## Miniature Multipoint Level Switches

## for Liquids



## NCM



- Wide Variety of Material Combinations
- Maximum Pressure: 400 PSIG (SS)
- Stem Lengths up to 48"
- Up to Four Switches Possible
- User-Specified Switch Locations

Miniature Multipoint Level Switches Model NCM

## Description

KOBOLD NCM multipoint float level switches are designed to meet a wide range of applications. They use a hermetically sealed reed contact actuated by a magnet in the float. As the float rises and falls, the magnetic field causes the switch inside the stem to open or close. These custom-manufactured units are available in lengths up to 48 inches with up to four control points in user specified locations.

## Technical Specifications

| Max. Stem Length: | 48" |
| :---: | :---: |
| Stem / Fitting Material: | Brass or 316 SS |
| Float Stop Materials |  |
| Brass Units: | Brass |
| SS Units: | 316 SS |
| Electrical Details: | SPST, 100 VA |
| Lead Wires: | 22 AWG, 24" for 1 or 2 Switch Points |
|  | 24 AWG, 24"for 3 Switch Points |
|  | 26 AWG, 24" for 4 Switch Points |
| Float Material: | NBR, SS, or Polypropylene |
| Max. Pressure |  |
| NBR, Polypropylene: | 150 PSIG |
| Stainless Steel: | 270 or 400 PSIG |
| Operating Temperature |  |
| NBR in Oil: | -40... $225^{\circ} \mathrm{F}$ |
| NBR in Water: | -40... $180{ }^{\circ} \mathrm{F}$ |
| Stainless Steel: | -40... $300^{\circ} \mathrm{F}$ |
| Polypropylene: | -40... $150{ }^{\circ} \mathrm{F}$ |
| Minimum S.G. of Media |  |
| Type 1 Float: | 0.70 |
| Type 2 Float: | 0.47 |
| Type 3 Float: | 0.60 |
| Type 4 Float: | 0.92 |
| Type 5 Float: | 0.65 |

## Fitting Options

| Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | Type 6 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \square \\ & \square \\ & \square \\ & \square \end{aligned}$ |  |
| 1/8" NPT | 1/4" NPT | 1" NPT | 3/4" NPT | 5/16" <br> Tubing | 1/2" NPT |



NCM: Miniature Multipoint Level Switches

- Lengths up to 48"
- Up to Four Switches
- Float Choices of NBR, SS, or Polypropylene
- Stem Choices of 316 SS or Brass


## Float Options



NCM Order Details: (Example: NCM-3132N)

| Model | Fitting Type | Fitting / Stem Material | Number of Switch Levels | Float Type and Material | Options |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NCM- |  | $\begin{aligned} & . .1 . .=\text { Brass / Brass } \\ & \text {..2.. }=\text { SS / SS } \end{aligned}$ | ..1.. = 1 Switch Level <br> ..2.. $=2$ Switch Levels <br> ..3.. $=3$ Switch Levels <br> ..4.. $=4$ Switch Levels |  | ..N = Alum. Junction Box (NEMA 4) <br> (Fitting Types 3 and 4) <br> ..NT = Alum. Junction Box with Terminal Strip (NEMA 4) <br> (Fitting Types 3 and 4) |

## NCM Order Details: Other Considerations

Please Provide:

- Full Part Number Using the 'Order Details' Table
- Completed 'Actuation Point Locations and Logic' Table Below
- Completed 'Application Information' Table Below



## Switch Geometry

A $=3 / 4^{\prime \prime}$ minimum distance to highest level
$B=1-3 / 4^{\prime \prime}$ minimum distance between levels
$C=1 "$ minimum distance from the end of the unit to the lowest level, except float type 4 \& 5 which requires a $2^{\prime \prime}$ minimum.

Please Note:

- Switch Operation Assumes Float is Dry (Empty Tank)
- Standard Lead Wires are 24" with 22, 24, or 26 AWG

| Application Information |  |  |
| :--- | :--- | :--- |
| Process Liquid: |  |  |
| Name: ___ |  |  |
| Temperature: |  |  |
| Min: $\quad$ Operating:___ Max: |  |  |
| Pressure: | Operating: $\quad$ Max: |  |


| Actuation Point Location and Logic |  |  |
| :---: | :---: | :---: |
| Distance <br> (Minimum of 1-3/4" Between Levels) | SPST Switch Operation |  |
| LO: | L0 $=\mathrm{L} 1+1^{\prime \prime}$ for float type 1,2 , or 3 <br> L1 + 2" for float type 4 or 5 |  |
|  | $\square$ N/O Dry | $\square \mathrm{N} / \mathrm{C}$ Dry |
| L2: | $\square$ N/O Dry | $\square \mathrm{N} / \mathrm{C}$ Dry |
|  | $\square$ N/O Dry | N/C Dry |
| L4: | $\square$ N/O Dry | $\square$ N/C Dry |

