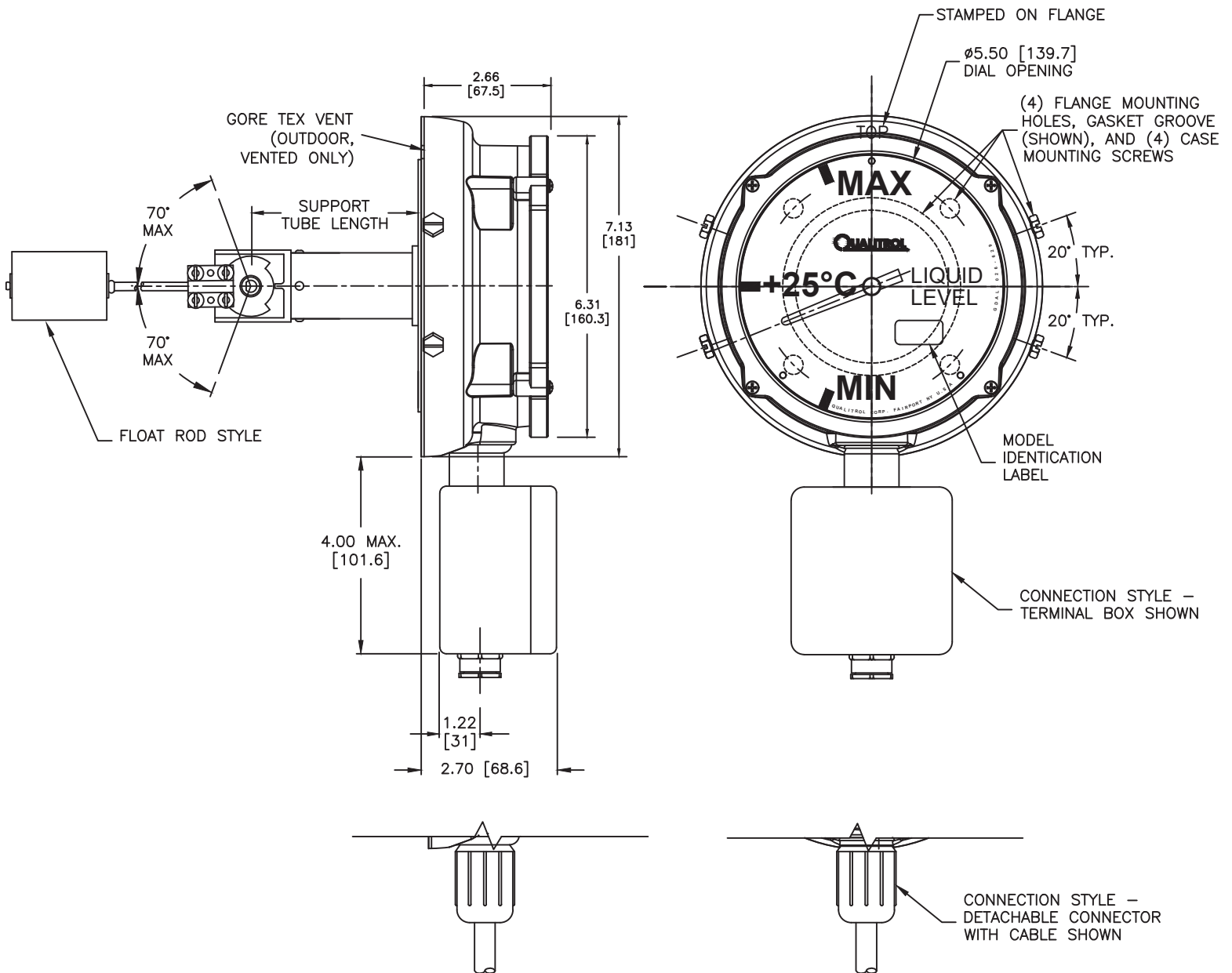


Product Information

6" Gear Drive Liquid Level Gauge General

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Information subject to change without notice.



