ZT64 Battery-operated Digital Pressure Gauge

Outline

This device is a digital pressure gauge with battery operation designed for the need of the pressure gauge / pressure sensor in semiconductor field.

This pressure gauge incorporates battery operational function and semiconductor strain gauge reduces its surface area of wettde parts substantially as compared to bourdon tube pressure gauge (Approximately 20% of bourdon tube type). Because there is no movable parts, the design provides excellent vibration and shock resistance as well as corrosion resistance for adapting to a variety of applications. Choice of UC grade throughout general use of specifications is available to suit for a variety of installation.

Features

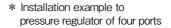
·The high corrosion resistant pressure sensor made of Co-Ni alloy or SUS316L is directly welded to the 316Lst.st. coupling portion, demonstrating excellent corrosion resistance, hermetic properties, stability and reliability.

*Please confirm that material in contact with gas is suitable for it. ·Adjustable-angle display

When installed to pressure regulator of four ports, the digital display can be made level by adjusting its angle to the left or right by 30°. (See the photo on the right)

- Energy-saving function (1) Automatic power off function can be selected
- (2) Adjustable sampling time constant (Can be selected a display update cycle of 0.5s, 2s, or 10s.) Please select (1) or (2) to match the selected use time.





List of grade

Cleanliness These pressure transmitters have been assembled, adjusted, inspected and packaged in a clean room, paying special attention for maintaining cleanliness.

Gra	ade	UC (Ultra Clean)	BA (Bright Annealing)	EP (Electro Polishing)	GP (General Purpose)	General-use
	roughness contact	0.18µm Ra Avg. 0.7µm Rz Max.	Approx. Rz 2.5µm	0.18µm Ra Avg.	0.5µm Ra Avg.	Rule anonymous
Wetted			alloy	SUS	SUS630 (17-4PH)	
parts	Fitting *1	SUS	316L	SUS	316L	SUS316
	imum pressure *2	200% of rat	ed pressure	150% of rat	ed pressure	200% of rated pressure
	kage leak rate)	5 x 10 ⁻¹² Pa•n	³ /s and under	5 x 10 ⁻¹² Pa•n	¹³ /s and under	1 x 10 ⁻⁹ Pa•m ³ /s and under
Par	ticle	Zero count for size 0.1µm or greater (In our inspection standard)		Zero count for size 0.1 µm or greater (In our inspection standard)		
Clea	aning	Ultra clearance (Cleaning)	Degreasing	Ultra clearance (Cleaning)	Degreasing	Use no oil & water
	g media * ³ mended)	High-purity gas, semiconductor material gas, etc.	Purge gas, exhaust gas, etc.	Purge gas, exhaust gas, etc.	Corrosion-resistant gas that does not require the cleanliness rating.	

*1 For UC Grade, the pressure transmitter can be manufactured in DOUBLE MELT material by request. Please contact us.

*2 Allowable maximum pressure is the upper limit of pressure value which may safely be applied to the product and remain in specification once pressure is returned to the rated pressure range with a couple of times overpressurization for about 10 minutes.

Effects of continuous overpressure are not guaranteed. *3 Ensure that pressure media is compatible with wetted parts

*UC / EP Grade rises with double packing (Filled with N2).

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Specification

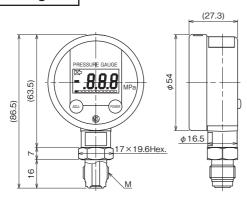
Item	Description
Fluid	Process gasses for semiconductor industry
Pressure range	0 to 0.5, 1, 2, 5, 10, 20MPa -0.1 to 0.5, 1, 2MPa
Fitting shape	Fitting: Type S
Connection	1/4UJR, VCR, etc.
Display accuracy*	± (1.0%F.S.+1 digit) at 23°C
Temperature coefficient	±0.1%F.S./°C (Both Zero and Span)
Power source	Lithium battery CR2032 (3V DC) x1 pc.
Battery life (With low battery voltage monitor)	Continuous use: About 2500 hours (At a display cycle of 0.5s) About 5000 hours (At a display cycle of 2s) About 7000 hours (At a display cycle of 10s) Power OFF: More than a year
Display system	3 digit LCD (Character height: 8.5 mm)
Display cycle	0.5, 2 or 10s can be set
Operating temperature range	-10 to 50°C (No freezing or condensation)
Operating humidity range	35 to 85%RH (No condensation)
Storage temperature range	-20 to 60°C (No freezing or condensation)
Enclosure	Indoor use
Case material	Zinc alloy die-cast (ZDC2) chrome plating
Panel material	Polycarbonate
Weight	Approx. 150 g (Including battery, varies depending on the fitting shape)

* Display accuracy includes the effects of Linearity, Hysteresis and Repeatability.

