Orange Research 140 Cascade Boulevard, Milford, Connecticut 06460

140 Cascade Boulevard, Milford, Connecticut 06460 203 877-5657 800 989-5657 Fax: 203 783-9546 www.orangeresearch.com

Product specifications for model 1020

Product Specifications

| sensor type | diaphragm | |
|------------------------------|---|--|
| functions | indicator, indicator/switch, switch | |
| min. break pt./set pt. | 0-25" H ₂ O | |
| max. range break pt./set pt. | 0-30 psid | |
| max. line pressure | 1000 psig | |
| min. burst pressure | 4000 psig | |
| standard maximum | indicator: 200°F | |
| temperature | indicator/switch, switch: 176°F | |
| high temp. construction | N/A | |
| minimum temperature | -20°F | |
| calibration accuracy* | ±5% of standard calibration point** ascending after rap at room temperature | |
| | *Calibration accuracy is affected by temperature. | |
| | **Standard calibration point is the highest calibrated point or 70% of full scale, whichever is larger. | |
| repeatability | ±2% of standard calibration point | |
| switches | 1 or 2 external hermetically sealed reed switches | |
| switch adjustability | factory set (upper 80% of standard calibration point ascending, or lower 80% of | |
| | standard calibration point descending) | |
| switch dead band | 5-20% full scale | |
| certification | CE | |

Standard configuration options

| configuration | unless otherwise specified | standard options available |
|--------------------------|--|--|
| porting size | 1/8" NPT | N/A |
| porting orientation | (must be specified) | in-line, back, or bottom |
| direction of pressure | left to right | right to left (upside-down orientation with arc on bottom) |
| calibration medium | air | N/A |
| switches | (must be specified) | -A SPST N/O (120VAC,0.7A,70VA;200VDC,1.0A,50W) -B SPST N/C (120VAC,0.25A,5VA;175VDC,0.25A,5W) -C SPDT (120VAC,0.25A,5VA;175VDC,0.25A,5W) |
| switch setting | set at break point ascending | other set points within adjustability ascending or descending |
| primary wetted parts | aluminum | N/A |
| secondary wetted parts | range spring: 302SS magnet: ceramic | |
| static seals | buna-N | Viton, fluorosilicone, neoprene, EPDM |
| diaphragm | buna-N | Viton, fluorosilicone, neoprene, EPDM, silicone |
| dial sizes & case styles | (must be specified) | 1" with molded lens, 2.5" with bezel case |
| lens | 1" dial: molded plastic 2.5" dial: glass | plastic lens available for 2.5" dial size |
| dial markings | colored arc, green to red (single break point) | 2.5" dials only: quantity dial (E, ½, ½, ¾, F) dual break points |
| break point on dial | 70% of full scale | N/A |
| starting mark on dial | 1/4 of full scale for quantity dials | N/A |

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Product specifications for model 1020

Product Specifications, (with -T3 transmitter)

| sensor type | diaphragm | |
|-----------------------|---|--|
| functions | indicator/transmitter, transmitter | |
| min. range | 0-25" H ₂ O | |
| max. range | 0-10 psid | |
| max. line pressure | 1000 psig | |
| standard maximum | 176°F (80°C) | |
| temperature | | |
| high temperature | N/A | |
| construction | | |
| minimum temperature | 0°F (-18°C) | |
| calibration accuracy* | ±10% of full scale ascending after rap at room temperature | |
| | *Calibration accuracy is compensated for temperature effects between 0°F and 176°F. | |
| | *Descending calibration available upon request. | |
| repeatability | ±2% of full scale | |
| transmitter enclosure | IP65, NEMA 4X | |
| certification | None | |

Standard configuration options, (with -T3 transmitter)

| configuration | unless otherwise specified | standard options available |
|------------------------|--|---|
| porting size | 1/8" NPT | N/A |
| porting orientation | (must be specified) | in-line, back, or bottom |
| direction of pressure | left to right | N/A |
| calibration medium | air | N/A |
| electronic output | 4-20 mA (2 wire) | N/A |
| supply voltage | 9-28 VDC (reverse polarity protected) | |
| electrical connection | EN 175301-803 (DIN 43650) Form "C" (8 mm), 3-pin appliance connector. Mating | |
| | connector included. | |
| connector pin-out | 1: + (EXC) 2: - | |
| primary wetted parts | aluminum | N/A |
| secondary wetted parts | range spring: 302SS | N/A |
| | magnet: ceramic | |
| static seals | buna-N | Viton, fluorosilicone, EPDM |
| diaphragm | buna-N | Viton, fluorosilicone, EPDM |
| dial sizes | 1" | N/A |
| lens | molded plastic | N/A |
| dial markings | green to red (red 70% to 100% of dial | level applications: yellow to green (yellow 0-30% |
| | arc) | of dial arc) |
| | level applications: red to green (red 0- | |
| | 30% of dial arc) | |

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Product specifications for model 1020

Product Specifications, (with -T5 or -T6 transmitter)

| sensor type | diaphragm |
|------------------------|--|
| functions | transmitter |
| std. ranges | 30" H ₂ O, 60" H ₂ O, 80" H ₂ O, 110" H ₂ O, 160" H ₂ O, others available up to 600" H ₂ O |
| max. line pressure | 1000 psig |
| std. max. temperature | 80°C (176°F) |
| minimum temperature | -15°C (5°F) |
| calibration accuracy | ±5% of range, descending after rap Accuracy is guaranteed over the rangeability of the instrument (top 90% of full scale) |
| repeatability | ±2% of full scale |
| porting size | 1/8" NPT |
| porting orientation | in-line in-line |
| calibration medium | air |
| primary wetted parts | aluminum |
| secondary wetted parts | range spring: 302SS magnet: SmCo |
| transmitter enclosure | IP65, NEMA 4X |
| certification | none |

Standard configuration options, (with -T5 transmitter)

| configuration | unless otherwise specified | standard options available | |
|-----------------------|---|----------------------------|--|
| electronic outputs | 0.5 to 4.5 VDC (3 wire) | | |
| supply voltage | 5 VDC ± 5% | | |
| electrical connection | Molex receptacle 50-57-9404 (can be modified for 24 AWG flying leads) Molex mating connector 70545-0038 included. | | |
| | -Consult factory for alternative connected | | |
| power-up time | 500 ms max. | | |
| power consumption | 250 mW max. | | |
| connector pin-out | 1: gnd (black) 2: out (white) 3: +5V input (red) 4: shield | | |
| output load | resistive: 2 KOhm, minimum capacitive: 1000 pF, maximum | | |
| static seals | buna-N | Viton | |
| diaphragm | buna-N | Viton | |

Standard configuration options, (with -T6 transmitter)

| configuration | unless otherwise specified | standard options available |
|-----------------------|---|----------------------------|
| electronic outputs | 4-20 mA (2 wire) | |
| supply voltage | 15-28 VDC (24 VDC nominal) | |
| electrical connection | Molex receptacle 50-57-9404 (can be modified for 24 AWG flying leads) | |
| | Molex mating connector 70545-0038 included. | |
| | -Consult factory for alternative connectors | |
| power-up time | 500 ms max. | |
| loop resistance | 800 ohms max., 250 ohms (typ.) at 24 VDC, 150 ohms min. | |
| connector pin-out | 1: return (black) 2: N/C (white) 3: +24 VDC in (red) 4: shield | |
| static seals | buna-N | Viton |
| diaphragm | buna-N | Viton |