NOTES: (UNLESS OTHERWISE SPECIFIED)

1. DIMENSIONS ARE FOR REFERENCE AND SHOWN IN INCHES [MILLIMETERS].
2. APPLICATION/FLOAT ROD, FLANGE CONSTRUCTION, SUPPORT TUBE LENGTH, BEZEL, CONNECTION, AND FLANGE MOUNTING OPTIONS ARE SPECIFIED ON ORDER.
3. STANDARD FINISH: ASA #70 LT GRAY C5M PER ISO 12944 (>15YRS).
4. CASE: ALUMINIUM
5. BEZEL: ALUMINIUM
6. INSULATION TEST: 2000 VOLTS TO GROUND FOR 60 SECONDS.
7. SWITCH RATING:
 - 10A @ 125, 250, 480 VAC
 - 1/2A @ 125 VDC - NON INDUCTIVE
 - 1/4A @ 250 VDC - NON INDUCTIVE

Product Information

6" Gear Drive Liquid Level Gauge

Option Sheet Part 1 of 2

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Specify

<input type="checkbox"/> Case Assembly only
<input type="checkbox"/> Flange Assembly only
<input type="checkbox"/> Float Rod only
<input type="checkbox"/> LLG complete

Environment Conditions

<input type="checkbox"/> Outdoor, Vented (IP55, T/B) (IP65, Connectors)
<input type="checkbox"/> Outdoor, Sealed (IP65)
<input type="checkbox"/> Low Temp, Polar (IP65)

Switch Rating

<input type="checkbox"/> STD	10 Amp @ 125/250 VAC w/ 2K Hi-Pot
<input type="checkbox"/> GOLD	0.10 Amp @ 125 VAC w/ 2K Hi-Pot

Number of Switches

<input type="checkbox"/> None	Switch #1		
<input type="checkbox"/> 1		Switch #2	
<input type="checkbox"/> 2			Switch #3
<input type="checkbox"/> 3			

Switch Settings

Specify settings at either Dimension 'A', 'B', 'C', or 'D' (see note 3,4 refer to option sheet part 2)

Dial Style

(refer to sheet 4)

Side Reading	<input type="checkbox"/> MAXMIN25 (Max, Min, and 25°C)
	<input type="checkbox"/> MAXMIN20 (Max, Min, and 20°C)
	<input type="checkbox"/> HILO25 (High, Lo, and 25°C)
	<input type="checkbox"/> ALBA25 (Alto, Bajo, and 25°C)
	<input type="checkbox"/> CUSTOM (consult factory)
*Top Reading	<input type="checkbox"/> MAXMIN25 (Max, Min, and 25°C)
	<input type="checkbox"/> HILO25 (High, Lo, and 25°C)
	<input type="checkbox"/> MAXMIN20 (Max, Min, and 20°C)
	<input type="checkbox"/> ALBA25 (Alto, Bajo, and 25°C)
	<input type="checkbox"/> CUSTOM/T (consult factory)

*for pointer travel > 180°

Dial Color

<input type="checkbox"/> White Characters / Black Background
<input type="checkbox"/> Yellow Characters / Black Background

Connection Styles

(refer to device wiring & connector styles)

<input type="checkbox"/> Qualitrol (detachable)
<input type="checkbox"/> ANSI (detachable)
<input type="checkbox"/> Perm. Attached
<input type="checkbox"/> Terminal Box (requires Outdoor, Vented and 6 o'clock connector orientation)
<input type="checkbox"/> Military
<input type="checkbox"/> None

Device Wiring

(refer to device wiring & connector styles)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

Connector Nut Style

(refer to device wiring & connector styles)

<input type="checkbox"/>

External Wiring

(refer to device wiring & connector styles)

<input type="checkbox"/> Cable	<input type="checkbox"/> 16 Ga. SOW-A/SO (Std.)
	<input type="checkbox"/> Other (consult factory)
<input type="checkbox"/> Flying Leads	<input type="checkbox"/> 16 Ga. TEW (Std.)
	<input type="checkbox"/> 16 Ga. TEF
	<input type="checkbox"/> 14 Ga. TEW
<input type="checkbox"/> None	
<input type="checkbox"/> Connector Parts Only	

