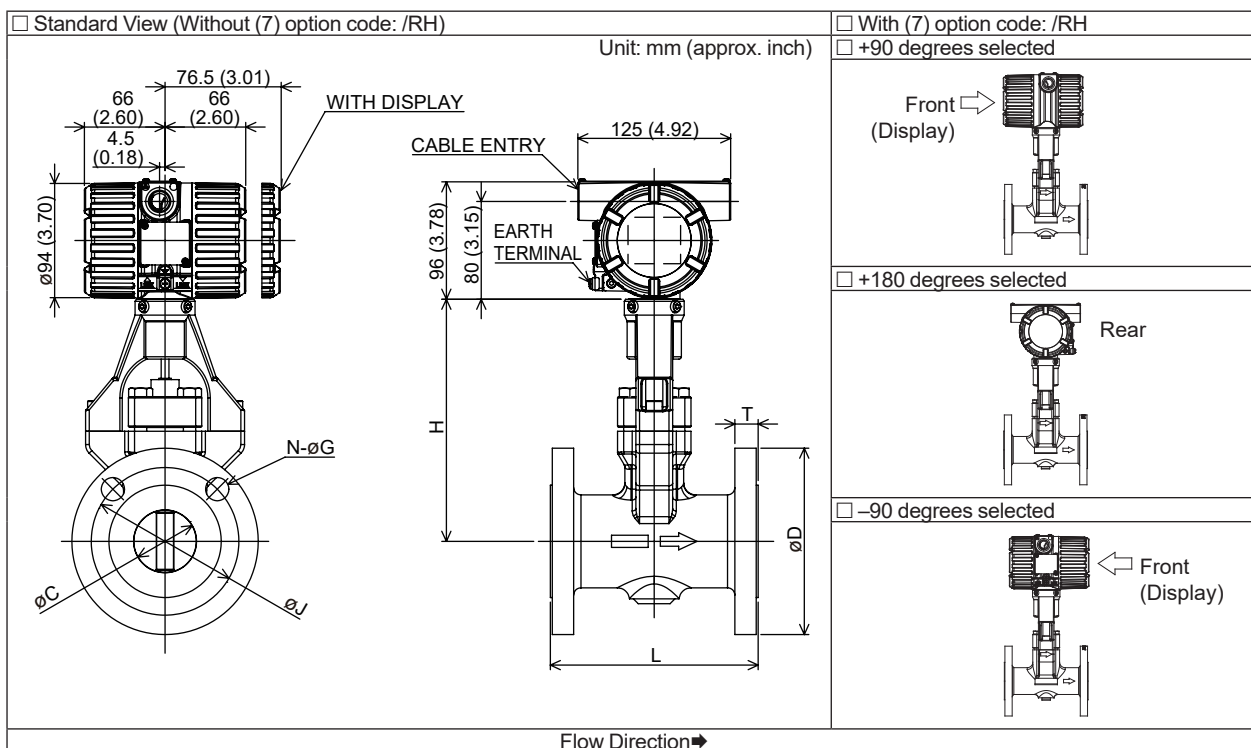


Drawings

Vortex Flowmeter VY Series
VY050, VY080, VY100
General Type
Process Connection: GB Flange

SD 01F07D05-02EN

- **General Type: GB Flange (Size 50 mm(2 inch), 80 mm(3 inch), 100 mm(4 inch))**


$$\begin{array}{r} \text{VY}\square\square\square - \square\square\square \text{ -0 } \square\square\square \square\square\square\square - \square\square\square\square\square \text{ 00 } / \square \\ \hline (1) \qquad (2) \quad (3) \qquad (4) \qquad (5) \quad (6) \qquad (7) \end{array}$$

- **Code details for SD**

(1) Model	VY050: Size 50 mm(2 inch), VY080: Size 80 mm(3 inch), VY100: Size 100 mm(4 inch)
(2) Type of Body	-0: General type
(3) Type of Shedder Bar	A: General type, B: General Type with Temperature Sensor, C: High Temperature Type, D: High Temperature Type with Temperature Sensor, E: Cryogenic Type, G: Long Neck Type, H: Long Neck Type with Temperature Sensor
(4) Process Connection GB Flange	[Body Material, Face, Pressure Rating] BBC□: CF8M, Raised Face(RF), PN10 to 100 CBC□: CF3M, Raised Face(RF), PN10 to 100 BFC□: CF8M, Large Male Face (MF-F), PN10 to 63 HBC□: CW-12MW, Raised Face(RF), PN10 to 40 BGC□: CF8M, Groove(TG-G), PN40 to 63 □: Pressure Rating, 1= PN10, 2= PN16, 3= PN25, 4= PN40, 5= PN63, 6= PN100
(5) Cable Entry : One : Two	0: JIS G1/2 Female, 2: ASME 1/2 NPT Female, 4: ISO M20x1.5 Female A: JIS G1/2 Female, C: ASME 1/2 NPT Female, E: ISO M20x1.5 Female, J and K: [Only for Japan Flameproof] ISO M20x1.5 Female
(6) Communication and Input/Output	JA: HART 7 communication, 4 to 20 mA DC, Pulse/Status output JB: HART 7 communication, 4 to 20 mA DC, Pulse/Status output, Analog input F0: FOUNDATION Fieldbus Communication M0: Modbus Communication, Pulse/Status output NN: None (Remote Sensor)
(7) Options	/RH: Cable Entry Direction Change /□: Other Options (No effect for structural demension)

