



## MOULDFLO WIRING MANUAL

MOULDFLO A/S  
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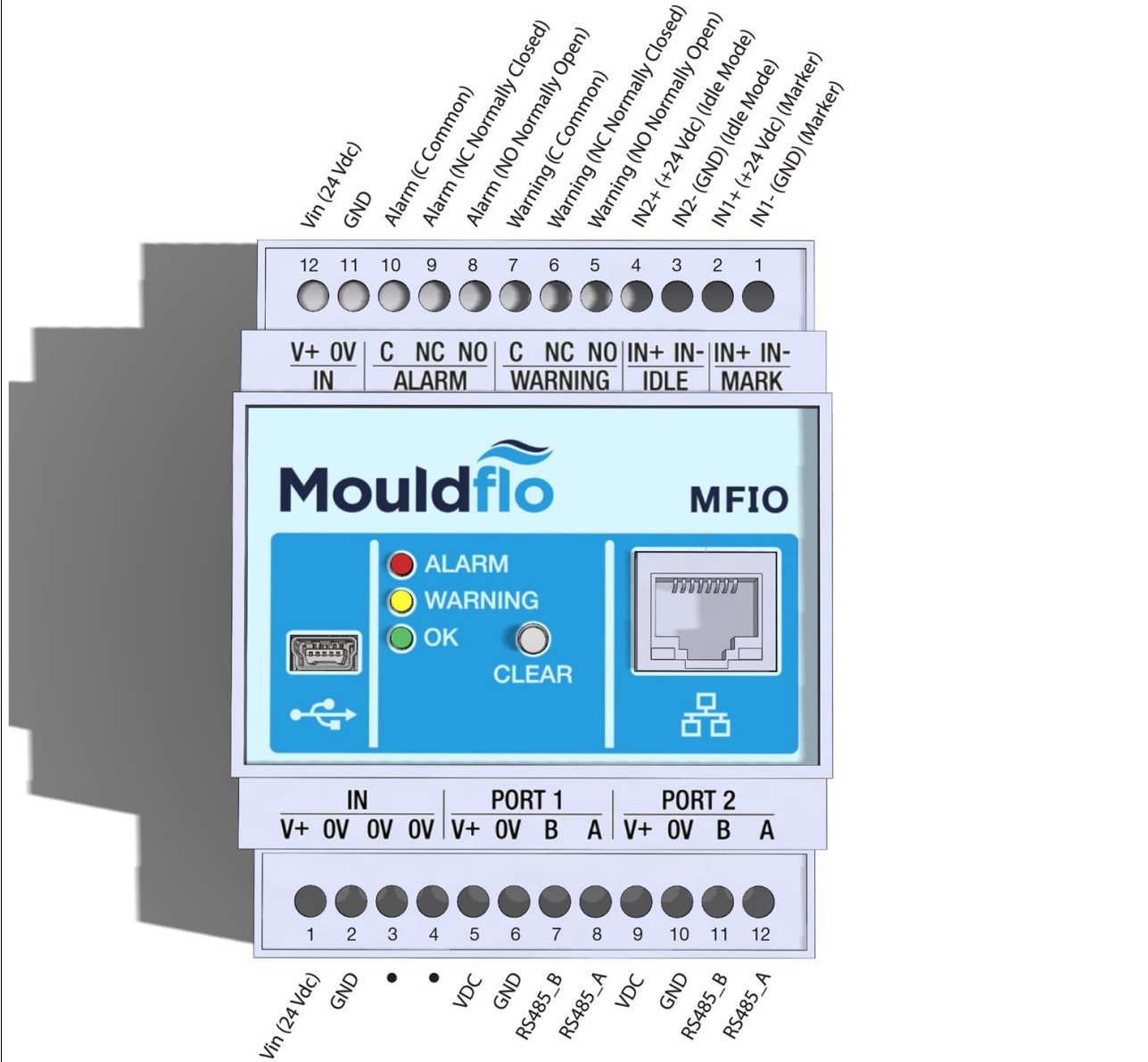
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## Introduction

This manual describes the connection and wiring of the Mouldflo I/O (MFIO) and the Manifold. Diagram and illustrations are also provided.

# Mouldflo I/O (MFIO)

The MFIO has two connector ports, one for connecting the systems Manifold to and one for connecting auxiliary equipment to. The MFIO also have two front port connectors, one for the USB connector to a display PC or server, and a Ethernet connector.