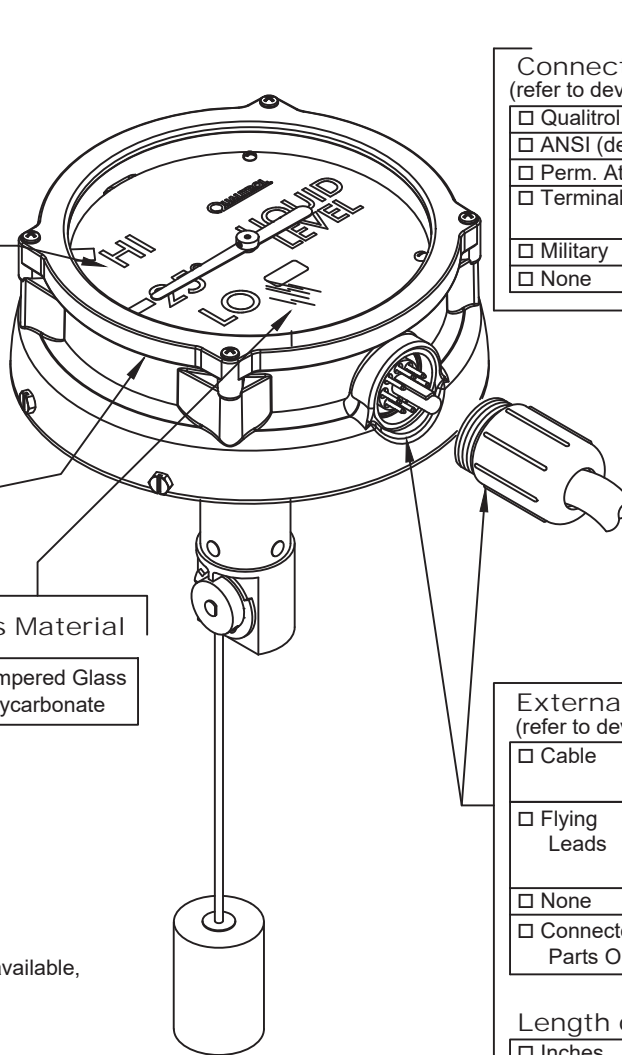
Length of Cable or Flying Leads

<input type="checkbox"/> Inches	<input type="checkbox"/> Meters
Specify 6" increments	Can be specified to 0.1 m
Length	

Connector Orientation

<input type="checkbox"/> At 3 o'clock (requires Outdoor, Sealed)
<input type="checkbox"/> At 6 o'clock (std.)

Note: Case mounting holes remain at 3 o'clock and 9 o'clock regardless of connector orientation.



Bezel Type

<input checked="" type="checkbox"/> Standard Removable (requires Indoor/Outdoor)
--