• Dimensions (Lay Length, Outer Diameter etc) and Weight for each Model

□ VY050		External Dimensions mm (approx. inch)						Weight kg(lb)*2
		Lay Length L*1	Outer Diameter øD	Flange Thickness T	Bolt Circle Diameter øJ	No. of Bolt Holes N	Hole Diameter øG	
☐	BBC2: CF8M, RF, PN16/10	170 (6.69)	165 (6.5)	18 (0.71)	125 (4.92)	4	18 (0.71)	11.8 (26) [12.2 (26.9)]
☐	CBC2: CF3M, RF, PN16/10							
☐	BFC2: CF8M, MF-F, PN16/10							
☐	HBC2: CW-12MW, RF, PN16/10							
☐	BBC4: CF8M, RF, PN40/25	170 (6.69)	165 (6.5)	20 (0.79)	125 (4.92)	4	18 (0.71)	11.8 (26) [12.2 (26.9)]
☐	CBC4: CF3M, RF, PN40/25							
☐	BFC4: CF8M, MF-F, PN40/25							
☐	BGC4: CF8M, TG-G, PN40							
☐	HBC4: CW-12MW, RF, PN40/25							13.2 (29.0) [13.6 (29.8)]
☐	BBC5: CF8M, RF, PN63	170 (6.69)	180 (7.09)	26 (1.02)	135 (5.31)	4	22 (0.87)	15.1 (33.3) [15.5 (34.2)]
☐	BFC5: CF8M, MF-F, PN63							
☐	BGC5: CF8M, TG-G, PN63							
☐	BBC6: CF8M, RF, PN100	170 (6.69)	195 (7.68)	30 (1.18)	145 (5.71)	4	26 (1.02)	18 (39.7) [18.4 (40.6)]

□VY080		External Dimensions mm (approx. inch)						Weight kg(lb)*2	
		(4) Process Connection	Lay Length L*1	Outer Diameter øD	Flange Thickness T	Bolt Circle Diameter øJ	No. of Bolt Holes N		Hole Diameter øG
		Code: Body Material, Face, Pressure Rating							
☐	BBC2: CF8M, RF, PN16/10	200 (7.87)	200 (7.87)	20 (0.79)	160 (6.3)	8	18 (0.71)	19.9 (43.9) [20.3 (44.8)]	
☐	CBC2: CF3M, RF, PN16/10								
☐	BFC2: CF8M, MF-F, PN16/10								
☐	HBC2: CW-12MW, RF, PN16/10								
☐	BBC4: CF8M, RF, PN40/25	200 (7.87)	200 (7.87)	24 (0.94)	160 (6.3)	8	18 (0.71)	20.5 (45.2) [20.9 (46.1)]	
☐	CBC4: CF3M, RF, PN40/25								
☐	BFC4: CF8M, MF-F, PN40/25								
☐	BGC4: CF8M, TG-G, PN40								
☐	HBC4: CW-12MW, RF, PN40/25							22.8 (50.2) [23.2 (51.1)]	
☐	BBC5: CF8M, RF, PN63	200 (7.87)	215 (8.46)	28 (1.1)	170 (6.69)	8	22 (0.87)	26 (57.3) [26.4 (58.2)]	
☐	BFC5: CF8M, MF-F, PN63								
☐	BGC5: CF8M, TG-G, PN63								
☐	BBC6: CF8M, RF, PN100	200 (7.87)	230 (9.06)	36 (1.42)	180 (7.09)	8	26 (1.02)	32.1 (70.8) [32.5 (71.7)]	

□VY100		External Dimensions mm (approx. inch)						Weight kg(lb)*2	
		(4) Process Connection	Lay Length L*1	Outer Diameter øD	Flange Thickness T	Bolt Circle Diameter øJ	No. of Bolt Holes N		Hole Diameter øG
		Code: Body Material, Face, Pressure Rating							
☐	BBC2: CF8M, RF, PN16/10	220 (8.66)	220 (8.66)	20 (0.79)	180 (7.09)	8	18 (0.71)	23.7 (52.2) [24.1 (53.1)]	
☐	CBC2: CF3M, RF, PN16/10								
☐	BFC2: CF8M, MF-F, PN16/10								
☐	HBC2: CW-12MW, RF, PN16/10							26.5 (58.2) [26.9 (59.1)]	
☐	BBC4: CF8M, RF, PN40/25	220 (8.66)	235 (9.25)	24 (0.94)	190 (7.48)	8	22 (0.87)	27.9 (61.5) [28.3 (62.4)]	
☐	CBC4: CF3M, RF, PN40/25								
☐	BFC4: CF8M, MF-F, PN40/25								
☐	BGC4: CF8M, TG-G, PN40								
☐	HBC4: CW-12MW, RF, PN40/25							31.2 (68.6) [31.6 (69.4)]	
☐	BBC5: CF8M, RF, PN63	220 (8.66)	250 (9.84)	30 (1.18)	200 (7.87)	8	26 (1.02)	37.9 (83.6) [38.3 (84.4)]	
☐	BFC5: CF8M, MF-F, PN63								
☐	BGC5: CF8M, TG-G, PN63								
☐	BBC6: CF8M, RF, PN100	220 (8.66)	265 (10.43)	40 (1.57)	210 (8.27)	8	30 (1.18)	39.2 (86.4) [39.6 (87.3)]	

