

(Differential Pressure Transducer)

(mADC, VDC) , 가

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, (non - linearity), (hysteresis), (deadband), (non - repeatability) 가 가 가 가 가 가 4가 ,

Accuracy, Operating Span, Thermal Effect Auto Zeroing Circuitry

* Accuracy().

가 ()

가 Accuracy “가 (visible summation)” non - linearity, hyateresis, deadband, non - repeatability

가 Accuracy 가 가

Accuracy %FS(percentage of the full span)

Accuracy . (: .5% of FS

Accuracy 가 full span FS .5% 가

).

* Operating(Input) Span(()).

Operating Span 가 가

. 가 0.35in.W.C.

full span() 0.5in.W.C. 가

0.35in.W.C. Operating(Input) Span .

Operating Span full span

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Accuracy full span operating span

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$$\text{Accuracy} \times \frac{\text{full span}}{\text{operating span}} = \text{Accuracy at Operating Span}$$

* Thermal(Temperature) Effect().

Thermal Effect 가 ,

(“Thermal Effect”) Accuracy
 thermal effect %F.S.(percentage of full span)
 %F.S.O.(percentage of full scale output) , Operating Span

$$\vdots$$

1. $\frac{1}{2}$ - Minimum 0.01"W.C.
2. (accuracy + temperature effect)
3. () 가
(operating span turndown)

VAV fan control system process setback mode , 20%
turndown 5 1 turndown
가 Operating Span 25 1
turndown .
가 full span
,
가
가
가
가 40

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Example 1 : FMS Full Span 0.15"W.C. ,
 130% 0.2"W.C. Full Span 가 가 .
 가 ±0.5%, ±1.3%, 1.5% FS 가 50% Turndown
 Operating Span :

TRANSDUCER DATAS			
	JDP-AZ2000 Series	A DP 1000 Series	S 264 Series
Full Span	0 - 0.2in.W.C.	0 - 0.25in.W.C.	0 - 0.2in.W.C.
	±0.5% of FS	±1.5% of FS	±1.3% of FS
	Yes	No	No
	±0.005% of FS/	±0.055% of FS/	±0.033% of FS/
	Calibration at 70	Calibration at 70	Calibration at 70
Operating Conditions			
(0.15" x 50%)	0.075"W.C	0.075"W.C	0.075"W.C
	104	104	104
Accuracy at Operating Conditions			
(at Full Span)	0.5X0.2"=0.001"W.C.	1.5X0.25"=0.00375"W.C.	1.3X0.2"=0.0026"W.C.
(at Operating Span)	0.001"/0.075"=1.33%	0.00375"/0.075"=5.00%	0.0026"/0.075"=3.47%

* Accuracy : Includes Linearity, Hysteresis, Repeatability

Example 2 : FMS Full Span 0.15" w.c. ,
130% 0.2"W.C. Full Span 가 가 .
Thermal Effect가 ±0.005%FS/ , ±0.055%FS/ , ±0.033%FS/ , ±0.028%FS/
가 50% Turndown Thermal Effect Operating Span
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TRANSDUCER DATAS			
	JDP-AZ2000 Series	A DP 1000 Series	S 264 Series
Full Span	0 - 0.2in.W.C.	0 - 0.25in.W.C.	0 - 0.2in.W.C.
	±0.5% of FS	±1.5% of FS	±1.3% of FS
	Yes	No	No
	±0.005% of FS/	±0.055% of FS/	±0.033% of FS/
	Calibration at 70	Calibration at 70	Calibration at 70
Operating Conditions			
(0.15" x 50%)	0.075"W.C	0.075"W.C	0.075"W.C
	104	104	104
Accuracy at Operating Conditions			
(at Full Span)	0.5X0.2"=0.001"W.C.	1.5X0.25"=0.00375"W.C.	1.3X0.2"=0.0026"W.C.
(at Operating Span)	0.001"/0.075"=1.33%	0.00375"/0.075"=5.00%	0.0026"/0.075"=3.47%
Thermal Effect at Operating Conditions			
104 () - 70 ()	34	34	34
(at Full Span)	0.005%X34 =0.17%	0.055%X34 =1.87%	0.033%X34 =1.122%
(at Operating Span)	(0.17%X0.2")/0.075" = 0.45%	(1.87%X0.25")/0.075" = 6.23%	(1.122%X0.2")/0.075" = 2.99%
Total Accuracy at Operating Conditions			
(at Operating Span)	1.33% + 0.45% = 1.78%	5.00% + 6.23% = 11.23%	3.47% + 2.99% = 6.46%

Span Auto Zeroing Auto Zeroing Operating ,
Auto Zeroing ,