

Flow

Flow Totaliser cum Controller - Microcompt



The Microcompt is a powerful flow computer, designed to meet the requirements of all types of fluid metering installations. Microcompt is designed for refuellers, tank trucks, marine and process batching applications. The Microcompt comes in two enclosures, first Standard Explosion proof enclosure for all hazardous area and second non-exproof (weatherproof) version.

SALIENT FEATURES

- ❑ Self-diagnostic
- ❑ Meter error curve linearization
- ❑ Alphanumeric 20 x 2 backlit LCD display
- ❑ Tamper-proof and sealed calibration facility and approved by Weights & Measures department
- ❑ Accepts all types of interlocks for fail-safe operation
- ❑ Can be used with any make of flow meters and pulse generators
- ❑ RS-232 / RS-485 connectivity
- ❑ Flameproof enclosure for hazardous area application approved by PESO
- ❑ Weatherproof to IP-65
- ❑ Temperature compensator as per API

PRINCIPLE OF OPERATION

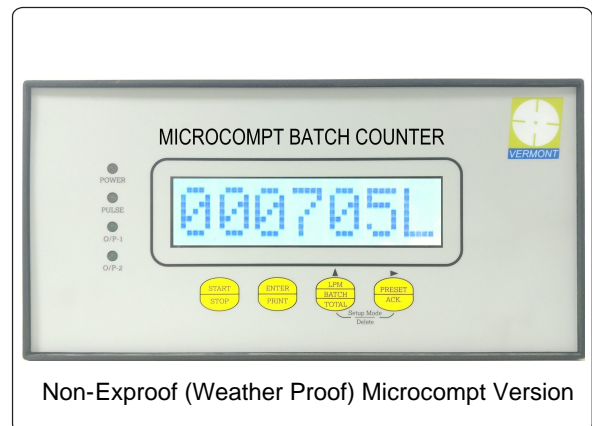
Microcompt realizes a self-test at start-up, and also periodically during operation, to ensure connectivity with external devices and systems.

The Microcompt can be programmed for a predetermined product quantity to be loaded prior to a delivery or as a Start / Stop system where unspecified product quantity can be delivered. In both the options, relay options are provided to control pumps and tank valves. Product delivery is started only after proper functioning of all the interlocks. The delivery commences with gradual opening of the set stop valve controlled by the Microcompt. Loading operation parameters like batch quantity, flow rate can be seen on the display.

During product delivery, Microcompt constantly monitors the meter flow rate and linearizes the meter accuracy curve to give unmatched metering accuracy.



Exproof Microcompt Version



Non-Exproof (Weather Proof) Microcompt Version

As Microcompt is designed for truck application, special features like low frequency / voltage functioning, vibration dampening, ticket printing as per customer requirement.

In the case of sudden power failure during product delivery, all the process data is stored into the EEPROM memory of the equipment.

EQUIPMENT CONFIGURATION

The Microcompt is equipped with a EEPROM memory, in which all the configuration parameters like multi-point meter K-factors, password and related information are stored.

The parameters are field-settable, with tamperproof sealing facility provided on the rear side of the equipment. To configure the parameters, the calibration window on the rear side is opened and the calibration

switch is actuated. The parameters can then be edited by using front push buttons. Once the equipment is configured for the required operating conditions, the switch is de-actuated and the window is sealed.

SELF-DIAGNOSTIC FEATURES

During the delivery, Microcompt constantly monitors the operating conditions for and logs an alarm if any of the conditions goes beyond threshold limits. These conditions include -

- ☐ Meter over / under speeding
- ☐ Absence of product after valve opening
- ☐ Pulse transmitter failure
- ☐ Electrical power failure
- ☐ Interlock failure like vehicle earthing, tank low alarm, etc.

In case of electrical power failure, Microcompt retains following information in its EEPROM memory -

- ☐ Current volume
- ☐ Accumulated totaliser
- ☐ Operational flags

PERIPHERALS

Microcompt may be associated with various types of peripherals, depending upon the case it will perform as either master or slave unit.

PLC / COMPUTER

Microcompt can be connected to a PLC or a computer via a MODBUS link. This allows remote control of the loading operation, presetting of quantities to be delivered, recovery of meter data, access control to the loading position, etc.

