

Modeling Code – Promass 80F Coriolis Mass Flowmeter

EXAMPLE: 1 Inch Promass 80 Transmitter, F Sensor

80F000	010	020	030	040	050	060	070	080	090	100
80F25	A	AAS	A	9	N	1	B	A	A	D

80F Promass 80F Coriolis Mass Flowmeter

000 Nominal Diameters:

08	DN8 3/8" full scale max. 2.0 t/h / 2.2 tons/h
15	DN15 1/2" full scale max. 6.5 t/h / 7.2 tons/h
25	DN25 1" full scale max. 18 t/h / 19.8 tons/h
40	DN40 1 1/2" full scale max. 45 t/h / 49.6 tons/h
50	DN50 2" full scale max. 70 t/h / 77.2 tons/h
80	DN80 3" full scale max. 180 t/h / 198 tons/h
1H	DN100 4" full scale max. 350 t/h / 386 tons/h
1F	DN150 6" full scale max. 800 t/h / 880 tons/h
2F	DN250 10" full scale max. 2200 t/h / 2425 tons/h

010 Measuring Tube Material:

A	Stainless Steel
B	Alloy C-22
C	Stainless Steel, mat. certificate (wetted parts) (not for SMS, DIN11851)
D	Alloy C-22, mat. certificate (wetted parts) (not for SMS, DIN11851)
E	Stainless Steel, mat. certificate (CT+WP = containment + wetted parts) (not for SMS, DIN11851)
F	Alloy C-22, mat. certificate (CT+WP = containment + wetted parts) (not for SMS, DIN11851)
1	Alloy C-22 + Stainless Steel, HT, mat. certificate (containment + wetted parts) HT = high temperature (Only with flange D2S,AAS,ABS,NDS,NES)
3	Alloy C-22, high temp., mat. certificate (containment + wetted parts) (Only with flange D2C,AAC,ABC,NDC,NEC)
9	Special version, to be specified

020 Process Connection:

Only for Stainless Steel measuring tubes:

D1S	PN16, 316L/1.4404, EN1092-1-B1 (DIN2501) flange
D2S	PN40, 316L/1.4404, EN1092-1-B1 (DIN2501) flange
D3S	PN63, 316L/1.4404, EN1092-1-B2 (DIN2501) flange
D4S	PN100, 316L/1.4404, EN1092-1-B2 (DIN2501) flange
D5S	PN16 groove, 316L/1.4404, EN1092-1-D (DIN2512N) flange
D6S	PN40 groove, 316L/1.4404, EN1092-1-D (DIN2512N)
D7S	PN63 groove, 316L/1.4404, EN1092-1-D (DIN2512N)
D8S	PN100 groove, 316L/1.4404, EN1092-1-D (DIN2512N) flange
AAS	Cl.150, 316L/1.4404, flange ANSI B16.5
ABS	Cl.300, 316L/1.4404, flange ANSI B16.5
ACS	Cl.600, 316L/1.4404, flange ANSI B16.5
R2S	PN40 DN25, 316L/1.4404, EN1092-1-B1 (DIN2501) flange

Only for Alloy C-22 measuring tubes:

D1C	PN16, Alloy C-22, EN1092-1-B1 (DIN2501) flange
D2C	PN40, Alloy C-22, EN1092-1-B1 (DIN2501) flange
D3C	PN63, Alloy C-22, EN1092-1-B2 (DIN2501) flange
D4C	PN100, Alloy C-22, EN1092-1-B2 (DIN2501) flange
D5C	PN16 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange

- D6C PN40 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
- D7C PN63 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
- D8C PN100 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
- AAC Cl.150, Alloy C-22, flange ANSI B16.5
- ABC Cl.300, Alloy C-22, flange ANSI B16.5
- ACC Cl.600, Alloy C-22, flange ANSI B16.5
- 999 Special version, to be specified

030 Additional Test, Certificate:

- A Basic version
- B pressure test (tube) + type test (containment)
- C Cleaned from oil+grease (wetted parts) (not for high temperature version)
- D Cleaned from oil+grease (wetted parts) + Pressure test (tube) + type test (containment) (not for high temperature version)
- F Purge + Pressure test (tube) + type test (containment) (not for high temperature version)
- G Rupture disk + pressure test (tube) (not for high temperature version)
- S marine certificate
- T marine certificate + pressure test (tube) + type test (containment)
- 5 CRN approval
- 6 CRN approval + pressure test (tube) + Type test (containment)
- 9 Special version, to be specified

