

#### **Features**

- 3½ digit LED display with NPN or PNP switch outputs
- 316L Stainless steel pressure fitting
- 7 µin Ra surface finish option
- A wide variety of available process commections
- 100% Helium leak tested
- Class 10 cleanroom packaged (UC and EP grades are double bagged)
- Available in gauge and compound ranges

#### **Typical Uses**

- High purity gas delivery systems
- Gas sticks
- Process gas analyzers

#### **Performance Specifications**

Static Accuracy:  $\pm$  0.50% or  $\pm$  1.0% of span @ 73 °F (23 °C) Accuracy includes the effects of linearity,

hysteresis and repeatability

Display Accuracy:  $\pm$  0.50% of span (+ 1 digit) @ 73 °F (23 °C) or

 $\pm$  1.0% of span (+ 1 digit) @ 73 °F (23 °C) (Ranges less than 75#, 5BR or P5MP, limited to

± 1.0% of span accuracy)

Stability:  $\pm$  0.25% of span/year

Temperature Effect:  $\pm 0.05\%$  of span /°C for units with  $\pm 0.50\%$ 

of span accuracy (Zero and Span) in operating

temperature range

 $\pm$  0.10% of span /°C for units with  $\pm$  1.0% of span accuracy (Zero and Span) in operating

temperature range

## **Environmental Specifications**

Operating Temperature: 14 °F to 122 °F (-10 °C to 50 °C)
Storage Temperature: -4 °F to 122 °F (-20 °C to 60 °C)

Humidity: 35% to 80% RH

#### **Functional Specifications**

Ranges: Compound: Vacuum & 15 psi to

Vacuum & 300 psi

Gauge: 0-30 psi to 0-3000 psi

Analog Output  $\leq 50 \text{ mS}$ 

Response Time:

splay 200 mS

Digital Display Response Time:

& Digital Display:

200 1110

Adjustable Response Time for Analog Output no filter, 25 mS, 250 mS, 2.5 s, 5 s, 10 s

(Filtering/Dampening)
Leakage Test: < 5 x 10<sup>-11</sup> atm cc/s

Proof Pressure: 150% of F.S. (EP & GP grades)

200% of F.S. (UC & BA grades)







#### **Key Benefits**

- Bright easy-to-see LED
- Ultraclean design & packaging
- 316L Stainless steel & CoNi wetted parts for protection against corrosion

ations
4-20 mA (2 Wire) or 1-5 Vdc (3 Wire)
15-24 Vdc for 4-20 mA version 12-24 Vdc for 1-5 Vdc version
Rmax = $400\Omega$ for 4-20 mA output Rmin = $10k\Omega$ for 1-5 Vdc output
EN61326-1:2013, EN61326-2-3:2013
3½ digit LED display
0.3" Height
Displays Max/Min value
PVC jacketed 5-conductor cable with 25 AWG lead-wires





#### **Comparator Output** NPN or PNP open collector with two independent outputs Load Current: 80 mA DC or less. Applied Voltage: 30 Vdc or less (NPN output) Residual Voltage: 1 Vdc or less at 80 mA DC of load current Short circuit protection: Over-current protection Response Time: 5 mS or less (no filter) Deadband: Hysteresis Mode (Variable) Window Comparator Mode (1% of Span fixed) 0 to 2 sec variable (for both ON and OFF) Delay: Comparator operation Red LED (OUT 1,2) lights when turning on the display LED: **Physical Specifications**

Case Material: Polycarbonate & ABS (UL94V-0)

Pressure  $\frac{9}{16}$ -18 UNF or  $\frac{7}{8}$ -14 UNF (compatible with Connection: various VCR®, UJR and CVC fittings.)

Surface Finish: Ultra Clean (UC) Grade 7 μin (0.18 μm) Ra avg.,

28 μin (0.7 μm) Rz max.

Electro Polishing (EP) Grade  $7 \mu in (0.18 \mu m) Ra avg.$ General Purpose (GP) Grade 20 µin (0.5 µm) Ra avg. Bright Annealing (BA) Grade 98 µin (2.5 µm) Rz avg.

