polymetron

pH/ORP transmitter
Model 9135

data sheet

Applications

- Drinking and waste water
- Industrial process control : chemical, petrochemical, pulp and paper, food and beverage, sugar, steel, surface treatment industries
- Pure and ultrapure water analysis : steam generation and electricity production, semiconductors , pharmaceuticals industries

Features

- Universal transmitter (2 high impedance inputs) : accepts combined and simple pH electrode, reference electrodes, antimony electrodes, ORP (redox) electrodes.

- Specific temperature compensation capabilities :
  - following Nernst equation
  - user–programmable coefficient
  - non–linear for ultrapure water
  - non–linear for process water

- Auto diagnostic of the measurement loop :
  checking of pH and reference electrode impedance.

- Several communication outputs available : 2 analog outputs, 4 relays, RS485 serial bus

- Integrated controller : frequency or pulse modes, bi-directional proportional function

- Large choice of calibration methods :
  - automatic determination of buffer solutions values
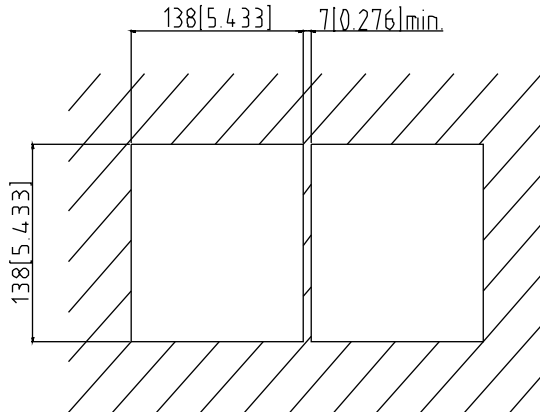 - manual set-up of process pH values, offset and slope specifications of the electrodes
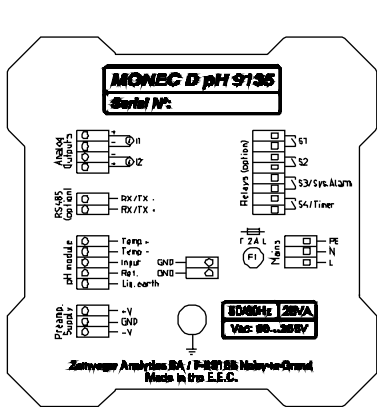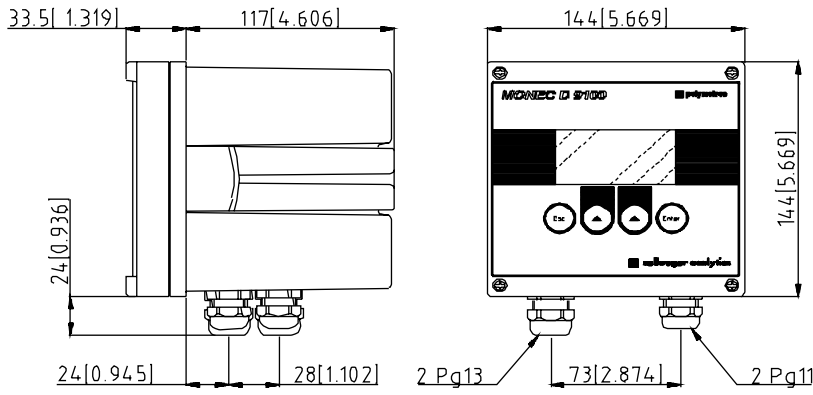
The pH and redox 9135 transmitter, a unique answer for all your needs.

- Mechanical strenght and easy mounting
  Polyester–coated metallic housing, NEMA 4X (IP65)
  Universal mounting bracket suitable for wall, panel or tube installation

- Clear graphic backlit display
  - Multi–lingual display: English, French, German, Italian, Spanish, Dutch
  - Numerous units available : pH, mV
  - simultaneous display of measure and associated temperature
  - display of relay limits and analog outputs

- Independent access levels (with separate entry codes) for calibration, programming and service

- Total galvanic isolation :
  - between sensors and transmitter
  - between micro-procesor and power supply, between other circuitry boards and analog outputs

- 2 "smart" analog outputs: 0/4–20 mA
  - linear, bilinear or logarithmic mode
  - simulation of the analog loop signal for testing purposes
  - programmable averaging for fast changing processes
  - bold capability of the 4-20 mA output for calibration, alarm, maintenance purpose

- Data retrieval for quality management
  - date and values of last calibration
  - self–diagnostic data
  - conformity certificate to specifications

- Options available :
  - SPDT relay board (part number 09125=A=4000)
  - relay 1: low or high setpoint, controller mode
  - relay 2: low or high setpoint, controller mode
  - relay 3: low or high setpoint or system alarm
  - relay 4: low or high setpoint or timer output
  relays outputs : 250 V AC, 3 A max., 100 V DC, 0,5 A max.