*1: Lay Length (L) tolerances are as follows:

- VY015 to VY200: ± 3.0 mm

*2: In case of Type of Shedder Bar: C, D, E, G or H, refer to the value in square brackets

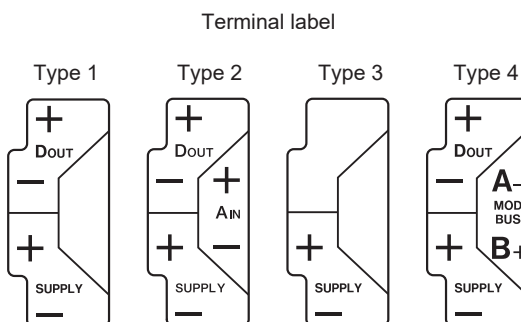
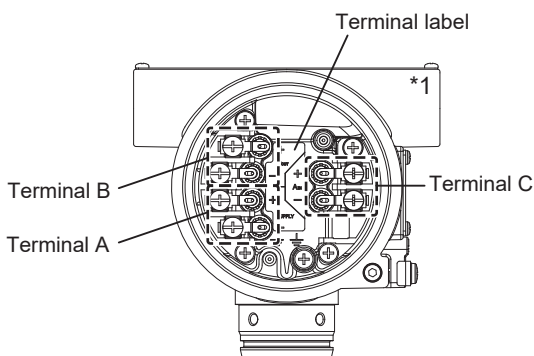
• Dimensions (height and diameters) for each Model

	(1) Model	(3) Type of Shedder Bar	Height H mm (inch)	Inner Diameter øC mm (inch)
☐	VY050	A, B: General type	198 (7.8)	51.1 (2.01)
☐		C, D: High Temperature type, E: Cryogenic type, G, H: Long Neck type	258 (10.16)	51.1 (2.01)
☐	VY080	A, B: General type	215 (8.46)	71 (2.8)
☐		C, D: High Temperature type, E: Cryogenic type, G, H: Long Neck type	275 (10.83)	71 (2.8)
☐	VY100	A, B: General type	236 (9.29)	93.8 (3.69)
☐		C, D: High Temperature type, E: Cryogenic type, G, H: Long Neck type	296 (11.65)	93.8 (3.69)

• Terminal Layout Diagram

☐ Integral Transmitter Case

Terminal screw size: M4



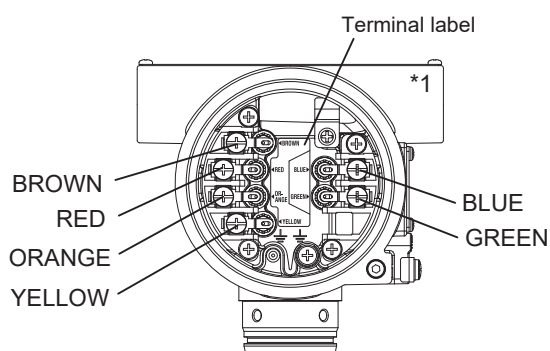
Terminal label	Communication and input/output	Terminal A	Terminal B	Terminal C
Type 1	JA	SUPPLY +, SUPPLY – Power supply, HART communication and analog output	D _{OUT} +, D _{OUT} – Pulse/status output	–
Type 2	JB	SUPPLY +, SUPPLY – Power supply, HART communication and analog output	D _{OUT} +, D _{OUT} – Pulse/status output	A _{IN} +, A _{IN} – Analog input
Type 3	F0	SUPPLY +, SUPPLY – Power supply and FOUNDATION Fieldbus communication	– (*2)	–
Type 4	M0	SUPPLY +, SUPPLY – Power supply	D _{OUT} +, D _{OUT} – Pulse/status output	MODBUS A –, MODBUS B + Modbus communication

*1: When -0 (JIS G1/2 female, one electrical connection), -2 (ASME 1/2 NPT female, one electrical connection), or -4 (ISO M20x1.5 female, one electrical connection) is selected for the cable entry, it is only located on the right side in this view.

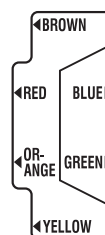
*2: Terminal B is a terminal block only and no screws are attached.

☐ Remote Sensor Terminal Box

Terminal screw size: M4



Terminal label



Terminal	Application
BROWN, RED, ORANGE, YELLOW, GREEN, BLUE (*2)	Connect the vortex fowmeter signal cable (VY1C)

*1: The cable entry is only located on the right side when viewed from the front.

*2: Match the colors of the vortex fowmeter signal cable (VY1C) with the corresponding terminals.