



AP-IHC MONITORING SYSTEM

McNab, Incorporated

A02-53B

DESCRIPTION

The AP-IHC is designed to provide an indication of a solution's conductance and with an appropriate signal/output module to provide control signal or alarm action. The maximum operation range of the system is 0-2,000,000 micromhos (linear) or 2,500 to 2,500,000 micromhos for percentage.

The AP-IHC system physically consists of two elements: The electronics case and a cell. The typical cell transmitter is not required.

The "Analyzer" contains the main circuit board, signal preamplifier, indicators and meter. The main circuit board hereafter referred to as the motherboard is mounted to the back wall of the case. This board contains the regulated power supply, the instrument fuse, an alarm circuit, and the interconnection terminal blocks. A second module, preamplifier, is mounted to this motherboard. A signal/output controller module is optional. The signal/output controller module provides signal or control output.

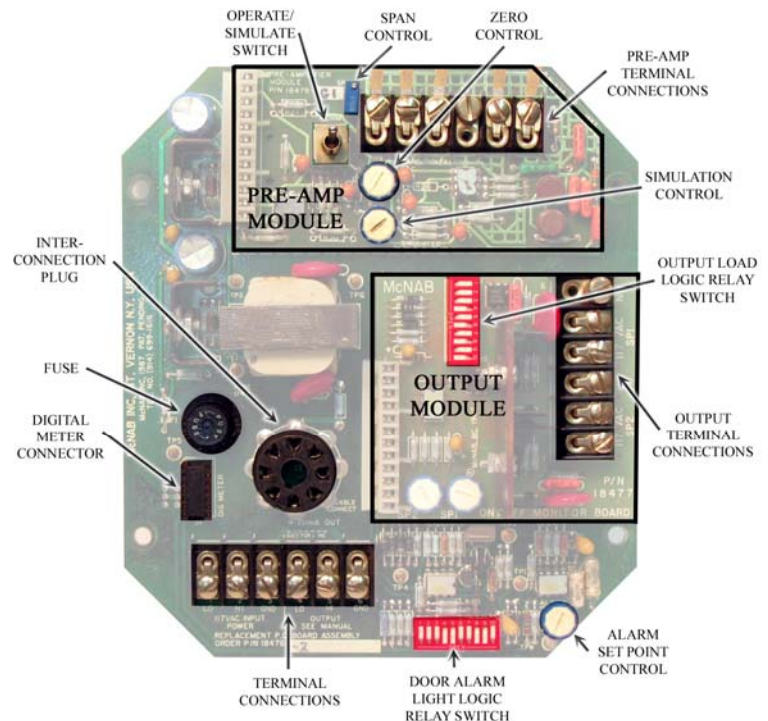
The remaining components of the AP-IHC Analyzer are the meter, the panel indicator lamps and the power switch all mounted on the swing-out door of the case assembly. Cables and connectors are provided to interconnect the motherboard with the front panel components and the preamplifier module with the cell.

The cabinet is a CRES NEMA 12 (or optional NEMA 4 or NEMA 4X) enclosure, and is designed for wall or pipe mounting. A gasket is provided between the door and cabinet. The door is secured by a hinge and a holding screw. Refer to drawing 18682. A female connector for the cell may be located on the case assembly bottom or the cell may be directly connected to the preamplifier terminal block (see cell drawing). Also on the bottom are conduit knockouts with 7/8-inch diameter access.

The cells used with the AP-IHC Analyzer system are either NPT type or valve insertion type (hot top valve).

Two cell styles are available. Style (1) are "screw-in" type, MC-41K, MC-61K (both with connector termination), and MC123K (with spade lug termination). Style (2) are the "valve insertion" type, MC-114 (for use with L family valves), or the MC-115G (for use with gate valves). Both "insertion" type cells have connector terminations. The "screw-in" type has on-inch NPT screw threads and mount into a tee or tank wall fitting. The "valve insertion" type cells are designed to insert coaxially into the McNab valves aforementioned. Do not have to dewater piping system.

In cases where the plant's high pressure requirements do not permit easy cell withdrawal for maintenance, or where short dead-time demands good full in-line sapling flows, a valve-inserted cell system, L-3p, should be used. This is known also as an linear injector cell assembly and hot tap valve. L-1 valve also has a mechanical interlock, which prevents extracting the cell until the L-3p valve is closed.



20 North MacQuesten Parkway ♦ Mount Vernon, New York ♦ 10504 U.S.A.
Phone: (914) 699-1616 ♦ Fax: (914) 699-1671
info@themcnab.com ♦ www.themcnab.com



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Application engineering drawings are included with cells and should be attached to the manual. It is possible that conflicts between text, drawings and illustrations may exist. If this occurs, the drawings take precedent, followed by the text, then illustrations.

SPECIAL FEATURES

- Unit is available in both semi-log and linear meter presentations
- By the unique circuit, the concentration range (2,000,000 μmho) is extended far beyond typical conductivity meters
- Available with the MC-114 cell and L-3p valve, so as to be able to insert the cell against pipe pressure
- Available in various scales; ppm, TDS, μmho , sea salt; etc.

TECHNICAL DATA

Ranges Available	0 – 20,000 ,micromho 0 – 200,000 micromho 0 – 2,000,000 micromho
Controller	Internal control adjusts set point, which is displayed on meter during adjustment procedure.
Relay	
Remote Output	0 – 1 mA for remote meter or data logger
Power Requirements	120 or 240 VAC, 50/60 Hz
Mounting Style	Wall (semi-flush with optional kit) rear mounting holes
Panel	21 (H) x 18.5 (W) x 14.2 (D) cm (18.25 x 7.25 x 5.6") Cabinet, stainless steel
Weight	2.75 kg (6 lbs.) panel only
Options	Semi-flush mounting kit [PN 18479] Cell test module used for verification of correct operation Drip shield [PN 18241] 100 ft. cell cable [PN 22063-1001] Cable strain relief [39131-7]
Cell Cable Length	See cell drawing
Maximum Cell Pressure	As per cell
Cell Material	Conductivity: _____ Salinity: _____ Plastic body, noble metal electrodes (typ)
Maximum Cell Temperature	Conductivity: _____ Salinity: _____ As per cell
Diameter of Cell	1" NPT Conductivity, see Salinity cell drawing
Instruction Book	PN 535



MC-41K
1" NPT PENTON

TYPICAL CELLS



MC-114 (Valve Not Shown)

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