Cable Length: Unit Weight: 250 g

## **Wetted Materials**

Pressure Sensor: Co-Ni (UC & BA grades)

316L Stainless steel (EP & GP grades)

Fitting: 316L Stainless steel

#### **Approvals**

CE, RoHS



Ordering Code	Example:	ZT60	2	3	E	150#	7	Р	1	1	-X
Model											
ZT60		ZT60									
<b>Mounting</b> (Note: All available 3 digit codes- Mou Grade are listed on the dimensional dr	nting/Connection/Cleaning awing pages.)										
1 - Horizontal Mounting, Type T											
2 - Horizontal Mounting, Type S			2								
A - Vertical Mounting, Type S											
Pressure Connection											
<ul> <li>3 - ¼ Compatible with VCR® Male Inte</li> <li>4 - ½ (or ³/º) Compatible with VCR® Ma only, EP Grade only)</li> </ul>		pe T Mountin	g	3							
J - ¼ VCR® Male Nut (UC and BA Gra	de only)										
K - 3/8 VCR® Male Nut (Horizontal Type	**	e only)									
L - 1/4 VCR® Female Nut (Bearings not											
M - 3/8 VCR® Female Nut (Bearings no UC Grade Only			nly,								
N - 1/4 UJR Male Nut											
P - 3/8 UJR Male Nut (Horizontal Type	T Mounting only, UC and EP	Grade only)									
Q - 1/4 UJR Female Nut											
R - 3/8 UJR Female Nut (Horizontal Typ	e T Mounting only, UC and	EP Grade onl	ly)								
W - 1/4 CVC Male Nut (UC and BA Grad	de only)										
X - 3/8 CVC Male Nut (Horizontal Type	T Mounting only, UC Grade	only)									
Y - 1/4 CVC Female Nut (Bearings not i	ncluded, UC and BA Grade	only)									
Z - 3/6 CVC Female Nut (Bearings not i UC Grade only)	ncluded, Horizontal Type T	Mounting only	у,								
Surface Finish/Cleaning Grade						-					
6 - UC Grade, 7 μin (0.18 μm) Ra avg.,	28 μin (0.7 μm) Rz maximun	n				_					
N - BA Grade, 98 μin (2.5 μm) Rz avg.						-					
E - EP Grade, 7 μin (0.18 μm) Ra avg.					Е	-					
G - GP Grade, 20 μin (0.5 μm) Ra avg.											
Pressure Range											
150# - See pressure range table on pa	age four for all standard ran	ges				150#					
Display Accuracy											
5 - $\pm 0.50\%$ of span +1 digit (this accu	racy not available for ranges	s below 75#, b	oelow	5BR or	below	P5MP)					
7 - ±1.00% of span +1 digit							7	-			
Input Power Supply								-			
N - 12 to 24 Vdc (1-5 Vdc version)											
P - 15 to 24 Vdc (4-20 mA version)								Р			
Comparator Output											
1 - PNP open collector with two output	uts (80 mA max)								1		
3 - NPN open collector with two output	uts (30 Vdc, 80 mA max)										
Analog Output											
1 - 4 to 20 mA output										1	
8 - 1 to 5 Vdc output											
0 - No analog output											
<u> </u>											
Options (If indicating an option, must	include an "X" (-X)										



Standard P	ressure Range Code Table
V/15#	Vac to 15 psi (Only available as 1.00% accuracy)
V/30#	Vac to 30 psi (Only available as 1.00% accuracy)
V/45#	Vac to 45 psi (Only available as 1.00% accuracy)
V/75#	Vac to 75 psi
V/150#	Vac to 150 psi
V/300#	Vac to 300 psi
30#	30 psi (Only available as 1.00% accuracy)
45#	45 psi (Only available as 1.00% accuracy)
75#	75 psi
150#	150 psi
300#	300 psi
500#	500 psi
750#	750 psi
1500#	1500 psi
3000#	3000 psi
N100/100KP	(-) 100 to 100 kPa (Only available as 1.00% accuracy)
N100/200KP	(-) 100 to 100 kPa (Only available as 1.00% accuracy)
N100/200KP	(-) 100 to 300 kPa (Only available as 1.00% accuracy)
NP1/P5MP	(-) 0.1 to 0.5 Mpa
NP1/1MP	(-) 0.1 to 1 Mpa
NP1/2MP	(-) 0.1 to 2 Mpa
200KP	200 kPa (Only available as 1.00% accuracy)
300KP	300 kPa (Only available as 1.00% accuracy)
P5MP	0.5 Mpa
1MP	1 Mpa
2MP	2 Mpa
3.5MP	3.5 Mpa
5MP	5 Mpa
10MP	10 Mpa
20MP	20 Mpa
N1/1BR	(-) 1 to 1 Bar (Only available as 1.00% accuracy)
N1/2BR	(-) 1 to 2 Bar (Only available as 1.00% accuracy)
N1/2BR N1/3BR	(-) 1 to 3 Bar (Only available as 1.00% accuracy)
N1/5BR	(-) 1 to 5 Bar (Only available as 1.00% accuracy)
N1/3BR N1/10BR	(-) 1 to 10 Bar
N1/20BR	(-) 1 to 20 Bar
2BR	2 Bar (Only available as 1.00% accuracy)
3BR	3 Bar (Only available as 1.00% accuracy)
5BR	5 Bar
10BR	10 Bar 20 Bar
20BR	
35BR	30 Bar
50BR	50 Bar
100BR	100 Bar
200BR	200 Bar