040 Calibration Massflow; Density:

- A 0.15%, 0.01g/ccm
- B 0.15%, 0.001g/ccm (not for high temperature version)
- C 0.15% 5-point, 0.01g/ccm (specify customer flow range)
- D 0.15% 5-point, 0.001g/ccm (not for high temperature version) (specify customer flow range: mass or volume)
- G 0.15% 5-point, 0.01g/ccm, traceable ISO/IEC17025 (specify customer flow range)
- H 0.15% 5-point, 0.001g/ccm, traceable ISO/IEC17025 (not for high temperature version) (specify customer flow range: mass or volume)

- P 0.10%, 0.01g/ccm (not for high temperature version) (only mass calibration)
- Q 0.10%, 0.001g/ccm (not for high temperature version) (only mass calibration)

9 FMC (Canada, U.S., Mexico)

Specify on order if calibration is different than option A

050 Approval:

- C ATEX II 2GD+ IECEx Z1,21 Ex d ia IIB Ex tD A21 Z= Zone (only for field housing, Ex)
- E ATEX II 2GD+ IECEx Z1,21 Ex d ia IIB Ex tD A21 Z= Zone (only for field housing, Ex)
- N XP FM Cl.I Div.1/CSA Cl.I Div.1, ABCD + Zone 1 (only for field housing, Ex)
- O *XP FM Cl.I Div.1/CSA Cl.I Div.1, ABCD+. Zone 1
- P XP FM Cl.I Div.1/CSA Cl.I Div.1, CD + Zone 1 (only for field housing, Ex)
- 4 ATEX II 1/2GD+ IECEx Z0/1,21 Ex dia IIB Z= Zone (only for field housing, Ex)
- 6 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIB Z= Zone (only for field housing, Ex)
- 9 Special version, to be specified

060 Housing:

- E Remote, field IP67 NEMA4X + 10m/30ft Cable (not for approval A,H,J,R)
- F Remote, field IP67 NEMA4X + 20m/65ft Cable (not for approval A,H,J,R)
- J Remote, field, for heating + 10m/30ft Cable (not for approval A,H,J,R) (not for high temperature version)
- K Remote, field, for heating + 20m/65ft Cable (not for approval A,H,J,R) (not for high temperature version)
- L Compact IP67 NEMA4X, stainless, Ex (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)
- M Compact IP67 NEMA4X, stainless, Ex, -40 oC/oF T-amb. (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)
- N Compact IP67 NEMA4X, stainless, Ex, HE, -40°C/°F T-amb., HE = harsh environment (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)

- 1 Compact IP67 NEMA4X, Alu, -40oC/oF T-amb.
(only for approval A,B,C,D,E,N,P,R, 3,4,5,6)
(not for high temperature version)
- 7 Remote,field IP67 NEMA4X,-40oC/oF T-amb.
+ 20m/65ft cable
(only for approval B,C,D,E,N,P,3,4,5,6)
(not for high temperature version)
- 4 Compact IP67 NEMA 4X, Alu, HE,
-40°C/°F T-amb., HE = harsh environment
(only for approval A,B,C,N,P,R,3,4)
(not for high temperature version)
- 8 Remote, field IP67 NEMA4X, HE,
-40°C/°F T-amb. + 20m/65 ft cable,
HE = harsh environment
(only for approval B,C,N,P,3,4)
(not for high temperature version)
- 9 Special version, to be specified

070 Cable Entry:

- A Gland M20 (EEx d > thread M20)
(for approval B,C,3,4 threads only)
(only for appr. A,B,C,D,E,H,J,3,4,5,6)
- B Thread NPT 1/2
(not for approval U,W)
- C Thread G 1/2
(not for approval N,P,U,W)

Only for fieldbus versions:

(only for Output/Input H)

- K Bus plug + gland M20
(only for approval A,H,J,R)
- L Bus plug + thread NPT 1/2
(only for approval A,H,J,R)
- M Bus plug + thread G 1/2
(only for approval A,H,J,R)
- X Not used, sensor only
(only for compact version)
- 9 Special version, to be specified

080 Power Supply; Display:

- 7 85-260VAC; WEA, w/o display,
Remote configuration,
WEA= language DE+EN+FR+IT+ES+PT+NL
(not for wall-mount/stainless housing)
(not for approval U,W)
- 8 20-55VAC / 16-62VDC; WEA, w/o display,
Remote configuration,
WEA= language DE+EN+FR+IT+ES+PT+NL
(not for wall-mount/stainless housing)
(not for approval U,W)

