

Panel-Mounted Pneumatic Instruments (Indicating Controllers)

130 Series Pneumatic CONSOTROL Auto Selector Control System

130 AUTO-SELECTOR



- **One Final Actuator**
 - To prevent any of several process measurements from exceeding their set points
- **Continuous Measurement**
 - Variables are measured and control is transferred to the one that is tending to exceed its limit
- **Auto/Manual Switch**
 - Smooth transfer by means of a single 2-position switch
 - Balanceless, bumpless
- **A Complete System Consists of:**
 - One 130MS (local set) or 130FS (local/remote set) controller with manual transfer unit
 - One or more 130MA (local set) or 130FA (local/remote set) controllers without manual units
 - Rack-mounted high or low selector relays
 - A rack-mounted seal valve

The 130 Series Pneumatic CONSOTROL Auto-Selector Control System controls two or more related variables within preset limits.

For complete specifications, refer to General Specification Sheet GS 2B-4H 1 D.

Functional Specifications

Supply Pressure:

140 to 150 kPa or 20 to 22 psi.

Input/Output Signal:

20 to 100 kPa or 3 to 15 psi, as specified.

Mode Adjustment Limits:

Proportional Band: 5 and 500%.

Integral Action:

0.01 and 50 minutes per repeat.

Derivative Action:

0.01 and 50 minutes.

Ambient Temperature Limits:

-20 and +65°C (0 and 150°F).

Control Action Reversal:

The control action is reversed by a 90 degree rotation of the reversing switch.

Auto/Manual Transfer Unit:

A 2-position switch lever located on the front of the manual unit is used to switch directly from automatic to manual and from manual to automatic without bumping the process.

Performance Specifications

Accuracy:

Measurement and Set Point Indicators: $\pm 0.5\%$ of calibrated span.

Output Indicator: $\pm 2\%$ of calibrated span.

Repeatability:

Measurement and Set Point Indicators: Better than 0.25% of calibrated span.

Dead Band:

Automatic Control Unit: Less than 0.1% of calibrated span.

Measurement and Set Point Indicators: Less than 0.1% of calibrated span.

Alignment Error:

Automatic Control Unit: Less than 0.5% of calibrated span.

Physical Specifications

Mounting:

These controllers are designed for flush mounting in vertical panels 3 to 25 mm (0.13 to 1 in) thick using 102 or 101 Series Shelves.

Each controller requires 1 unit of shelf capacity. They may be calibrated for mounting in a panel, inclined up to 75 degrees from vertical, with the rear of the instrument lower than the front.

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Physical Specifications (continued)

Connections:

Separate electric and pneumatic connectors are located on the rear of the chassis in accordance with the standard arrangement for 101, 102 Series Shelves..

Nameplate:

White translucent plastic with 2.5 mm (0.1 in) high black letters. There can be a maximum of 2 lines with 17 characters or spaces per line.

Pointers:

Measurement: Red.

Manual Set (130M Series) and Remote Set (130F Series): Black on white.

Local Set (130F Series): Black.

Output: Red.

Scales:

Vertical Scale: Removable, transparent plastic with black markings; 100 divisions, scaled as specified.

Output:

Black markings on a white background; 20 divisions from 0 to 100% output signal. The red pointer continuously indicates automatic or manual output. Refer to Chart and Dial Catalog 600.

Nominal Dimensions (including manual unit):

205 mm high x 70 mm wide x 555 mm deep (8.2 in high x 2.8 in wide x 21.8 in deep).

Selector Relays and Volume Booster:

A low selector relay is required for each controller in a "LOW" Auto-Selector System. A "HIGH" selector system requires one less high selector relay than the number of controllers and one low selector relay used as a volume booster in the system output. Specify High Selector, Part No. B0114YL or Low Selector, Part No. B0114BZ.

Seal Valve:

One pneumatically actuated seal valve is required per Auto-Selector System. Specify Part No. C0138RM.

Optional Features

"Batch" Controller:

High "Batch" feature available only for controllers used in "LOW" Auto-Selector Systems. Add Suffix -B to Model Number.

Alarm Actuators and Alarm Lamps:

Refer to Page 72.

How to Order

1) SPECIFY MODEL NUMBER:

Controller:

with Manually Positioned Set Point.....	130M
with Remote/Local Set Point.....	130F

Auto-Selector:

without Manual Transfer Unit	A
with Manual Transfer Unit	S

Control Function:

Proportional plus integral	N4
Proportional plus integral plus derivative.....	N5

2) SPECIFY INPUT/OUTPUT SIGNAL _____

3) SPECIFY SET POINT AND MEASUREMENT SCALE—REFER TO CHART AND DIAL CATALOG 600 _____

4) SPECIFY SELECTOR RELAYS AND SEAL VALVE _____

5) SPECIFY MOUNTING EQUIPMENT—102 OR 101 SERIES SHELVES _____

6) SPECIFY OPTIONAL FEATURES _____

7) SPECIFY INFORMATION FOR NAMEPLATE AND INSTRUMENT TAG _____