#### **Wiring Diagrams**

#### **Electric Connection**

Colored cables are used as described below. Confirm the connection before power is on. Warm up the unit and allow it to stabilize for about five minutes after power up before adjusting the zero point and starting measurements.

#### Wiring for Analog Outputs

- Brown Power source (+)
- Blue Common for power source
   (-) and analog output (-)
- Black Open collector output 1
- White Open collector output 2
- Orange Analog output (+)

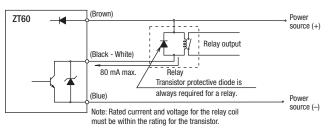
#### **Internal Type**

Output Type: The comparator output comprises open collector output. The analog output comprises 4 to 20 mA current output or any of the voltage outputs.

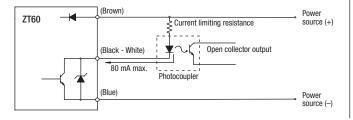
"Open collector" means that the collector of an output transistor is open for the user to use for any desired user defined application. Accordingly, the user is free to use the open collector output in any way.

The output transistor is rated for 30 Vdc, 80 mA. Be sure not to exceed this rating.

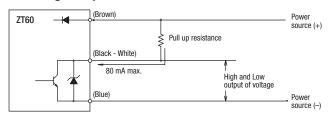
# 1. Wiring for open NPN Collector a. with relay



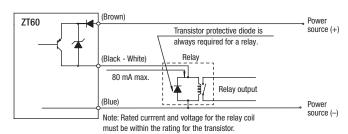
#### b. with photocoupler



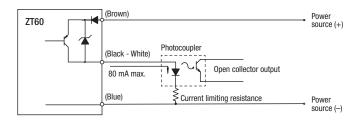
#### c. Voltage Output



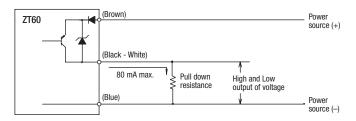
# 2. Wiring for open PNP Collector a. with relay



## b. with photocoupler



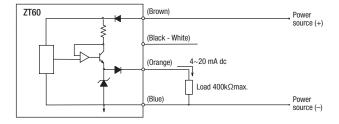
#### c. Voltage Output



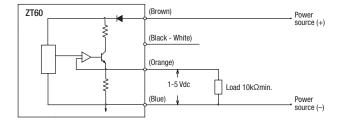


## **Wiring Diagrams**

# 3. Wiring for Analog Outputs a. 4-20 mA output



#### b. Voltage Output: 1-5 Vdc



#### **Noise Precautions**

#### **Power Lines**

Noise on the power lines can cause fluctuating pressure indication and incorrect operation. Check the cable routing for the DC power lines and use a power source of a high noise removal rate.

#### **Output Lines**

The internal circuit of the open collector output is connected to that of the output line. Take special care when routing the wires and make the wires as short as possible.

#### Induced Noise

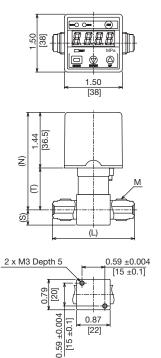
The unit may operate erroneously when subjected to external induction. Keep off a noise source, change the direction, or provide a magnetic or static shield, etc.