- A 85-260VAC; WEA, 2-line + push buttons,
WEA= language DE+EN+FR+IT+ES+PT+NL
- B 20-55VAC / 16-62VDC; WEA, 2-line +
push buttons,
WEA= language DE+EN+FR+IT+ES+PT+NL
- E 85-260VAC; EES, 2-line + push buttons,
EES= language SV+FI+NO+RU+PL+CS+EN
(not for approval U,W)
- F 20-55VAC / 16-62VDC; EES, 2-line +
push buttons,
EES= language SV+FI+NO+RU+PL+CS+EN
(not for approval U,W)
- X Sensor only
- 9 Special version, to be specified

090 Adjustment; Software Feature:

- A Default liquid; Basic version
- B Default gas; Basic version
- X Sensor only
- 9 Special version, to be specified

100 Output; Input:

- A 4-20mA SIL HART + frequency
- D 4-20mA SIL HART + freq.+ status+stat.In
- H PROFIBUS PA (only for approval A,H,J,R)
- S 4-20mA SIL HART active + freq. , Ex-i,
freq. = passive (not for approval A,H,J,R,U,W)
- T 4-20mA SIL HART passive + freq., Ex-i,
freq. = passive (not for approval A,H,J,R,U,W)
- 8 4-20mA SIL HART + 20mA + freq. + stat.In
- X Sensor only
- 9 Special version, to be specified

Modeling Code - Promass 83F Coriolis Mass Flowmeter

EXAMPLE: 3 Inch Promass 80 Transmitter, F Sensor

83F000	010	020	030	040	050	060	070	080	090	100
83F80	A	AAS	A	9	N	1	B	A	A	M

83F Promass 83F Coriolis Mass Flowmeter

000 Nominal diameters

08	DN8 3/8" full scale max. 2.0 t/h / 2.2 tons/h
15	DN15 1/2" full scale max. 6.5 t/h / 7.2 tons/h
25	DN25 1" full scale max. 18 t/h / 19.8 tons/h
40	DN40 1 1/2" full scale max. 45 t/h / 49.6 tons/h
50	DN50 2" full scale max. 70 t/h / 77.2 tons/h
80	DN80 3" full scale max. 180 t/h / 198 tons/h
1H	DN100 4" full scale max. 350 t/h / 386 tons/h
1F	DN150 6" full scale max. 800 t/h / 880 tons/h
2F	DN250 10" full scale max. 2200 t/h / 2425 tons/h

010 Measuring Tube Material:

A	Stainless Steel
B	Alloy C-22
C	Stainless Steel, mat. certificate (wetted parts) (not for SMS, DIN11851)
D	Alloy C-22, mat. certificate (wetted parts) (not for SMS, DIN11851)
E	Stainless Steel, mat. certificate (CT+WP = containment + wetted parts) (not for SMS, DIN11851)
F	Alloy C-22, mat. certificate (CT+WP = containment + wetted parts) (not for SMS, DIN11851)
1	Alloy C-22 + Stainless Steel, HT, mat. certificate (containment + wetted parts) HT = high temperature (Only with flange D2S,AAS,ABS,NDS,NES)
3	Alloy C-22, high temp., mat. certificate (containment + wetted parts) (Only with flange D2C,AAC,ABC,NDC,NEC)
9	Special version, to be specified

020 Process Connection:

Only for Stainless Steel measuring tubes:

D1S	PN16, 316L/1.4404, EN1092-1-B1 (DIN2501) flange
D2S	PN40, 316L/1.4404, EN1092-1-B1 (DIN2501) flange
D3S	PN63, 316L/1.4404, EN1092-1-B2 (DIN2501) flange
D4S	PN100, 316L/1.4404, EN1092-1-B2 (DIN2501) flange

D5S	PN16 groove, 316L/1.4404, EN1092-1-D (DIN2512N) flange
D6S	PN40 groove, 316L/1.4404, EN1092-1-D (DIN2512N)
D7S	PN63 groove, 316L/1.4404, EN1092-1-D (DIN2512N)
D8S	PN100 groove, 316L/1.4404, EN1092-1-D (DIN2512N) flange
AAS	Cl.150, 316L/1.4404, flange ANSI B16.5
ABS	Cl.300, 316L/1.4404, flange ANSI B16.5
ACS	Cl.600, 316L/1.4404, flange ANSI B16.5
R2S	PN40 DN25, 316L/1.4404, EN1092-1-B1 (DIN2501) flange