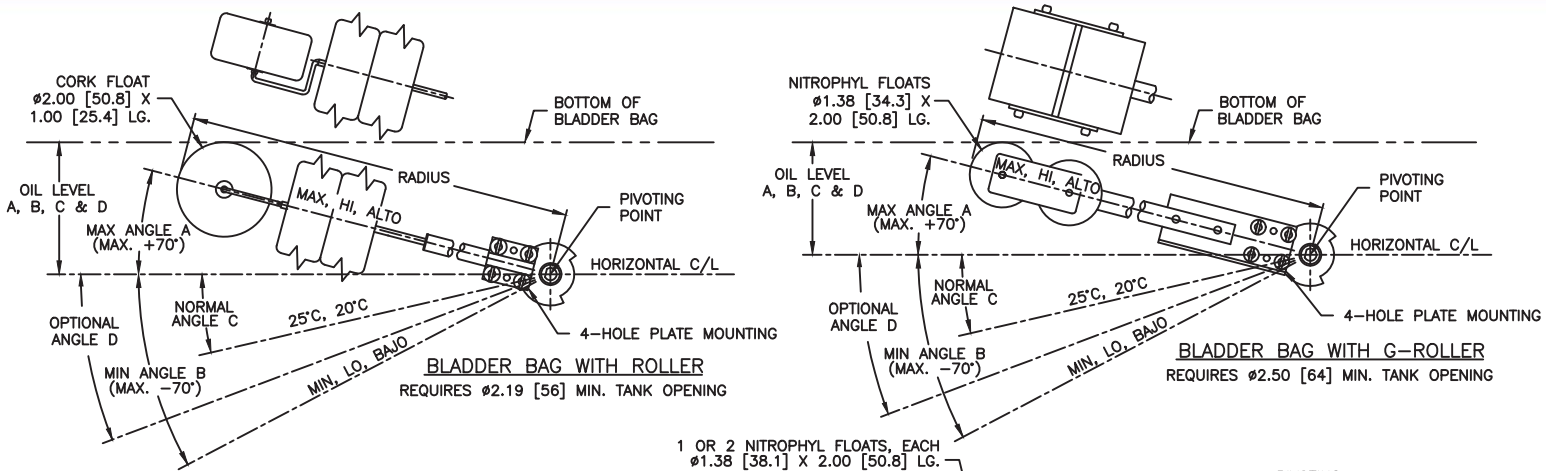
Lens Material

<input type="checkbox"/> Tempered Glass
<input type="checkbox"/> Polycarbonate

Note: Not all option combinations are available, please consult factory.

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. DIMENSIONS ARE FOR REFERENCE AND SHOWN IN INCHES [MILLIMETERS].
2. SWITCH REMAINS ACTUATED FOR APPROXIMATELY 90 DIAL DEGREES AFTER OPERATING.
3. SWITCHES OPERATE ON FALLING LEVEL FOR B, C, AND D AND ON RISING LEVEL FOR A.
4. MINIMUM DIAL SEPARATION BETWEEN SWITCH SET POINTS IS 5°
5. FOR SWITCH SET POINTS AT < 5° DIAL SEPARATION, SEQUENCE OF OPERATION CANNOT BE DETERMINED.



Application/Float Rod Style

	min/max length in inches [mm]
<input type="checkbox"/> Roller (for Bladder bags, U.S. Style)	27.0 [686]/105.0 [2667]
<input type="checkbox"/> Straight (for Straight Float Rods)	6.0 [152]/42.0 [1067]
<input type="checkbox"/> G-Roller (for Bladder Bags, Euro Style)	11.8 [300]/98.4 [2500]

Gear Ratio

	minimum A,B,C,D angular separation
<input type="checkbox"/> 2:1 Recommended for float travel > 45 degrees	6°
<input type="checkbox"/> 3:1 Non-Standard	4°
<input type="checkbox"/> 4:1 Recommended for float travel ≤ 45 degrees	3°

Data Type

Angles
Given from
Horizontal
Center Line

Oil Levels
Given from
Horizontal
Center Line
(Same Units as Radius)

Radius

Inches Can be specified to .10" increments

Millimeters Specify in 1 mm increments

Length =

Note : If radius is specified in mm, then ROLLER/
G-ROLLER float rod hardware will be metric.

Data Input

*use minus sign (-) for angles or oil levels below horizontal c/l and plus sign (+) for angles or oil levels above horizontal c/l

Max Angle/Level (required)	*A =	20°C/25°C Angle/Level (required except when ordering flange assembly only)	*C =
Min Angle/Level (required)	*B =	Optional Grad Angle/Level D must be between C & B (optional 4th graduation mark)	*D =

Notes: (A-B) x (Gear Ratio) must be between 45° and 270° inclusive.
Maintain minimum A,B,C,D angular separation per Gear Ratio table.

Gear Drive Flange Mounting Styles (in inches unless otherwise noted)