## Dimensions are in inches [mm] for UC/BA/EP/GP Grade

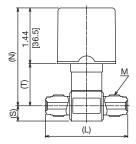
#### Horizontal Mounting - Type T - Male Integrated

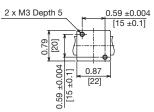
#### **UC/BA Grade**



Compatible with 1/4 VCR®

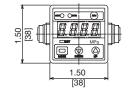
# 3.50 [38]

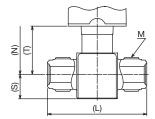


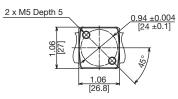


Compatible with 1/4 VCR®

#### **EP/GP Grade**







Compatible with 1/2 (3/8) VCR®

		Piping	Screw Size		Dime	nsions		Model
Grade	Connection	Dia.	M	N	Т	S	L	Number
UC	Compatible with VCR® Male Intergrated	1/4	<sup>9/16</sup> -18UNF	2.52 [64]	1.08 [27.5]	0.39 [10]	2.13 [54]	ZT60-136

			Piping	Screw Size		Dime	nsions		Model
'	Grade	Connection	Dia.	M	N	Т	S	L	Number
	ВА	Compatible with VCR®  Male Intergrated	1/4	<sup>9</sup> /16-18UNF	2.52 [64]	1.08 [27.5]	0.39 [10]	2.13 [54]	ZT60-13N

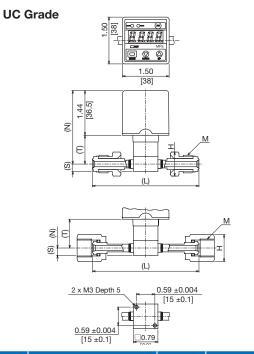
		Piping	Piping Screw Size Dimensions					Model
Grade	Connection	Dia.	M	N	Т	S	L	Number
EP	Compatible with VCR®	1/4	<sup>9/16</sup> -18UNF	2.52 [64]	1.08 [27.5]	0.39 [10]	2.13 [54]	ZT60-13E
	Male Intergrated	1/2 (3/8)	<sup>7</sup> / <sup>6</sup> -14	2.68 [68]	1.24 [31.5]	0.63 [16]	2.56 [65]	ZT60-14E

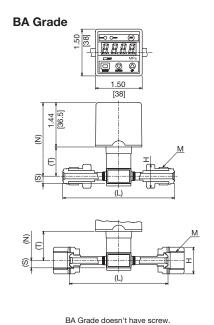
0	0	Piping	Screw Size		Dimensions			Model
Grade	Connection	Dia.	M	N	T	S	L	Number
GP	Compatible with VCR®  Male Intergrated	1/4	%-18UNF	2.52 [64]	1.08 [27.5]	0.39 [10]	2.13 [54]	ZT60-13G



