranted to be free from defects in material and workmanship and will be repaired or replaced at no charge to Buyer, provided return or rejection of product is made within a reasonable period but no longer than three (3) years for calibration and non-calibration defects, from date of delivery.


To assure warranty service, customers must register their products online on Sierra's website. Online registration at of all of your Sierra products is required for our warranty process. Read complete warranty policy at sierrainstruments.com/warranty.

 **Warning!** If a d-flux has to be returned for service (for ex. repair & calibration) to the manufacturer, a strict RMA procedure including thorough cleaning of the device has to be followed prior to sending. Failure to comply may lead to legal claims against the sender as this may harm our employees. If internal corrosion occurs when operating dangerous gases (HCL, CL2, F2, H2S, SO2, etc.), it will void the warranty of the device and the device must never be returned.



Scan to Download the
d-flux Instruction Manual



 **Note:** Please dispose of the device in an environmentally friendly way (recycle).

Sierra's Flow Connector App

d•flux's user-friendly Bluetooth® app is available for free from Google Play. It allows you to easily and securely connect with your device to create and edit profiles (a set of settings). While operating in the field, you can adjust flow range and dynamic range, filter settings, alarms and warnings, and an assortment of other critical parameters. Users can also update and configure in-situ with no need for cables or disassembly, saving both time and money.

Sierra's Flow Studio

Sierra's d•flux offers advanced Modbus communication and analog output. Optional digital communications include PROFINET or EtherCAT. Sierra Flow Studio is advanced PC-based software that lets you communicate with your d•flux device in a Microsoft Windows environment through Modbus. It is available for free download from Sierra's website.



Download on Google Play: Sierra Flow Connector App



Measurably Different.™

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