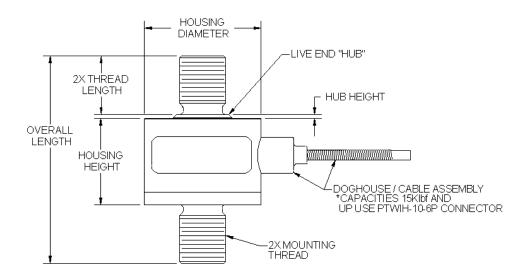


# MODEL WMCP, WMC (CAPACITIES 500gf thru 50Klbf) INSTALLATION INFORMATION

# PHYSICAL DESCRIPTION



## WMCP SERIES / WMC SERIES INSTALLATION TORQUE

| WINO CERTE OF WINO CERTED INCTACE ATTOM TORQUE |         |                  |              |               |                  |  |  |  |
|--|---------|------------------|--------------|---------------|------------------|--|--|--|
|  |         | MODEL / CAPACITY |              |               |                  |  |  |  |
|  |         | WMCP SERIES      | WMC SERIES   |               |                  |  |  |  |
|  | lbf     |                  | 5,10         | 25, 50, 100   | 250, 500, 1000   |  |  |  |
| CAPACITY                                       | gf      | 500, 1000        |              |               |                  |  |  |  |
|  | Ν       |                  | 22, 45       | 110, 220, 450 | 1100, 2200, 4500 |  |  |  |
| HOUSING DIAMETER                               | in (mm) | 1.00 (25.4)      | 0.75 (19.1)  | 1.00 (25.4)   | 1.00 (25.4)      |  |  |  |
| OVERALL LENGTH                                 | in (mm) | 1.36 (34.5)      | 1.01 (25.7)  | 1.05 (26.7)   | 1.32 (33.5)      |  |  |  |
| HOUSING HEIGHT                                 | in (mm) | 0.75 (19.1)      | 0.45 (11.4)  | 0.52 (13.2)   | 0.53 (13.4)      |  |  |  |
| HUB HEIGHT                                     | in (mm) | 0.11 (2.8)       | 0.06 (1.5)   | 0.03 (0.8)    | 0.03 (0.8)       |  |  |  |
| HUB DIAMETER                                   | in (mm) | 0.37 (9.4)       | 0.31 (7.9)   | 0.37 (9.4)    | 0.34 (8.6)       |  |  |  |
| MOUNTING THREAD                                |         | #6-32 UNC-3A     | #6-32 UNC-3A | #10-32 UNC-3A | 0.250-28 UNF-3A  |  |  |  |
| THREAD LENGTH                                  | in (mm) | 0.25 (6.4)       | 0.25 (6.4)   | 0.25 (6.4)    | 0.38 (9.7)       |  |  |  |
| MAX RECOMMENDED                                | in-lb   | 15               | 10           | 40            | 100              |  |  |  |
| SEATING TORQUE                                 | Nm      | 1.7              | 1.1          | 4.5           | 11               |  |  |  |

## WMCP SERIES / WMC SERIES INSTALLATION TORQUE (CONTINUED)

|                  |                | MODEL / CAPACITY |                 |                         |                    |  |  |
|------------------|----------------|------------------|-----------------|-------------------------|--------------------|--|--|
|                  |                | WMC SERIES       |                 |                         |                    |  |  |
|                  | lbf            | 2000, 3000       | 5000            | 7500, 10K               | 15K, 20K, 30K, 50K |  |  |
| CAPACITY         | gf             |                  |                 |                         |                    |  |  |
|                  | Ν              | 9K, 13K          | 22K             | 33K, 45K                |                    |  |  |
| HOUSING DIAMETER | in (mm)        | 1.00 (25.4)      | 1.25 (31.8)     | 1.38 (34.9)             | 2.50 (63.5)        |  |  |
| OVERALL LENGTH   | in (mm)        | 1.75 (44.5)      | 2.23 (56.6)     | 2.88 (73.2)             | 6.50 (165.1)       |  |  |
| HOUSING HEIGHT   | in (mm)        | 0.72 (18.3)      | 0.94 (23.9)     | 1.09 (27.7)             | 2.47 (62.7)        |  |  |
| HUB HEIGHT       | HEIGHT in (mm) |                  | 0.03 (0.8)      | 0.03 (0.8)              | 0.03 (0.8)         |  |  |
| HUB DIAMETER     | in (mm)        | 0.45 (11.5)      | 0.58 (14.7)     | 0.88 (22.3)             | 1.68 (42.7)        |  |  |
| MOUNTING THREAD  |                | 0.375-24 UNF-3A  | 0.500-20 UNF-3A | 0.750-16 UNF-3A         | 1.500-12 UNF-2A    |  |  |
| THREAD LENGTH    | in (mm)        | 0.50 (12.7)      | 0.63 (16.0)     | 0.63 (16.0) 0.88 (22.4) |                    |  |  |
| MAX RECOMMENDED  | in-lb          | 400              | 400             | 400                     | 5000               |  |  |
| SEATING TORQUE   | Nm             | 45               | 45              | 45                      | 565                |  |  |