Only for Alloy C-22 measuring tubes:

D1C	PN16, Alloy C-22, EN1092-1-B1 (DIN2501) flange
D2C	PN40, Alloy C-22, EN1092-1-B1 (DIN2501) flange
D3C	PN63, Alloy C-22, EN1092-1-B2 (DIN2501) flange
D4C	PN100, Alloy C-22, EN1092-1-B2 (DIN2501) flange
D5C	PN16 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
D6C	PN40 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
D7C	PN63 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
D8C	PN100 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
AAC	Cl.150, Alloy C-22, flange ANSI B16.5
ABC	Cl.300, Alloy C-22, flange ANSI B16.5
ACC	Cl.600, Alloy C-22, flange ANSI B16.5
999	Special version, to be specified

030 Additional Test, Certificate:

A	Basic version
B	pressure test (tube) + type test (containment)
C	Cleaned from oil+grease (wetted parts) (not for high temperature version)
D	Cleaned from oil+grease (wetted parts) + Pressure test (tube) + type test (containment) (not for high temperature version)

- F Purge + Pressure test (tube) + type test (containment)
(not for high temperature version)
- G Rupture disk + pressure test (tube)
(not for high temperature version)
- S marine certificate
- T marine certificate + pressure test (tube) + type test (containment)
- 5 CRN approval
- 6 CRN approval + pressure test (tube) + Type test (containment)
- 9 Special version, to be specified

040 Calibration Massflow; Density:

- A 0.1%, 0.01g/ccm
- B 0.1%, 0.001g/ccm
(not for high temperature version)
- C 0.1% 5-point, 0.01g/ccm
(specify customer flow range)
- D 0.1% 5-point, 0.001g/ccm
(not for high temperature version)
mass or volume)
- G 0.1% 5-point, 0.01g/ccm, traceable ISO/IEC17025
(specify customer flow range)
- H 0.1% 5-point, 0.001g/ccm, traceable ISO/IEC17025
(not for high temperature version)
(specify customer flow range:
mass or volume)
- M PremiumCal 0.05% 5-point, 0.01g/ccm, traceable ISO/IEC17025
(not for high temperature version)
(only mass calibration)
- N PremiumCal 0.05% 5-point, 0.001g/ccm, traceable ISO/IEC17025
(not for high temperature version)
(only mass calibration)
- 9 FMC (Canada, U.S., Mexico)

Specify on order if calibration is different than option A

050 Approval:

- B ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC
Ex tD A21 Z= Zone (only for field housing, Ex)
- C ATEX II 2GD+ IECEx Z1,21 Ex d ia IIB
Ex tD A21 Z= Zone (only for field housing, Ex)
- D ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC
Ex tD A21 Z= Zone (only for field housing, Ex)
- E ATEX II 2GD+ IECEx Z1,21 Ex d ia IIB
Ex tD A21 Z= Zone (only for field housing, Ex)

- F *ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC.
Ex tD A21 Z= Zone
- G *ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC.
Ex tD A21 Z= Zone
- N XP FM Cl.I Div.1/CSA Cl.I Div.1, ABCD +Zone 1
(only for field housing, Ex)
- O *XP FM Cl.I Div.1/CSA Cl.I Div.1, ABCD+ Zone 1
- P XP FM Cl.I Div.1/CSA Cl.I Div.1, CD +
Zone 1 (only for field housing, Ex)
- 1 *ATEX II 1/2GD+IECEx Z0/1,21 Ex d ia IIC.
Z= Zone
- 2 *ATEX II 1/2GD+IECEx Z0/1,21 Ex d ia IIC.
Z= Zone
- 3 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIC
Z= Zone (only for field housing, Ex)
- 4 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIB
Z= Zone (only for field housing, Ex)
- 5 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIC
Z= Zone (only for field housing, Ex)
- 6 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIB
Z= Zone (only for field housing, Ex)
- 9 Special version, to be specified