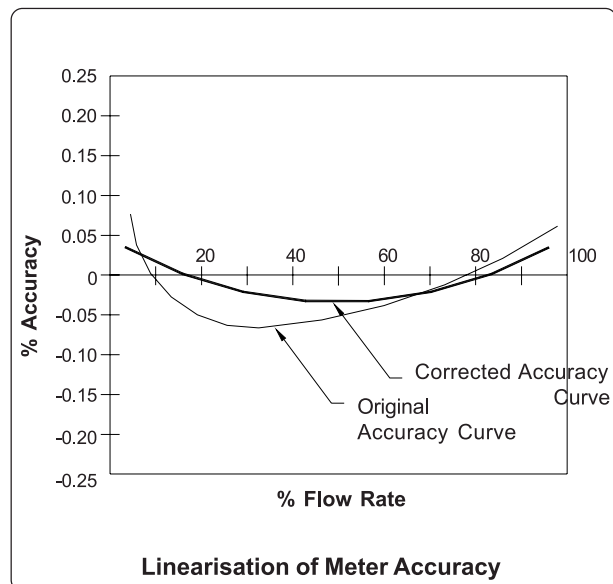
PRINTERS

Different types of printers can be connected via a serial link. Microcompt can be interfaced to an industry standard Slip Printer and can offer the possibilities of printing out all information in the form of a loading ticket.

STANDARD SPECIFICATIONS

POWER REQUIREMENT

Voltage : 12 VDC / 24 VDC / 110 VAC / 230 VAC
 Current : 200 mAmp
 Data Entry : 4 nos. multi-function push button keys



Display : Alphanumeric 20 x 2 backlit LCD display

Memory : 64 KB

INPUTS

PULSE TRANSMITTER

Type : Square wave
 Frequency : 0 to 2000 Hz
 No. of Channels : Two
 Duty Cycle : 50% with 90°

ANALOGUE

Type : PT-100 three wire RTD
 Temperature : -20°C to +75°C
 Accuracy : +/- 1°C
 Resolution : 0.1°C
 Quantity : 1 no.

DIGITAL

Voltage : 12 VDC
 Quantity : 2 nos.

SERIAL COMMUNICATION

Port-1 : RS-232 for serial printer
 Port-2 : RS 485 optically isolated, for host communication
 Protocol : MODBUS RTU
 Baud Rate : Programmable to 4800 / 38400 BPS

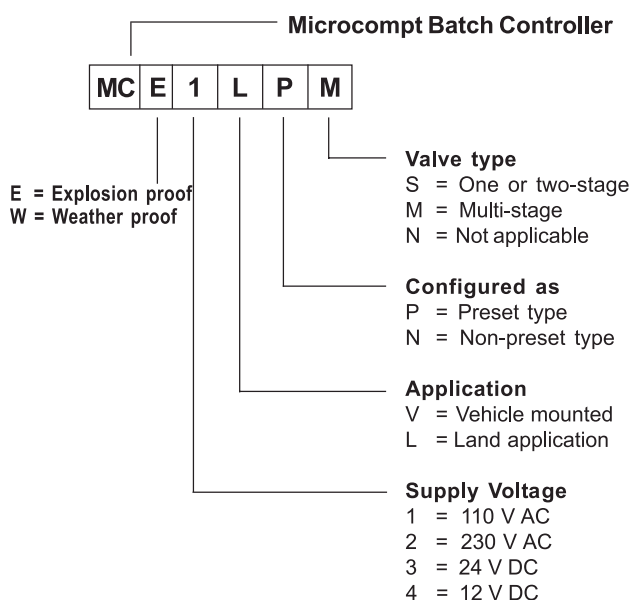
OUTPUTS

Type : Optical TTL output
Voltage : 12 VDC / 230 VAC
Current : 50 mA
Quantity : 4 nos.
Analogue : 4-20 mA (Flow rate)
Type : Potential-free
Voltage : 12 VDC / 24 VDC / 230 VAC
Quantity : 2 nos.

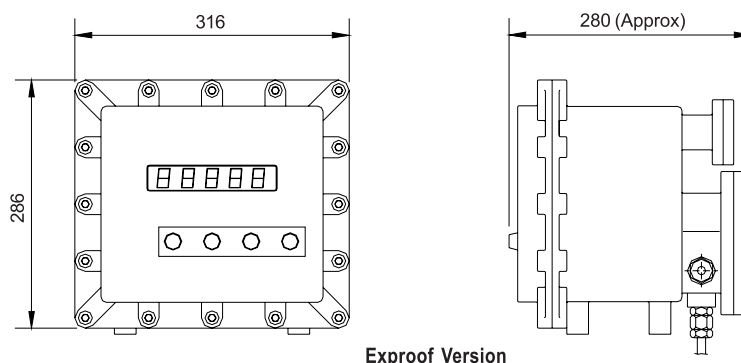
OPERATING ENVIRONMENT

Temperature : -20°C to +60°C
Humidity : 0 to 95% RH, non-condensing

MODEL DESIGNATION



OVERALL DIMENSIONS



Notes : ⌘ Cable Entry : 3/4" B.S.Con., 8 nos. ⌘ Cable Glands are not included in standard scope of supply.
⌘ Base Mounting : M12x12 deep, 4 nos.



- Specifications are subject to change without notice.
- All dimensions are in mm unless otherwise specified.

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