

Intrinsically safe circuit to float, speeds installation, and supports pulse inputs

For Hazardous Environments

Most sewer lift stations are considered hazardous locations per the National Electric Code (NEC Rule 22-704). The MyDro Safe Module Plus allows the state of a high-level float (located in the hazardous location) to be shared with both the local control panel and the Mission remote terminal unit (RTU) while complying with NEC requirements for hazardous environments. The float-sensing circuit is certified for Class I, Division I (methane) environments typical of sewer lift stations.

Speeds Installation

The optional module connects to the MyDro 150 or 850 RTU with a quick-connect communications cable. The cable powers the module and includes the RS485 communications link between the two components. The RS485 standard is capable of reliable communications up to 4,000 feet, allowing the module to be located closer to the sensed elements. The enclosure is compatible with standard DIN rail. Terminals are front-facing.

High Wet Well Alarms Even When AC Has Failed

High wet well events are reported even when there is no AC power to the station because of the backup battery associated with MyDro unit.

Relay—Local Alarm

A built-in relay can drive a local alarm light and buzzer based on float.

Relay—Lock-Out Functions

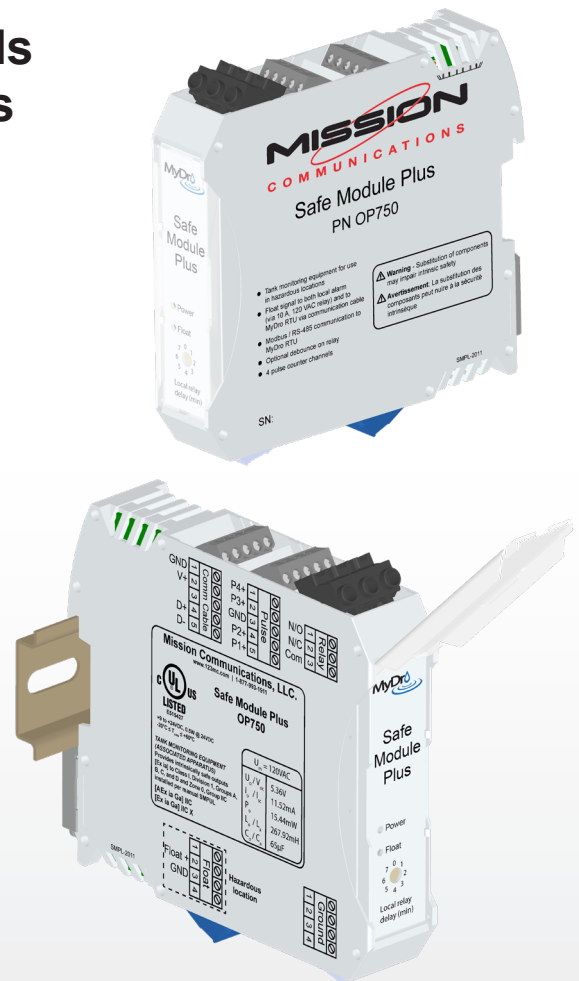
The relay can be used in specialty applications where safety lock-out functions are desired. A selectable debounce (time delay) can be set for the included relay to avoid short cycling of equipment because of a bouncing float. For example, in clean water applications the relay can be included in the control circuit of a service pump and used to lock-out the pump before the supply runs dry, as indicated by a normally open (N/O) low-level float. The Mission notification system can be set to dispatch a notification, such as “service pump lock-out activated because low supply level.”

Four Pulse Channels

The module supports four pulse channels. They are typically used with rain tipping buckets and pulse-based flow meters. The inputs support dry, open collector, and wetted circuits. Non-volatile memory maintains the pulse count for extended power outages or if communication cable is disconnected. Pulse counts accumulate even if the MyDro RTU is offline as long as it has power.

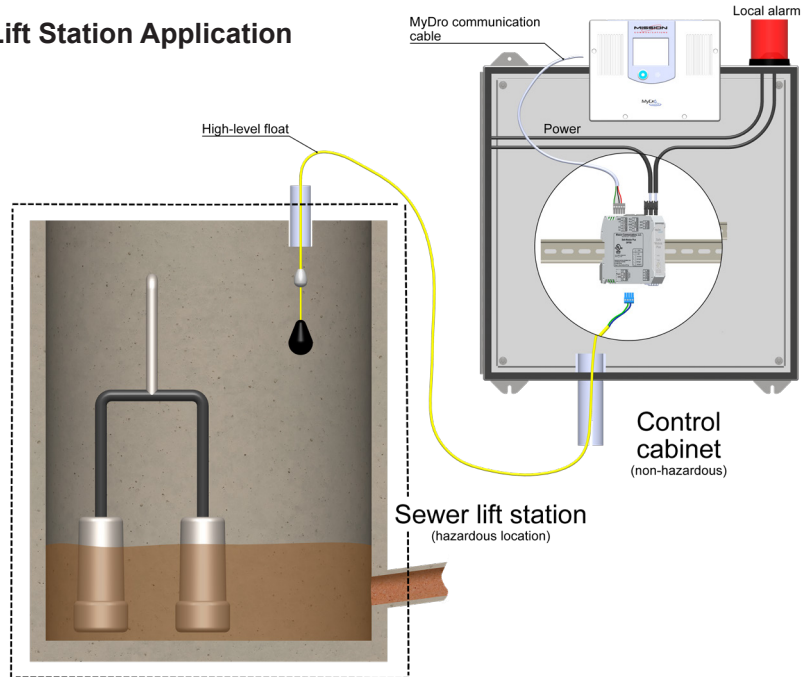
Supervision

The MyDro will report RS485 communication failure as well as intrinsically safe circuit failure if those conditions occur.