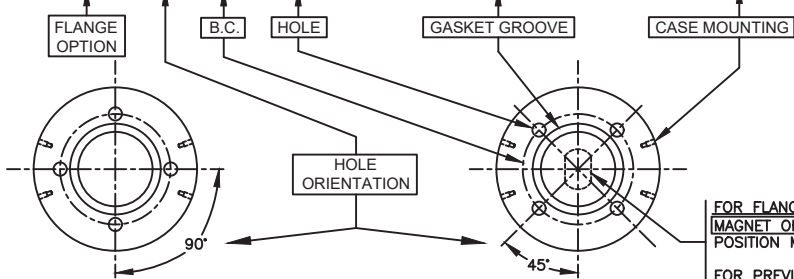
<input type="checkbox"/> 45E31	45°	3.125	Ø.28	2.75 O.D. x 2.13 I.D. x .13 x .06 DP.	#10-32
<input type="checkbox"/> 45E32	45°	3.125	Ø.34	2.75 O.D. x 2.13 I.D. x .06 DP.	#10-32
<input type="checkbox"/> 45E33	45°	3.125	Ø.34	2.75 O.D. x 2.13 I.D. x .13 x .06 DP.	#10-32
<input type="checkbox"/> 45E34	45°	3.125	Ø.34	2.63 O.D. x 1.75 I.D. x .08 DP.	#10-32
<input type="checkbox"/> 45E41	45°	4.000	Ø.44	3.38 O.D. x 2.63 I.D. x .06 DP.	#10-32
<input type="checkbox"/> 45E42	45°	4.000	Ø.44	N/A	#10-32
<input type="checkbox"/> 45E43	45°	4.000	Ø.44	3.38 O.D. x 2.63 I.D. x .13 x .09 DP.	#10-32
<input type="checkbox"/> 45E44	45°	4.000	Ø.44	3.38 O.D. x 2.63 I.D. x .09 DP.	#10-32
<input type="checkbox"/> 45E45	45°	4.750	Ø.56	4.00 O.D. x 3.12 I.D. x .12 DP.	#10-32
<input type="checkbox"/> 45E51	45°	5.000	Ø.34	3.81 O.D. x 3.31 I.D. x .13 DP.	#10-32
<input type="checkbox"/> 90E31	90°	3.125	Ø.34	2.75 O.D. x 2.13 I.D. x .06 DP.	#10-32
<input type="checkbox"/> 90E32	90°	3.125	Ø.28	2.75 O.D. x 2.13 I.D. x .06 DP.	#10-32
<input type="checkbox"/> 90E33	90°	3.125	Ø.28	N/A	#10-32
<input type="checkbox"/> 90E34	90°	3.125	Ø.34	2.75 O.D. x 2.13 I.D. x .13 x .06 DP.	#10-32
<input type="checkbox"/> 90E35	90°	3.125	Ø.34	2.63 O.D. x 1.75 I.D. x .08 DP.	#10-32
<input type="checkbox"/> 45M41	45°	4.000	Ø13MM	N/A	M5
<input type="checkbox"/> 45M42	45°	4.000	Ø7MM	87MM O.D. x 72.4MM I.D. x 4.3MM DP.	M5

Flange Construction

<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY
<input type="checkbox"/> STD	<input type="checkbox"/> HEAVY DUTY

Support Tube Length (inches/mm) Flange Construction

<input type="checkbox"/> 2.17 / 55MM	STD Only
<input type="checkbox"/> 2.50 / 63MM	
<input type="checkbox"/> 2.76 / 70MM	
<input type="checkbox"/> 3.15 / 80MM	STD or HEAVY DUTY
<input type="checkbox"/> 3.58 / 91MM	
<input type="checkbox"/> 3.94 / 100MM	
<input type="checkbox"/> 4.25 / 108MM	
<input type="checkbox"/> 4.92 / 125MM	
<input type="checkbox"/> 5.25 / 133MM	HEAVY DUTY Only
<input type="checkbox"/> 5.91 / 150MM	
<input type="checkbox"/> 6.38 / 162MM	
<input type="checkbox"/> 7.87 / 200MM	
<input type="checkbox"/> 10.4 / 265MM	
<input type="checkbox"/> 11.5 / 292MM	



Note: Not all option combinations are available, please consult factory.

