4. Model KFDB differential pressure indicating controller

4-1. KFDB standard type

Model No. : KFDB [ ][ ] - [I][II][III][IV][V][VI][VII][VIII][IX] - [X]

Basic No. — Selection — Option

Model No. Ex.

KFDB22 -332244A1T -M67

Selection — I II Element Type

Range	I	II
High	25 to 500kPa {2,500 to 50,000 mm H2O}	2.5 to 53.0kPa {250 to 5,500 mm H2O}
Med	2.5 to 53.9kPa {250 to 5,500 mm H2O}	0.5 to 6kPa {50 to 600 mm H2O}
Low	0.5 to 6kPa {50 to 600 mm H2O}	0.1 to 1.2kPa {10 to 120 mm H2O}
Lowest	0.1 to 1.2kPa {10 to 120 mm H2O}	25 to 500 kPa {2500 to 50,000 mm H2O}
Press	25 to 500 kPa {2500 to 50,000 mm H2O}	2.5 to 53.0kPa {250 to 5,500 mm H2O}
High Press	2.5 to 53.0kPa {250 to 5,500 mm H2O}	

Selection — III to VI Cover & Diaphragm

III	HP Cover Material	1 : SF45
IV	LP Cover Material	2 : SUS316
V	HP Diaph. Material	3 : Monel
VI	LP Diaph. Material	4 : Tantalum
		5 : Rigid PVC
		8 : SUS316L

Selection — III to VI Cover & Diaphragm

III	HP Cover Material	1 : SF45
		2 : SUS316
IV	LP Cover Material	3 : Monel
V	HP Diaph. Material	4 : Tantalum
		5 : Rigid PVC
VI	LP Diaph. Material	8 : SUS316L

VII Air piping connect: A = Rc 1/4 internal; B = 1/4 NPT internal

VIII Pneumatic Signal (* 1): 1 = 0.2 to 1.0kgf/cm²; 2 = 3 to 15psi.; 3 = 0.2 to 1.0 bar; 4 = 20 to 100 kPa; 8 = 19.6 to 98.1kPa (equality to 0.2 to 1.0kgf / cm²); A = Dual Scale main: Pa (20 to 100 kpa) sub: kgf/cm2(0.2 to 1.0kgf/cm²); D = Dual Scale main: kgf/cm² (0.2 to 1.0kgf/cm²) sub: pa (20 to 100 kpa)

IX Mounting: P = Panel; T = 2-inch Pipe

X Option: X = No Option; K = With External Sp Manual Setting knob; M = With Built-in Manual Controller With Auto/Manual Switch; 5 = Elevation; 6 = Suppression; 7 = Pressure regulator with filter; H = For high accuracy

Y -Spec: 23 = Vacuum Service (* 9); 29 = With Steam Block (* 2); 66 = Stainless steel Bolt (* 3); 138[ ] = Corrosion proof/Silver coating (* 5); 169 = With Adjustable Damper (* 13); 171 = Rear Process Pipe Connec. (* 5); 182 = Degreasing for Oxygen Service (* 6); 183 = Chlorine Service (* 7); 186 = Measuring Controller for Small -Flow (*10)

Type	Control Model	Model No.	Basic No.	Price	11	22	33	44	81	82	1122				1188			2222			2233			2244		
					0	0	0	0	0	0	0	39	58	97	8	46	102	20	72	102	90	166	179	229	339	351
Indicating Transmitter	Non -Control	KFDB00		910	✓						✓				✓			✓			✓			✓		
						✓					✓				✓			✓			✓			✓		
							✓					✓				✓			✓			✓			✓	
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Indicating Controller [ ] =1 Indicating Transmitting Controller [ ] = 2 (Local Type)	P+Manual Reset	KFDB[ ]1		906	✓						✓				✓			✓			✓			✓		
	PI	KFDB[ ]2		914		✓					✓				✓			✓			✓			✓		
	PID	KFDB[ ]3		962			✓				✓				✓			✓			✓			✓		
	PD+Manual Reset	KFDB[ ]4		954				✓				✓				✓			✓			✓			✓	
	PI + Batch	KFDB[ ]5		995					✓				✓				✓			✓			✓			✓
										✓				✓			✓			✓			✓			✓
	On -Off	KFDB[ ]6		902																						
	Differential Gap	KFDB[ ]7		901																						
	P + External Reset	KFDB[ ]8		911																						
	PD+External Reset	KFDB[ ]9		962																						
Indicating Controller [ ] =3 Indicating Transmitting Controller [ ] = 4 (Cascade Type)	P+Manual Reset	KFDB[ ]1		1,054	✓						✓				✓			✓			✓			✓		
	PI	KFDB[ ]2		1,037		✓					✓				✓			✓			✓			✓		
	PID	KFDB[ ]3		1,086			✓				✓				✓			✓			✓			✓		
	PD+Manual Reset	KFDB[ ]4		1,027				✓				✓				✓			✓			✓			✓	
	PI + Batch	KFDB[ ]5		1,119					✓				✓				✓			✓			✓			✓
										✓				✓			✓			✓			✓			✓
	On -Off	KFDB[ ]6		1,026																						
	Differential Gap	KFDB[ ]7		1,027																						
	P + External Reset	KFDB[ ]8		1,037																						
	PD+External Reset	KFDB[ ]9		1,086																						