Mouldflo I/O front, with labels for each pin on the two connectors

## **Power Supply Connection**

The MFIO should be supplied with 12 to 24 Vdc to power the MFIO and to be distributed to the Manifolds. The power supply connection can be made to both Connector 1 or Connector 2. If the MFIO is seen from the front, then Connector 1 is at the bottom and Connector 2 is at the top and the power supply should be connected to the pins at the fare left.

	<b>Designator</b>	<b>Pin</b>	<b>Description</b>
Connector 1	J1	1	Vin, +12 to +24 Volt DC
Connector 1	J1	2	Ground, GND
Connector 2	J2	12	Vin, +12 to +24 Volt DC
Connector 2	J2	11	Ground, GND

Please see Mouldflo Wiring Diagram for details.

## **Manifold Connector Ports**

Connector 1, apart from the power supply input, holds the two ports for connecting the Manifolds to. The Manifolds should be supplied with cable installed, but if not the case, the cable have 4 leads, which should be 2 twisted pairs. One pair for the power and one pair for the RS485 connection.

The Manifolds can be daisy-chained by connecting them to each other, up to 4 Manifolds are supported.

	<b>Designator</b>	<b>Port</b>	<b>Pin</b>	<b>Description</b>
Connector 1	J1	1	5	VDC, supply to the Manifold, provided by MFIO
Connector 1	J1	1	6	Ground, GND
Connector 1	J1	1	7	RS485, B signal
Connector 1	J1	1	8	RS485, A signal
Connector 1	J1	2	9	VDC, supply to the Manifold, provided by MFIO
Connector 1	J1	2	10	Ground, GND
Connector 1	J1	2	11	RS485, B signal
Connector 1	J1	2	12	RS485, A signal

Please see Mouldflo Wiring Diagram for details.

## **Auxiliary Connections**

Connector 2 provides two relay outputs with both the normally closed and the normally open switch for connecting a beacon light. One relay is for the Alarm state and one for the Warning state of the system.

Connector 2 also provides two galvanic separated inputs. One input is intended to set markers in the sampled data, to for example indicate the machine cycle time. The other input is intended for setting the system in "idle", where the Manifold status (Alarm or Warning) won't trigger the overall system status.

	<b>Designator</b>	<b>Pin</b>	<b>Description</b>
Connector 2	J2	10	Alarm (C Common)
Connector 2	J2	9	Alarm (NC Normally Closed)
Connector 2	J2	8	Alarm (NO Normally Open)
Connector 2	J2	7	Warning (C Common)
Connector 2	J2	6	Warning (NC Normally Closed)
Connector 2	J2	5	Warning (NO Normally Open)
Connector 2	J2	4	IN2+ (+24 Vdc) (Idle Mode)
Connector 2	J2	3	IN2- (GND) (Idle Mode)
Connector 2	J2	2	IN1+ (+24 Vdc) (Marker)
Connector 2	J2	1	IN1- (GND) (Marker)

Please see Mouldflo Wiring Diagram for details.

## **USB Connector**

The USB mini connector is provided to connect the MFIO to the flat panel PC running the Mouldflo Graphical User Interface (GUI) or a server running the Mouldflo GUI with a VNC (Virtual Network Computing) front-end.

## **Ethernet Connector**

An Ethernet connector is provided to connect the MFIO to a Ethernet LAN. Data can be retrieved from the system by issuing HTTP requests, please see Mouldflo Interface Manual for further details on the protocol.

## Mouldflo Manifold

The Manifolds should be delivered with cable installed. This cable has 4 wires that should be connected to the MFIO. If the cable has to be replaced, the Manifold has to be disassembled.

The cable to be used has to have two twisted pairs. One pair for the power and one pair for the RS485 connection.

The Manifolds can also be daisy-chain, by connecting the next Manifold to the connector of the first one.

### **Connector Port**

The PCB (Printed Circuit Board) inside the Manifold has a connector, J13. The table below shows the connections on that connector.

<b>Designator</b>	<b>Pin</b>	<b>Description</b>
J13	1	VDC, supply to the Manifold, provided by MFIO
J13	2	Ground, GND
J13	3	RS485, B signal
J13	4	RS485, A signal

# Mouldflo Wiring Diagram