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### MECHANICAL INSTALLATION NOTES

- 1. Installation must provide each mounting thread at least one thread diameter amount of engagement. Additional thread engagement is always more desirable.
- 2. Mating hardware does not have to be jammed against either the load cell hub or base end for proper performance.
- 3. If mating hardware is jammed against either the load cell hub or base end, adhere to the maximum recommended seating torque values listed in the above tables. For lower capacities up through 100lbf, the base end of the housing can be safely clamped with modest holding force for reacting torque at the live end and preventing rotation of the housing. Utilize pads or soft jaws to prevent marring of the body. Wrench flats are not provided.
- 4. For thread jamming mating hardware onto capacities of 250lbf and above, it is recommended that a tension preload be applied to the fully engaged mating assembly prior to applying a modest cinching torque to fully seat the mating components. Consult "Torque Versus Clamping Load" tables or formulae with the appropriate material-based friction coefficient for comparing the preload to the maximum recommended seating torque in the above tables. Do not exceed the maximum safe axial load listed in the specifications for the load cell. Upon release of the tension preload, a residual clamping load will remain in the mated interfaces. Reapply the same tension preload prior to un-jamming the hardware for disassembly and removal.
- 5. Never use the cable, doghouse assembly or connector for reacting against installation or disassembly torques.
- 6. Jam nuts or equivalent may be employed provided that a full thread diameter of engagement is accommodated in each and every component as described in Note 1.
- 7. With the base end of the load cell on the "fixed" side of the load string, the force to be measured should be applied to the active end of the cell to eliminate possible errors due to cable motion and interaction.

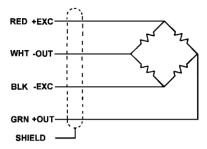
### **ELECTRICAL INFORMATION**

1. WMCP and WMC models from low capacities up through 10Klbf possess a 4-conductor shielded Teflon® cable (AWG 30), 5 feet (1.5m) long. Wiring Color Code complies with ISA S37.8 ASpecifications and Tests for Strain

Gage Force Transducers@ and WMC Load Cell Terminology.

2. The following provides the connector pinouts for standard WMC model load cells for capacities of 15Klbf through 50Klbf. Connector type: PTWIH-10-6P

| PIN | FUNCTION     |
|-----|--------------|
| Α   | + EXCITATION |
| В   | + SENSE      |
| С   | - EXCITATION |
| D   | - SENSE      |
| E   | - SIGNAL     |
| F   | + SIGNAL     |



**TENSION UPSCALE** 

CONNECTOR PINOUT

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| Capacity  | 500gf       | 1000gf    | 5lbf        | 10lbf | 25-500lbt | 1000lbf | 2K-10Klbf | 15K-50Klbf |
|---|-------------|-----------|-------------|-------|-----------|---------|-----------|------------|
| Rated Output, Nom. (mV/V)                         |             | 1.50      | 2.00        |       |           |         |           |            |
| Input Resistance (Ohms)                           | 350 ± 3.5   |           |             |       |           |         |           |            |
| Output Resistance (Ohms)                          | 350 ± 3.5   |           |             |       |           |         |           |            |
| Recommended Excitation (VDC)                      |             | 5         |             |       |           | 10      |           |            |
| Non-Linearity, Max. (% Rated Output)              |             | 0.15      |             |       |           | C       | ).20      | 0.10       |
| Hysteresis, Max. (% Rated Output)                 |             | 0.15 0.20 |             |       |           |         | 0.10      |            |
| Temp. Range Compensated                           | 50 - 150 °F |           | 15 - 115 °F |       |           |         |           |            |
| Temp. Effect on Zero, Max. (% Rated Output/100°F) | 2.00        | 1.00      | 0.50        |       |           | 0.25    |           |            |

WARRANTY & CERTIFICATION STATEMENT ON OTHER SIDE