## Dimensions are in inches [mm] for UC/BA Grade

## Horizontal Mounting - Type T - Male Nut / Female Nut





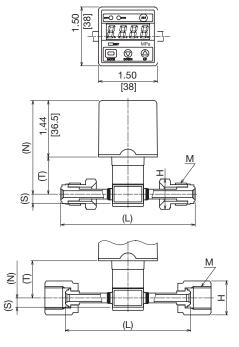
Out de	0	Piping	Screw Size		Dimensions				Model
Grade	Connection	Dia.	M	N	T	S	H	L	Number
	VCR® Male Nut	1/4	<sup>9/16</sup> -18UNF	2.36 [60]	0.93 [23.5]	0.24 [6]	0.63 x 0.73 [16 x 18.5] Hex	3.39 [86]	ZT60-1J6
	VON Male Nut	3/8	<sup>7</sup> /6-14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	0.94 x 1.09 [24 x 27.7] Hex	3.56 [90.5]	ZT60-1K6
	VCR® Female Nut	1/4	9/16-18UNF	2.36 [60]	0.93 [23.5]	0.24 [6]	0.75 x 0.86 [19 x 21.9] Hex	3.18 [80.8]	ZT60-1L6
	(Bearings are not included)	3/8	<sup>7</sup> /8-14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	1.06 x 1.23 [27 x 31.2] Hex	3.22 [81.8]	ZT60-1M6
	UJR Male Nut	1/4	<sup>9</sup> /16-18UNF	2.36 [60]	0.93 [23.5]	0.24 [6]	0.67 x 0.77 [17 x 19.6] Hex	3.43 [87]	ZT60-1N6
UC	OUN Male Nut	3/8	<sup>7</sup> /8-14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	0.91 x 1.05 [23 x 26.6] Hex	3.94 [100]	ZT60-1P6
	UJR Female Nut	1/4	<sup>9/16</sup> -18UNF	2.36 [60]	0.93 [23.5]	0.24 [6]	0.75 x 0.86 [19 x 21.9] Hex	3.43 [87]	ZT60-1Q6
	(With pure ring)	3/8	<sup>7</sup> /8-14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	1.02 x 1.18 [26 x 30] Hex	3.94 100]	ZT60-1R6
	CVC Male Nut	1/4	<sup>9/16</sup> -18UNF	2.36 [60]	0.93 [23.5]	0.24 [6]	0.62 x 0.72 [15.8 x 18.2] Hex	3.39 [86]	ZT60-1W6
	CVC IVIAIR NUL	3/8	<sup>7</sup> / <sup>8</sup> -14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	0.94 x 1.08 [23.8 x 27.5] Hex	3.57 [90.6]	ZT60-1X6
	CVC Female Nut	1/4	<sup>9/16</sup> -18UNF	2.36 [60]	0.93 [23.5]	0.24 [6]	0.75 x 0.86 [19 x 21.9] Hex	3.18 [80.8]	ZT60-1Y6
	(Bearings are not included)	3/8	<sup>7</sup> /6-14UNF	2.58 [65.5]	1.14 [29]]	0.28 [7]	1.06 x 1.23 [27 x 31.2] Hex	3.23 [82]	ZT60-1Z6

Overde	O a marantia m	Piping	Screw Size			Din	nensions		Model															
Grade	Connection	Dia.	M	N	Т	S	H	L	Number															
	VCR® Male Nut						0.63 x 0.73 [16 x 18.5] Hex	3.39 [86]	ZT60-1JN															
	VCR® Female Nut (Bearings are not included)						0.75 x 0.86 [19 x 21.9] Hex	3.18 [80.8]	ZT60-1LN															
BA	UJR Male Nut	1/4	9/16 101 INIE	9/16-18UNF 2.38	0.94	0.24	0.67 x 0.77 [17 x 19.6] Hex	3.62 [92]	ZT60-1NN															
DA	UJR Female Nut (Without pure ring)	74	7.0-10UNF	[60.5]	[24]	[6]	0.75 x 0.86 [19 x 21.9] Hex	3.19 [81]	ZT60-1QN															
	CVC Male Nut																					0.62 x 0.72 [15.8 x 18.2] Hex	3.39 [86]	ZT60-1WN
	CVC Female Nut (Bearings are not included)						0.75 x 0.86 [19 x 21.9] Hex	3.18 [80.8]	ZT60-1YN															



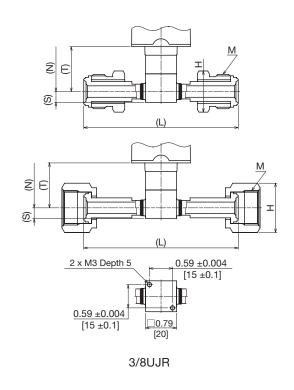
## Dimensions are in inches [mm] for EP/GP Grade

## Horizontal Mounting - Type T - Male Nut / Female Nut



\*There is no M3 screw on the piping diameter 1/4.

1/4UJR



Overde	O annua akian	Piping	Screw Size			Din	nensions		Model
Grade	Connection	Dia.	M	N	Т	S	H	L	Number
	UJR Male Nut	1/4	<sup>9/16</sup> -18UNF	2.38 [60.5]	0.94 [24]	0.24 [6]	0.67 x 0.77 [17 x 19.6] Hex	3.43 [87]	ZT60-1NE
EP	OJR Male Nut	3/8	7∕8-14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	0.91 x 1.05 [23 x 26.6] Hex	3.94 [100]	ZT60-1PE
EP	UJR Female Nut	1/4	<sup>9/16</sup> -18UNF	2.38 [60.5]	0.94 [24]	0.24 [6]	0.75 x 0.86 [19 x 21.9] Hex	3.19 [81]	ZT60-1QE
	(Without pure ring)	3/8	7∕6-14UNF	2.58 [65.5]	1.14 [29]	0.28 [7]	1.02 x 1.18 [26 x 30] Hex	3.94 [100]	ZT60-1RE