Mounting Angle

0 (Horizontal)

-15 degrees

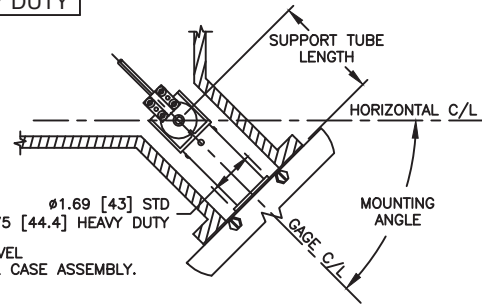
-30 degrees

-45 degrees

Other

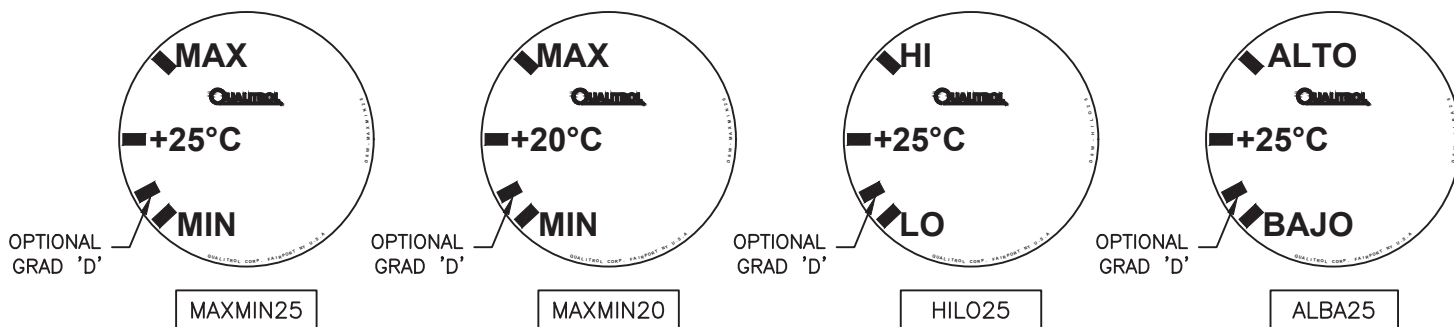
FOR FLANGE ONLY MODELS:
[MAGNET ORIENTATION] AT 1/2 TOTAL FLOAT TRAVEL POSITION MUST BE DETERMINED FROM ORIGINAL CASE ASSEMBLY.

FOR PREVIOUSLY CONFIGURED LLG042:
* WITH SIDE READING DIALS, MAGNET ORIENTATION = 0°.
* WITH TOP READING DIALS, MAGNET ORIENTATION = 90°.