Type	Control Model	Basic No.	2288			3333		5533		5544		A	B	1	2	3	4	8	A	D	P	T	X	K	M	5	6	7	H	23	29	66	138[ ]	169	171	182		183		*10
			27	77	141	281	326	102	154	224	306	0	0	0	0	20	0	0	20		0	0	0	8	67	17	17	31	5	27	33	16	27	* 4	8	14	46	58	46	58	46
Indicating Transmitter	Non -Control	KFDB00	✓			✓		✓		✓		✓		✓	✓	✓	✓		✓		✓		✓			✓	✓		✓	✓		✓		✓	✓	✓	✓		✓		✓
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						✓				✓		✓		✓	✓	✓	✓	✓	✓		✓		✓			✓	✓			✓		✓	✓	✓	✓			✓		✓	✓
												✓		✓	✓	✓	✓	✓	✓		✓		✓			✓	✓	✓					✓	✓	✓			✓		✓	✓
Indicating Controller [ ] =1 Indicating Transmitting Controller [ ] = 2 (Local Type)	P+Manual Reset	KFDB[ ]1	✓			✓		✓		✓		✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓		✓		✓
	PI	KFDB[ ]2		✓			✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓		✓
	PID	KFDB[ ]3			✓		✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓		✓		✓
	PD+Manual Reset	KFDB[ ]4				✓		✓		✓		✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓			✓		✓	✓
	PI + Batch	KFDB[ ]5					✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓														
												✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓					✓	✓				✓				✓
	On -Off	KFDB[ ]6																																						
	Differential Gap	KFDB[ ]7																																						
	P + External Reset	KFDB[ ]8																																						
	PD+External Reset	KFDB[ ]9																																						
Indicating Controller [ ] =3 Indicating Transmitting Controller [ ] = 4 (Cascade Type)	P+Manual Reset	KFDB[ ]1	✓			✓		✓		✓		✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓		✓		✓	✓	✓	✓		✓		✓
	PI	KFDB[ ]2		✓			✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓		✓		✓
	PID	KFDB[ ]3			✓		✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓		✓		✓	✓	✓	✓		✓		✓
	PD+Manual Reset	KFDB[ ]4				✓		✓		✓		✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓		✓	✓		✓		✓	✓			✓		✓	✓
	PI + Batch	KFDB[ ]5					✓		✓		✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓														
												✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓					✓	✓				✓				✓
	On -Off	KFDB[ ]6																																						
	Differential Gap	KFDB[ ]7																																						
	P + External Reset	KFDB[ ]8																																						
	PD+External Reset	KFDB[ ]9																																						

Note
* 1. Contact YAMATAKE when engineering units are different between input range pressure and output signal pressure.
* 2 Cannot be featured in the case of Monel and PVC cover for Selection III and IV ; I.e. KFDB[ ][ ] -3333,5533,5544
* 3 Maximum working pressures for stainless steel bolt are as shown in the table below.

Model No.	Cover Material (Selection III, IV)			
	SF45	SUS316	Monel	PVC
KFDB[ ][ ] -11,22	60kgf / cm²	60kgf / cm²	60kgf / cm²	15kgf / cm²
KFDB[ ][ ] -33	25kgf / cm²	25kgf / cm²	25kgf / cm²	10kgf / cm²
KFDB[ ][ ] -81,82	230kgf / cm²	230kgf / cm²	-	-

* 4 Refer to Common Data on KF Series.
* 13 Time constant (continuously adjustable) is as follows.
(1) KFDB[ ][ ] -11,22,81, 82 : 0.5 sec. or less min., 30 sec. or more max.
(2) KFDB[ ][ ] -33 : 1.5 sec. or less min., or more max.
(3) KFDB[ ][ ] -44 : With adjustable damper as standard. 2 sec. Or less min., 25 sec. Or more max.
* 7 Available for diaphragm material only in Tantalum Fill liquid : Fluoric oil Wetted part : Degreased
Working temperature (fluid, ambient) : -10 to 80℃ I.e., KFDB[ ][ ] -[ ][ ]2244, [ ][ ] -5544
* 9 Vacuum Service is not available with Y182, Y183 and Y169.
*10 Applicable Model : KFDB[ ][ ] -22,38,82