Quarte	0	Piping	Screw Size		Dimensions				
Grade	Connection	Dia.	M	N	Т	S	H	L	Number
0.5	UJR Male Nut		040 401115	2.38	0.94	0.24	0.67 x 0.77 [17 x 19.6] Hex	3.43 [87]	ZT60-1NG
GP	UJR Female Nut (Without pure ring)	1/4	<sup>9∕16</sup> -18UNF	[60.5]	[24	[6]	0.75 x 0.86 [19 x 21.9] Hex	3.19 [81]	ZT60-1QG



## Dimensions are in inches [mm] for UC/BA/EP/GP Grade

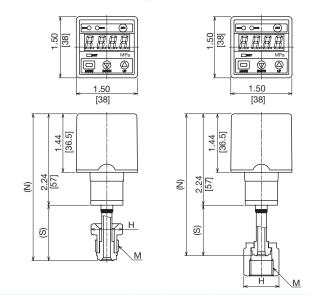
## Horizontal Mounting - Type S - Male Integrated

# 1.50 380 1.50 388 1.50 388 1.50 38 (22 x 25.4) M

#### Compatible with 1/4 VCR

Grade	Connection	Piping Dia.	Screw Size M	Model Number
UC	Compatible with VCR® Male Integrated	1/4	<sup>9/16</sup> -18UNF	ZT60-236

## Horizontal Mounting - Type S - Male Nut / Female Nut



Grade	Connection	Piping	Screw	Dim		ensions	Model
Grade	Connection	Dia.	Size M	N	S	H	Number
	VCR® Male Nut			3.58 [91]	1.39 [34]	0.63 x 0.73 [16 x 18.5] Hex	ZT60-2J6
	VCR® Female Nut (Bearings are not included)	1/4		3.48 [88.4]	1.24 [31.4]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2L6
UC	UJR Male Nut		<sup>9/16</sup> -18UNF	3.70 [94]	1.46 [37]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-2N6
	UJR Female Nut (With pure ring)		,	3.60 [91.5]	1.41 [34.5]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2Q6
	CVC Male Nut			3.66 [93]	1.42 [36]	0.62 x 0.72 [15.8 x 18.2] Hex	ZT60-2W6
	CVC Female Nut (Bearings are not included)			3.48 [88.4]	1.24 [31.4	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2Y6

Grade	Connection	Piping Dia.	Screw Size M	Model Number
BA	Compatible with VCR® Male Integrated	1/4	<sup>9</sup> ⁄16-18UNF	ZT60-23N

Cuada	Connection	Piping	Screw		<u>Dim</u>	ensions	Model
Grade	Connection	Dia.	Size M	N	S	H	Number
	VCR® Male Nut	1	%16-18UNF -	3.58 [91]	1.39 [34]	0.63 x 0.73 [16 x 18.5] Hex	ZT60-2JN
	VCR® Female Nut (Bearings are not included)			3.10 [78.8]	0.86 [21.8]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2LN
BA	UJR Male Nut			3.70 [94]	1.46 [37]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-2NN
DA	UJR Female Nut (Without pure ring)			3.10	0.85 [21.7]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2QN
	CVC Male Nut			3.66 [93]	1.42 [36]	0.62 x 0.72 [15.8 x 18.2] Hex	ZT60-2WN
	CVC Female Nut (Bearings are not included)			3.48 [88.4]	1.24 [31.4]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2YN

Grade	Connection	Piping Dia.	Screw Size M	Model Number
EP	Compatible with VCR® Male Integrated	1/4	%-18UNF	ZT60-23E

Out of	0	Piping	Screw		Dilli	CHOIDHO	Model
Grade	Connection	Dia.	Size M	N	S	H	Number
EP	UJR Male Nut	1/4	<sup>9</sup> /16-18UNF	3.60 [91.5]		0.67 x 0.77 [17 x 19.6] Hex	ZT60-2NE
EP	UJR Female Nut (Without pure ring)	74	718-18UNF	3.48 [88.5]	1.24 [31.5]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2QE

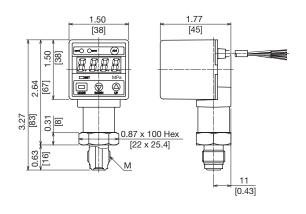
Grade	Connection	Piping Dia.	Screw Size M	Model Number
GP	Compatible with VCR® Male Integrated	1/4	<sup>9</sup> ⁄16-18UNF	ZT60-23G