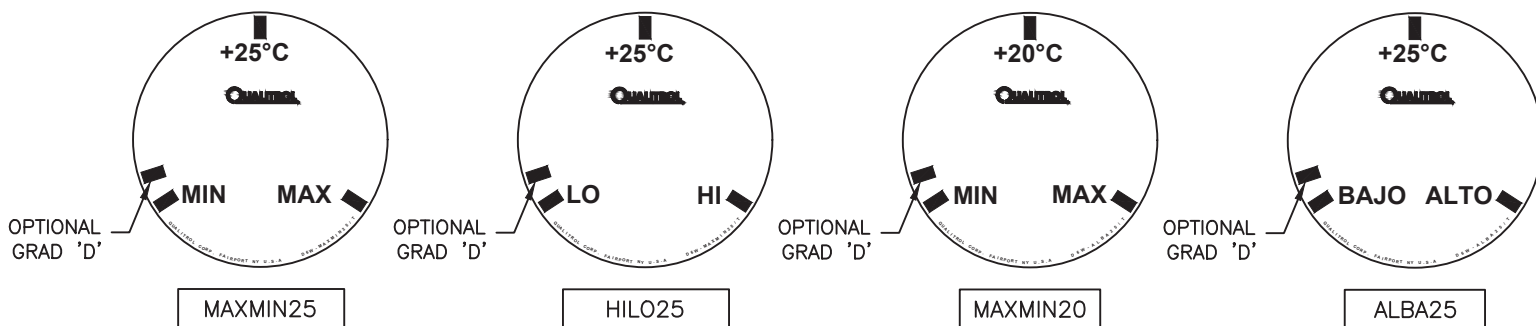




SIDE READING DIAL STYLES



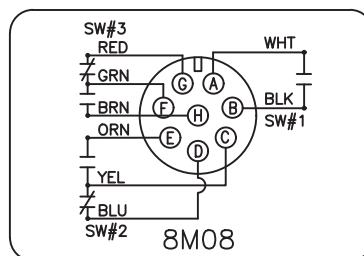
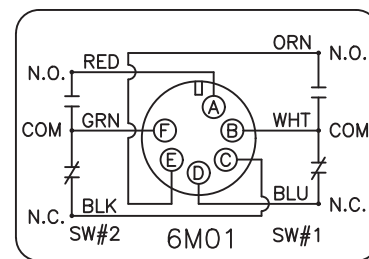
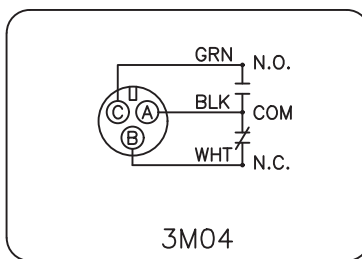
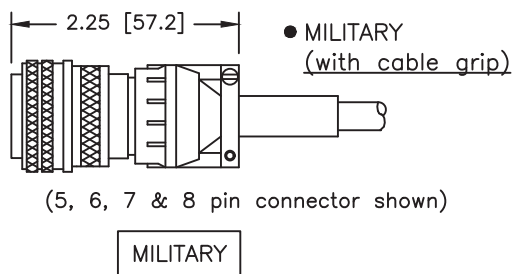
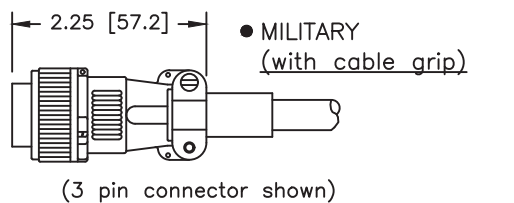
TOP READING DIAL STYLES



NOTES: (UNLESS OTHERWISE SPECIFIED)

1. DIMENSIONS ARE FOR REFERENCE AND SHOWN IN INCHES [MILLIMETERS].
2. GRADS ARE SHOWN FOR ILLUSTRATION ONLY. ACTUAL LOCATION WILL BE DETERMINED BY A, B, C, D DIMENSIONS AND GEAR RATIO.
3. TOP READING DIALS MUST BE USED FOR DIAL TRAVEL EQUAL TO OR GREATER THAN 180° (270° MAX).

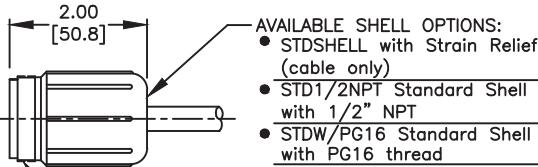
CONNECTOR NUT STYLES AND DEVICE WIRING
FOR MILITARY DETACHABLE CONNECTORS





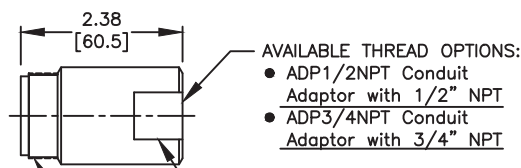
CONNECTOR NUT STYLES AND DEVICE WIRING FOR QUALITROL AND ANSI DETACHABLE CONNECTORS

STANDARD NUT



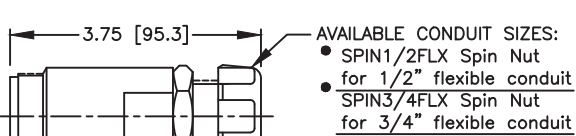
- #1.31-18 UNEF-2A
- STDSHELL
- STD1/2NPT
- STDW/PG16

CONDUIT ADAPTOR



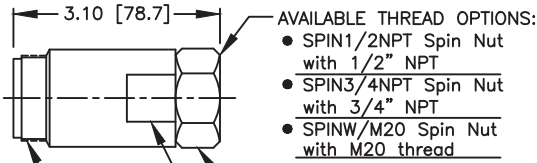
- #1.31-18 UNEF-2A
- 1.31 WD. WRENCH FLATS
- ADP1/2NPT
- ADP3/4NPT

SPIN NUT (FLEX CONDUIT ADAPTOR)



- #1.31-18 UNEF-2A
- 1.37 HEX.
- 1.31 WD. WRENCH FLATS
- SPIN1/2FLX
- SPIN3/4FLX

SPIN NUT (CONDUIT ADAPTOR)



- #1.31-18 UNEF-2A
- 1.25 HEX.
- 1.31 WD. WRENCH FLATS
- SPIN1/2NPT
- SPIN3/4NPT
- SPINW/M20

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. DIMENSIONS ARE FOR REFERENCE AND SHOWN IN INCHES [MILLIMETERS].