Dimensions 1

UC/BA/EP/GP Grade

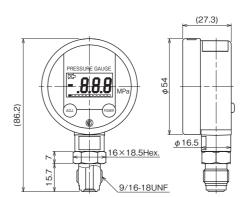
Male Integrated



Compatible with 1/4 VCR



Unit: mm





Grade	Connection	Piping DIA.	Screw size M	Model number
UC	Compatible with VCR Male integrated	1/4	9/16-18UNF	ZT64-236

Grade	Connection	Piping DIA.	Screw size M	Model number
BA	Compatible with VCR Male integrated	1/4	9/16-18UNF	ZT64-23N

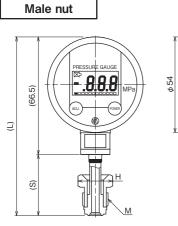
Grade	Connection	Piping DIA.	Screw size M	Model number
EP	Compatible with VCR Male integrated	1/4	9/16-18UNF	ZT64-23E

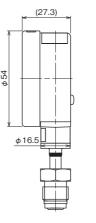
Grade	Connection	Piping DIA.	Screw size M	Model number
GP	Compatible with VCR Male integrated	1/4	9/16-18UNF	ZT64-23G

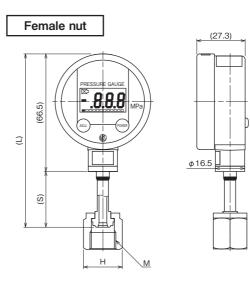
Dimensions 2

UC/BA/EP/GP Grade

Unit: mm







Grade	Connection	Piping	Screw size		Dir	nensions	Model
Grade	Connection	DIA.	М	L	S	Н	number
UC	VCR Male nut	1/4	9/16-18UNF	100.5	34	16 x 18.5 Hex.	ZT64-2J6
00	VCR Female nut (Bearings are not included)	1/4	9/16-180INF	97.9	31.4	19 x 21.9 Hex.	ZT64-2L6

Grade	Connection	Piping	Screw size		Dir	nensions	Model
Grade	Connection	DIA.	М	L	S	Н	number
ВА	VCR Male nut	- 1/4	9/16-18UNF	100.5	34	16 x 18.5 Hex.	ZT64-2JN
DA	VCR Female nut (Bearings are not included)	1/4	9/10-180INF	88.3	21.8	19 x 21.9 Hex.	ZT64-2LN

Grade	Connection	Piping	Screw size		Dir	nensions	Model
Graue	Connection	DIA.	М	L	S	Н	number
EP	UJR Male nut	1/4	9/16-18UNF	101	34.5	17 x 19.6 Hex.	ZT64-2NE
	UJR Female nut (Without pure ring)	1/4	9/10-180INF	98	31.5	19 x 21.9 Hex.	ZT64-2QE

Grade	Connection	Piping	Screw size		Dir	nensions	Model
Graue	COILIECTION	DIA.	М	L	S	Н	number
GP	UJR Male nut	1/4	9/16-18UNF	101	34.5	17 x 19.6 Hex.	ZT64-2NG
GP	UJR Female nut (Without pure ring)	1/4	9/10-18UNF	98	31.5	19 x 21.9 Hex.	ZT64-2QG

UC Grade

<mark>el numb</mark>		onf	iguı	ratio	n	Pleas	se spe	ecify th	ne moo	lel nur	nber,	each s	specs	and tl	he ran	ge for	order	ing.	
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	① Mount	ting		2	Туре	S													
L		(2)			3	1/4	Com	patible	with V	CR Mal	e integ	ated							_
		<u> </u>	ectior	ı	J	1/4	VCF	Male r	nut										_
					L	1/4	VCF	Femal	e nut (E	earings	are no	ot inclue	ded)						
				ted part grade * 1	S	6	Pres	Grade sure se ng: SUS		o-Ni all	oy (All	welding	;)						
					(4)			D	-0.1	to 0.5N	IPa (I	lumber	of digi	t indica	ition: .5	00)			_
					Press	sure rar	nge	E	-	to 1MP		Number							
Please spe	oifu th			1				F 2	-	to 2MP		Number							
range and	units	separa						2		0.5MPa	``	Number				-			_
besides se range code		n of						4		2MPa		Vumber	-			-			
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								7	0 to	10MPa	1)	Number	of digi	t indica	ition: 10	0.0)			_
						r		8	0 to	20MPa	1)	Number	of digi	t indica	ition: 20	0.0)			
						5 Displ	lay acc	curacy	7	± (1	.0%F.8	S.+1digi	t)						
							⑥ Pow	er sourd	ce	В	Lithiu	um batte	ery (3V	DC): (R2032	2			
										(t5) Docu	ments		0	Subn instru inspe test r inspe stren	e specify nission uction n ection p report (*	drawin, nanual, rocedu 1 pc 1 tracea culatior	gs, re, mill copy), bility ce	nents sepa test rep ertificato	00

*1 For UC Grade, the pressure transmitter can be manufactured in DOUBLE MELT material by request. Please contact us.