Our de	O a mana a sti a m	Piping	Screw	Dimensions		ensions	Model
Grade	Connection	Dia.	Size M	N	S	H	Number
GP	UJR Male Nut	1/		3.60 [91.5]	1.41 [34.5]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-2NG
GP	UJR Female Nut (Without pure ring)	1/4		3.48 [88.5]	1.24 [31.5]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-2QG



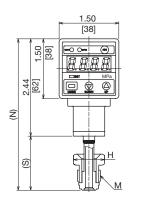
## Dimensions are in inches [mm] for UC/BA/EP/GP Grade

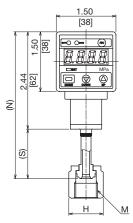
## Vertical Mounting - Type S - Male Integrated



Compatible with 1/4 VCR

## Vertical Mounting - Type S - Male Nut / Female Nut





Grade	Connection		Screw Size M	Model Number
UC	Compatible with VCR® Male Integrated	1/4	%16-18UNF	ZT60-A36

Cuada	Compostion	Piping	Screw		Dim	ensions	Model
Grade	Connection	Dia.	Size M	N	S	H	Number
	VCR® Male Nut		%6-18UNF	3.78 [96]	1.39 [34]	0.63 x 0.73 [16 x 18.5] Hex	ZT60-AJ6
	VCR® Female Nut (Bearings are not included)	. 1/4		3.68 [93.4]	1.24 [31.4]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AL6
UC	UJR Male Nut			3.90 [99]	1.46 [37]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-AN6
00	UJR Female Nut (With pure ring)			3.80	1.41 [34.5]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AQ6
	CVC Male Nut			3.86 [98]	1.42 [36]	0.62 x 0.72 [15.8 x 18.2] Hex	ZT60-AW6
	CVC Female Nut (Bearings are not included)			3.68 [93.4]	1.24 [31.4]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AY6

Grade	Connection	Piping Dia.	Screw Size M	Model Number
ВА	Compatible with VCR® Male Integrated	1/4	<sup>9/16</sup> -18UNF	ZT60-A3N

0	O-maratian	Piping	Screw		Dim	ensions	Model
Grade	Connection	Dia.	Size M	N	S	H	Number
	VCR® Male Nut		1/4 9/6-18UNF	3.78 [96]	1.39 [34]	0.63 x 0.73 [16 x 18.5] Hex	ZT60-AJN
	VCR® Female Nut (Bearings are not included)	1/4		3.30 [83.8]	0.86 [21.8]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-ALN
BA	UJR Male Nut			3.90 [99]	1.46 [37]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-ANN
DA	UJR Female Nut (Without pure ring)			3.30	0.85 [21.7]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AQN
	CVC Male Nut			3.86 [98]	1.42 [36]	0.62 x 0.72 [15.8 x 18.2] Hex	ZT60-AWN
	CVC Female Nut (Bearings are not included)			3.68 [93.4]	1.24 [31.4]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AYN

Grade	Connection	Piping Dia.	Screw Size M	Model Number
EP	Compatible with VCR® Male Integrated	1/4	%16-18UNF	ZT60-A3E

0	0	Piping	Screw	Difficusions			wodei
Grade	Connection	Dia.	Size M	N	S	H	Number
EP	UJR Male Nut	- 1/4	<sup>9/16</sup> -18UNF	3.80 [96.5]	1.41 [34.5]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-ANE
EF .	UJR Female Nut (Without pure ring)			3.68 [93.5]	1.24 [31.5]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AQE

Grade	Connection	Piping Dia.	Screw Size M	Model Number
GP	Compatible with VCR® Male Integrated	1/4	%-18UNF	ZT60-A3G

	Grade	Commontion	Piping	Screw	Dimensions			Model
	Grade	Connection	Dia.	Size M	N	S	H	Number
	GP	UJR Male Nut	- 1/4	18UNF	3.80 [96.5]	1.41 [34.5]	0.67 x 0.77 [17 x 19.6] Hex	ZT60-ANG
	Gr	UJR Female Nut (Without pure ring)			3.68 [93.5]	1.24 [31.5]	0.75 x 0.86 [19 x 21.9] Hex	ZT60-AQG