  - RS485 board: galvanically serial link isolated (part number 09125=A=1100)

  - Detailed test certificate (part number : 09135=T=0000)

- Transmitter

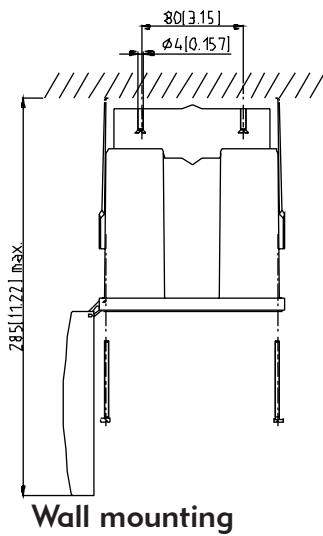| model	part number
220 V standard	09135=A=0000
with relay board	09135=A=0004
with RS485 board	09135=A=0011
with RS485 and relay board	09135=A=0015

These models also exist in 24 V.
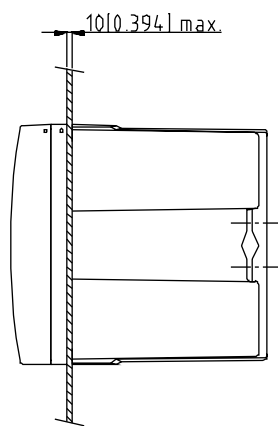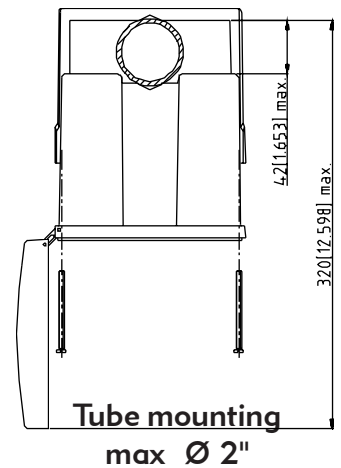
Dimensions in mm [inches] and connections

33.5 [1.319] 117 [4.606] 144 [5.669]

144 [5.669]

24 [0.936] 144 [5.669]

MONEC D 9100 polymetron

Esc Enter

zellweger analytics

24 [0.945] 28 [1.102]

2 Pg13 73 [2.874] 2 Pg11

MONEC D pH 9135

Serial N°:

Analog output

Q1
Q2

RS-485 (option)

RX/TX -
RX/TX +

pH module

Temp +
Temp -
Input
Ref.
Liq. earth

GND
GND

Preamp. supply

+V
GND
-V

Relays (option)

S1
S2
S3 / Sys.Alarm
S4 / Timer

F 2 A L

F1

Mains

PE
N
L

50/60Hz 28VA
Vac: 90...265V

Zellweger Analytics SA / P-85135 Noisy-le-Grand
Made in the E.E.C.

138 [5.433] 7 [0.276] min.

138 [5.433]

Panel cutout

Universal mounting

80 [3.15]
Ø4 [0.157]

285 [11.22] max.

10 [0.394] max.

42 [1.653] max.

320 [12.59] max.

Wall mounting

Panel mounting

Tube mounting
max Ø 2"

polymetron

a Hach Ultra Analytics solution

HACH ULTRA ANALYTICS

www.hachultra.com

Distributor

HUA_TE9135revE.pm6

CE

BVQi
ISO 9001

Specifications

Enclosure	
Conforms to European standards	EN 50081-1 & 50082-2 (EMC) EN-61010-1 (low voltage)
Protection	NEMA 4X IP65 certified
Material	aluminium and polyester–coated metallic housing stainless steel screws
Cable glands	2 x PG13 and 2 x PG11
Connections	2.5 mm^2 terminals with screws demountable terminals for the mains and relays
Net weight	2 kg (4.4 lbs)
Temperature	Stockroom : −20 to 70°C (4 to 158°F) Operating : −20 to 60°C (4 to 140°F)
Display	LCD Display 34 x 67.4 mm (1.3 x 2.7 in) 4 digits: 12 mm x 8 mm (0.5 x 0.3 in) central graphic zone, relays status indication (S1, S2, S3 , S4) double display : measure + temperature
Power supply	universal self–adapting : standard version : 100 to 240 VAC, +/- 10% 50/60 Hz low voltage version : 13 to 30 VAC, 50/60 Hz; 18 to 42 VDC consumption: 25 VA
Packaging	the transmitter is shipped in a cardboard box with instruction manual, 4 cable glands, screws for panel mounting and a quality certificate of conformity to specifications

Analysis

■ Specifications

	measuring range	resolution	repeatability
- temperature	-20 ... +200 °C	0,1°C	+/- 0,2 °C
- pH	0...14 pH	0,01 pH / 1mV	+/- 0,02 pH / +/- 1 mV
- redox	-1500... 1500 mV	1 mV	+/- 1 mV

■ Impedance set-up range :
- glass : 5Mohm ... 1 Gohm
- reference : 1 Kohm ... 1 Mohm

■ 2 analog outputs : 0 or 4-20 mA, freely programmable scale
- 1 fo pH or ORP (redox) and 1 for temperature or
- 2 for pH or ORP (redox)
true full galvanic insulation, 16 bits resolution, max load : 900 ohms