BA Grade

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Model I	number]	Sele	ctive s	spec.		Addi	tional	spec.	(Optio	n)			
	① Moun	ting		2	Туре	S	1			-									
		2			3	1/4	Com	patible	with V(CR Mal	e integr	ated							
		Conr	ection		J	1/4 1/4		patible											
			(3)		L	1/4 N	-	Female Grade	e nut (E	searings	s are no		ueu)						
				ed part: ade	S		Pres	sure sei ng: SUS		o-Ni all	oy (All	welding	g)						
					(4)			D	-	to 0.5N			of digi			-			
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Please s								2		0.5MPa	-		of digi			-			
range ar besides			tely	\rightarrow				3	0 to	1MPa	1)	Number	of digi	t indica	tion: 1.	00)			
range co	ode.							4		2MPa 5MPa			of digi						
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								8		20MPa			of digi						
						⑤ Displ	ay acc	uracy	7	± (1	.0%F.S	S.+1dig	it)						
							⑥ Powe	er sourc	e	в	Lithiu	um batte	ery (3V	DC): C	R2032	2			
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Model number configuration Please specify the model number, each specs and the range for ordering.

EP Grade

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Digital Pressure Gauge ① ② With Battery Operated EP Grade							1	4	5	6	7	8	9	10	11	12	(13)	(14)		
Model	Model number							Selective spec. Additional spec. (Option)												
	(1)							ype S												
	② 3 Connection N ③ Wetted parts by grade					1/4 Compatible with VCR Male integrated														
						1/4 UJR Male nut														
						1/4 UJR Female nut (Without pure ring)														
						E EP Grade Pressure sensor: SUS316L (All welding) Fitting: SUS316L														
	(4)							D												
	_					sure rar	nge	E -0.1 to 1MPa (Number of digit indication: 1.00)												
Diagon (F		-0.1 to 2MPa (Number of digit indication: 2.00) 0 to 0.5MPa (Number of digit indication: .500)										
		•						2	-	o 0.5MPa (Number of digit indication: .500) o 1MPa (Number of digit indication: 1.00)										
	range and units separately besides selection of range code.							4	-	2MPa	-		-			-			-	
Tange C								4 0 to 2MPa (Number of digit indication: 2.00) 6 0 to 5MPa (Number of digit indication: 5.00)												
								7 0 to 10MPa (Number of digit indication: 10.0)												
								8	0 to	0 to 20MPa (Number of digit indication: 20.0)										
							ay acc	curacy	7	± (1.0%F.S.+1digit)										
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GP Grade

Model number configuration Please specify the model number, each specs and the range for ordering.

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Model I	Model number								Selective spec. Additional spec. (Option)											
	1 Mounting 2			2	Туре	S		1												
		2	② Connection		3	1/4 Compatible with VCR Male integrated														
		Conr			N	1/4		Male nu												
	l				Q	1/4 G	UJR Female nut (Without pure ring) GP Grade													
	③ Wetted pa by grade																			
	(4) Pressure ran						D -0.1 to 0.5MPa (Number of digit indication: .500)													
							ige	e E -0.1 to 1MPa (Number of digit indication: 1.00) F -0.1 to 2MPa (Number of digit indication: 2.00)												
Please specify the pressure							2 0 to 0.5MPa (Number of digit indication: 2.50)													
range and units separately besides selection of			\rightarrow				3 0 to 1MPa (Number of digit indication: 1.00)													
range co	range code.							4		2MPa 5MPa			of digi							
				7 0 to 10MPa								(Number of digit indication: 5.00) (Number of digit indication: 10.0)								
								8	0 to	20MPa	1)	Number	umber of digit indication: 20.0)							
						5 Displ	ay acc	uracy	7	± (1	.0%F.S	S.+1dig	it)							
							6 Powe	er sourc	e	B Lithium battery (3V DC): CR2032										
										15			0	Nil						
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General-use

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ΖΤ	6	4	_	V	0	2	—		7	В	×	×	×	\times	\times	\times	\times	\times			
Digital Pre With Batte Gene		rated		1	2	3	-	4	5	6	7	8	9	10	1	12	13	14	(
Model number									Selective spec. Additional spec. (Option)												
	123 Mountin		V02	Type S Connection: 1/4 VCR Male Wetted parts material •Pressure sensor: SUS630 (17-4PH) (All welding) •Fitting: SUS316																	
1	(4)			D		-0.1 to 0.5MPa (Number of digit indication: .500)															
					Pres	sure rai	nge	E		-0.1 to 1MPa (Number of digit indication: 1.00)											
Please specify the pressure range and units separately								F 2	-0.1 to 2MPa (Number of digit indication: 2.00) 0 to 0.5MPa (Number of digit indication: .500)												
				->					0 to 1MPa (Number of digit indication: 1.00)												
besides selection of range code.						0 to 2MPa (Number of digit indication: 2.00)															
								6	0 to s	5MPa	1)	lumber	of digi	t indica	ition: 5.	00)					
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								8	0 to 2	to 20MPa (Number of digit indication: 20.0)											
						5 Disp	lay acc	uracy	7	7 ± (1.0%F.S.+1digit)											
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