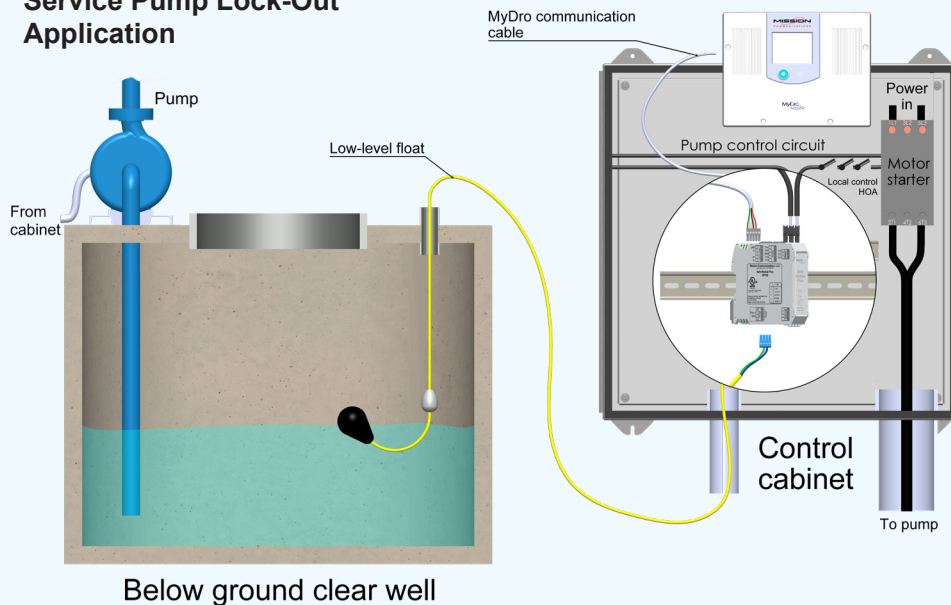


- Reduce installation time and complexity
- Float circuit designed for hazardous locations typical of a sewer lift station
- Dispatches high wet well alarms even if AC power fails
- Duplicate float signal for multiple purposes
- Supports 4 pulse channels

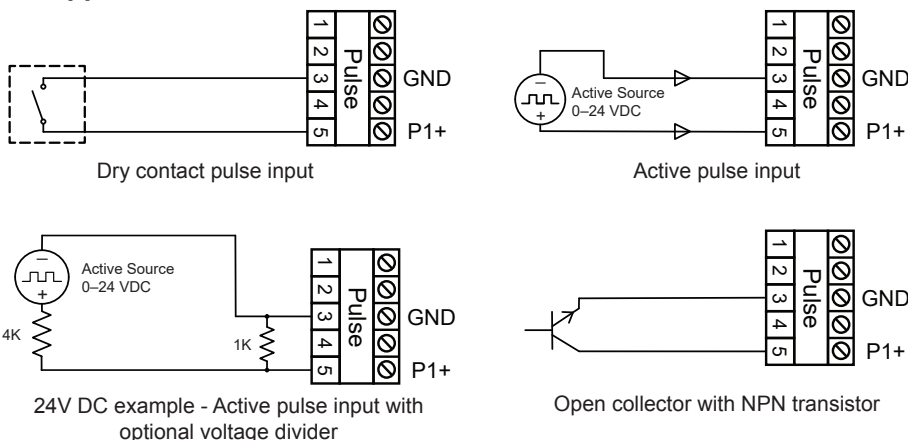
Sewer Lift Station Application



Service Pump Lock-Out Application



Pulse Applications



Specifications

Float-Sensing Circuit:

- Current and voltage limited
- Certified Class I, II, III, Division I, Groups D-G T1

Power:

- 9 to 24 VDC, 12 VDC nominal
- Supplied by MyDro (backed up by battery) when included communications cable is used
- 0.5 W max (when relay is energized), 0.2 W quiescent

Communications Cable:

- 2 conductors for power
- 2 conductors for communications
- Shielded cable, grounded at MyDro via RJ45
- RS485 differential pair (D+, D-)
- Modbus RTU (slave address=200)
- Additional I/O expansion available; see MyDro Expansion Modules specification sheet

Interposing Relay:

- Maximum 10 A at 120 VAC
- Maximum 14 gauge wire

Relay Lock-Out Mode:

- Relay state change coincident with float change or with configurable time delay for debounce purposes
- Time delay configurable with rotary switches (0, 1, 2, 3, 4, 5, 6, 7, etc. minutes)

Pulse Channels:

- 4 channels, common ground
- Minimum pulse width 8 ms high, 8 ms low
- Dry input (polarity insensitive)
- Open collector (polarity sensitive)
- Wetted up to 24 VDC

Onboard LEDs:

- Power
- Float/fuse open

Physical/Environmental:

- 30 mm DIN rail mount
- 100 mm H x 100 mm D x 25 mm W (4 in x 4 in x 1 in)
- 0.5 lb
- -20° C to 60° C, non-condensing
- Enclosure is flame resistant polyamide
- ROHS certified (lead-free)

Includes:

- Safe Module Plus
- 3-in DIN rail with screws
- 4 x 4 removable terminals
- Communications cable
- Installation instructions

Service:

- Expansion service fee—12 months (PN SPOP-12)

Warranty:

- One year manufacturing and material warranty



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