ALL WIRING SHOWN AS VIEWED FROM OUTSIDE OF ENCLOSURE. ALL SWITCH FUNCTIONS SHOWN IN NON-ALARM STATE.

STD. CABLE IS 16 GA. TYPE SOW-A/SO. STD. FLYING LEADS ARE 16 GA. TYPE TEW.

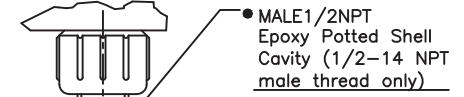
CONNECTOR NUT STYLES AND DEVICE WIRING FOR PERMANENTLY ATTACHED CABLES AND WIRES

POTTED CABLE CONNECTION



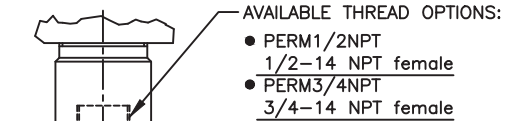
POTTEDNUT

MALE CONDUIT CONNECTION

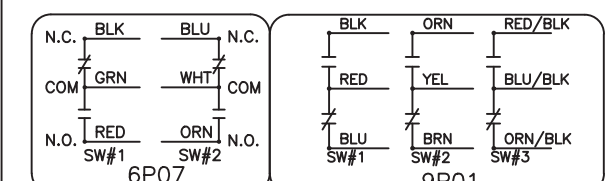
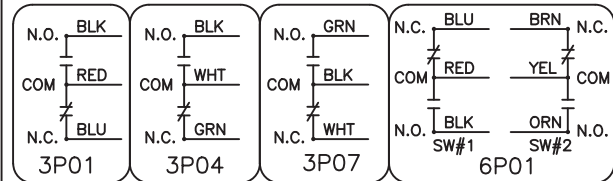
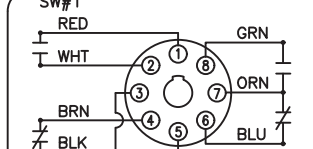
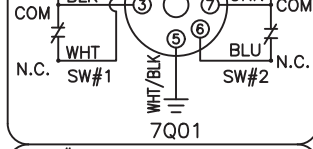
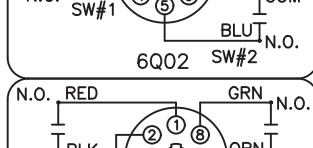
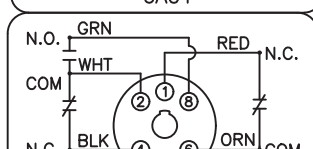
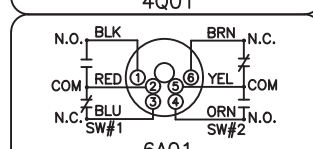
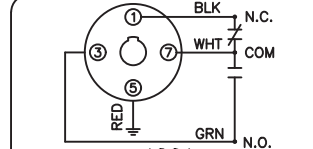
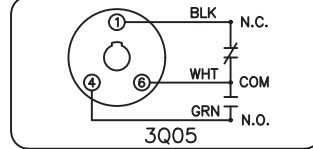
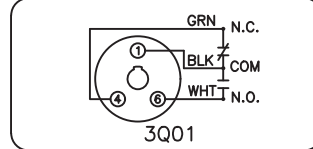
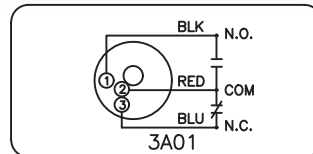


MALE1/2NPT

FEMALE CONDUIT CONNECTION



- PERM1/2NPT
- PERM3/4NPT



DEVICE WIRING FOR TERMINAL BOX
TERMINAL BOX: 1,2 & 3 SWITCH W/ GROUND
(2 & 3 SWITCH VERSION SHOWN)