4. Model KFDB differential pressure indicating controller

4-2. KFDB flange type, remote seal diaphragm type

Model No. KFDB [ ][ ] - [I][II][III][IV][V][VI][VII][VIII][IX][X][XI][XII] - [XIII]

(Basic No. / Selection / Option)

Model No. Ex.

KFDB22 -611122100A1F -M7

KFDB42 -721122503A1T -M7

Selection — I II Element: Flange (High Range 25 to 500kPa (2,500 to 50,000mmH2O); Middle Range 2.5 to 53.9kPa (250 to 5,500mmH2O)); Remote Seal Diaphragm (High Range 25 to 500kPa (2,500 to 50,000mmH2O); Middle Range 2.5 to 53.9kPa (250 to 5,500mmH2O))

Selection — III to VI Cover & Diaphragm, Standard Flange Type:
III HP side Flange material; IV LP side Cover material; V HP side Diaph. material; VI LP side Diaph. material
1 : SF45; 2 : SUS316; 3 : Monel Lining; 4 : Tantalum; 5 : Rigid PVC; 7 : SUS304; 8 : SUS316L

Selection — III to VI Cover & Diaphragm, Extended Flange:
III HP side Flange material; IV LP side Cover material; V HP side Diaph. material; VI LP side Diaph. material
1 : SF45; 2 : SUS316; 3 : Monel; 4 : Tantalum; 5 : Rigid PVC; 7 : SUS304; 8 : SUS316L

Selection — VII Flange Rating, Standard Flange: 80mm JIS 10K (RF); 80mm JIS 30K (RF); 3in. ANSI 150 (RF); 3in. ANSI 300 (RF)

Selection — VII Flange Rating, Extended Flange: 100mm JIS 10K (RF); 100mm JIS 30K (RF); 4in. ANSI 150 (RF); 4in. ANSI 300 (RF)

Selection — VIII Capillary Length: 2m; 3m; 5m

Selection — IX Extended Flange Length: None; 100mm; 150mm

Selection — X Air Piping connection: Rc 1/4 internal; 1/4 NPT internal

Selection — XI Pneumatic Signal *1: 0.2 to 1.0kgf/cm2; 3 to 15psi.; 0.2 to 1.0 bar; 20 to 100 kPa; 19.6 to 98.1kPa (equality to 0.2 to 1.0kgf / cm2.); Dual Scale main: Pa (20 to 100 kpa) sub: kgf/cm2(0.2 to 1.0 kgf/cm2); Dual Scale main: kgf/cm2 (0.2 to 1.0kgf/cm2) sub: pa (20 to 100 kpa)

Selection — XII Mounting: Flange; 2-inch Pipe; Panel

XIII Option: No Option; Manual setting Knob With External SP; With Built -in Manual Controller With Auto/Manual Switch; Elevation; Suppression; Pressure regulator with filter

Y -Spec: Vacuum Service; High Temp. Service; High Temp. -Vacuum Service; Stainless steel Bolt; Corrosion -resistant Silver coating; Adjustable Damper; Degreasing for Oxygen Service; Chlorine Service

| Type | Control Model | Model No. Basic No. | Price | I II Element: Flange High Range | Flange Middle Range | Remote Seal Diaphragm High Range | Remote Seal Diaphragm Middle Range | III to VI Cover & Diaphragm, Standard Flange Type | | | | | | | | | | | | III to VI Cover & Diaphragm, Extended Flange | | | | | | | | | | | | | | | | | | VII Flange Rating, Standard Flange: 80mm JIS 10K (RF) | | | | 80mm JIS 30K (RF) | | | | 3in. ANSI 150 (RF) | | | | 3in. ANSI 300 (RF) | | | | VII Flange Rating, Extended Flange: 100mm JIS 10K (RF) | | | | 100mm JIS 30K (RF) | | | | 4in. ANSI 150 (RF) | | | | 4in. ANSI 300 (RF) | | | | VIII Capillary Length | | | IX Extended Flange Length | | | X Air Piping connection | | XI Pneumatic Signal *1 | | | | | | | XII Mounting | | | XIII Option | | | | | | | | Y -Spec | | | | | | | |
|---|---|---