060 Housing:

- E Remote, field IP67 NEMA4X + 10m/30ft
Cable (not for approval A,H,J,R)
- F Remote, field IP67 NEMA4X + 20m/65ft
Cable (not for approval A,H,J,R)
- J Remote, field, for heating + 10m/30ft
cable (not for approval A,H,J,R)
(not for high temperature version)
- K Remote, field, for heating + 20m/65ft
cable (not for approval A,H,J,R)
(not for high temperature version)
- L Compact IP67 NEMA4X, stainless, Ex
(only for approval B,C,D,E,N,P,3,4,5,6)
(not for high temperature version)
- M Compact IP67 NEMA4X, stainless, Ex, -40°C/
°F T-amb.
(only for approval B,C,D,E,N,P,3,4,5,6)
(not for high temperature version)
- N Compact IP67 NEMA4X, stainless, Ex, HE,
-40°C/°F T-amb., HE = harsh environment
(only for approval B,C,D,E,N,P,3,4,5,6)
(not for high temperature version)
- 1 Compact IP67 NEMA4X, Alu, -40°C/°F T-amb.
(only for approval A,B,C,D,E,N,P,R, 3,4,5,6)
(not for high temperature version)

- 7 Remote,field IP67 NEMA4X,-40oC/oF T-amb.
+ 20m/65ft cable
(only for approval B,C,D,E,N,P,3,4,5,6)
(not for high temperature version)
- 4 Compact IP67 NEMA 4X, Alu, HE,
-40°C/°F T-amb., HE = harsh environment
(only for approval A,B,C,N,P,R,3,4)
(not for high temperature version)
- 8 Remote, field IP67 NEMA4X, HE,
-40°C/°F T-amb. + 20m/65 ft cable,
HE = harsh environment
(only for approval B,C,N,P,3,4)
(not for high temperature version)
- 9 Special version, to be specified

070 Cable Entry:

- A Gland M20 (EEx d > thread M20)
(for approval B,C,3,4 threads only)
(only for appr. A,B,C,D,E,H,J,3,4,5,6)
- B Thread NPT 1/2 (not for approval U,W)
- C Thread G 1/2 (not for approval N,P,U,W)

Only for fieldbus versions:

(Only for Output/Input H)

- K Bus plug + gland M20
(only for approval A,H,J,R)
- L Bus plug + thread NPT 1/2
(only for approval A,H,J,R)
- M Bus plug + thread G 1/2
(only for approval A,H,J,R)
- X Not used, sensor only
(only for compact version)
- 9 Special version, to be specified

080 Power Supply; Display:

- 7 85-260VAC; WEA, w/o display,
Remote configuration,
WEA= language DE+EN+FR+IT+ES+PT+NL
(not for wall-mount/stainless housing)
(not for approval U,W)
- 8 20-55VAC / 16-62VDC; WEA, w/o display,
Remote configuration,
WEA= language DE+EN+FR+IT+ES+PT+NL
(not for wall-mount/stainless housing)
(not for approval U,W)
- A 85-260VAC; WEA, 4-line + Touch control
WEA= language DE+EN+FR+IT+ES+PT+NL
- B 20-55VAC / 16-62VDC; WEA, 4-line +
Touch control,
WEA= language DE+EN+FR+IT+ES+PT+NL

- E 85-260VAC; EES, 4-line + Touch control
EES= language SV+FI+NO+RU+PL+CS+EN
(not for approval U,W)
- F 20-55VAC / 16-62VDC; EES, 4-line +
Touch control, EES= language
SV+FI+NO+RU+PL+CS+EN
(not for approval U,W)
- X Sensor only
- 9 Special version, to be specified

090 Adjustment; Software Feature:

- A Default liquid; Basic version
- B Default gas; Basic version
- C Default liquid; Concentration measurement
- E Default liquid; Advanced diagnostics
- D Default gas; Advanced diagnostics
- X Sensor only
- 9 Special version, to be specified

100 Output; Input:

Fixed I/O modules:

- A 4-20mA SIL HART + frequency
- B 4-20mA SIL HART + freq. + 2x relay
- F PROFIBUS PA, Ex-i
(not for approval A,H,J,R,U,W)
- G FOUNDATION Fieldbus, Ex-i
(not for approval A,H,J,R,U,W)
- H PROFIBUS PA (only for approval A,H,J,R)
- J PROFIBUS DP
- K FOUNDATION Fieldbus
- Q Modbus RS485
- R 4-20mA SIL HART + 0/4-20mA, active Ex-i
(not for approval A,H,J,R,U,W)
- S 4-20mA SIL HART active + freq., Ex-i,
freq. = passive (not for approval A,H,J,R,U,W)
- T 4-20mA SIL HART passive + freq., Ex-i,
freq. = passive (not for approval A,H,J,R,U,W)
- U 4-20mA SIL HART + 0/4-20mA, passive Ex-i
(not for approval A,H,J,R,U,W)

Flexible I/O modules:

- V PROFIBUS DP + 2x relay + stat.In
modules exchangeable
- P PROFIBUS DP + 20mA + freq.+ stat.In
modules exchangeable
- 7 Modbus RS485 + 2x relay + stat.In
modules exchangeable
- N Modbus RS485 + 20mA +freq.+stat.In
modules exchangeable
- C 4-20mA SIL HART + freq. + 2x relay M=
modules exchangeable

D	4-20mA SIL HART + freq.+ relay+stat.In modules exchangeable	2	4-20mA SIL HART + freq.+relay+20mA out modules exchangeable
E	4-20mA SIL HART + 20mA+ relay+stat.In modules exchangeable	3	4-20mA SIL HART + relay + 20mA (1x out, 1x in), modules exchangeable
L	4-20mA SIL HART + 2x relay + stat.In modules exchangeable	4	4-20mA SIL HART + freq.+relay+20mA in, modules exchangeable
M	4-20mA SIL HART + 2x freq. + stat.In modules exchangeable	5	4-20mA SIL HART + freq.+20mA in+stat.In modules exchangeable
W	4-20mA SIL HART + 2x 20mA + relay modules exchangeable	6	4-20mA SIL HART + stat.In + 20mA (1x out, 1x in), modules exchangeable
0	4-20mA SIL HART + 2x 20mA + stat.In modules exchangeable	X	Sensor only
		9	Special version, to be specified

Modeling Code – Promass 84F Coriolis Mass Flowmeter

EXAMPLE: 4 Inch Promass 84 Transmitter, F Sensor

84F000	010	020	030	040	050	060	070	080	090	100
84F1H	A	AAS	A	9	N	1	B	A	U	M

84F Promass 84F Coriolis Mass Flowmeter for Custody Transfer Application

000 Nominal Diameters:

08	DN8 3/8" full scale max. 2.0 t/h / 2.2 tons/h
15	DN15 1/2" full scale max. 6.5 t/h / 7.2 tons/h
25	DN25 1" full scale max. 18 t/h / 19.8 tons/h
40	DN40 1 1/2" full scale max. 45 t/h / 49.6 tons/h
50	DN50 2" full scale max. 70 t/h / 77.2 tons/h
80	DN80 3" full scale max. 180 t/h / 198 tons/h
1H	DN100 4" full scale max. 350 t/h / 386 tons/h
1F	DN150 6" full scale max. 800 t/h / 880 tons/h
2F	DN250 10" full scale max. 2200 t/h / 2425 tons/h

010 Measuring Tube Material:

A	Stainless Steel
B	Alloy C-22
C	Stainless Steel, mat. certificate (wetted parts) (not for SMS, DIN11851)
D	Alloy C-22, mat. certificate (wetted parts) (not for SMS, DIN11851)
E	Stainless Steel, mat. certificate (CT+WP = containment + wetted parts) (not for SMS, DIN11851)
F	Alloy C-22, mat. certificate (CT+WP = containment + wetted parts) (not for SMS, DIN11851)
1	Alloy C-22 + Stainless Steel, HT, mat. certificate (containment + wetted parts) HT = high temperature (Only with flange D2S,AAS,ABS,NDS,NES)
3	Alloy C-22, high temp., mat. certificate (containment + wetted parts) (Only with flange D2C,AAC,ABC,NDC,NEC)
9	Special version, to be specified

020 Process Connection:

Only for Stainless Steel measuring tubes:

D1S	PN16, 316L/1.4404, EN1092-1-B1 (DIN2501) flange
D2S	PN40, 316L/1.4404, EN1092-1-B1 (DIN2501) flange
D3S	PN63, 316L/1.4404, EN1092-1-B2 (DIN2501) flange

D4S	PN100, 316L/1.4404, EN1092-1-B2 (DIN2501) flange
D5S	PN16 groove, 316L/1.4404, EN1092-1-D (DIN2512N) flange
D6S	PN40 groove, 316L/1.4404, EN1092-1-D (DIN2512N)
D7S	PN63 groove, 316L/1.4404, EN1092-1-D (DIN2512N)
D8S	PN100 groove, 316L/1.4404, EN1092-1-D (DIN2512N) flange
AAS	Cl.150, 316L/1.4404, flange ANSI B16.5
ABS	Cl.300, 316L/1.4404, flange ANSI B16.5
ACS	Cl.600, 316L/1.4404, flange ANSI B16.5
R2S	PN40 DN25, 316L/1.4404, EN1092-1-B1 (DIN2501) flange

Only for Alloy C-22 measuring tubes:

D1C	PN16, Alloy C-22, EN1092-1-B1 (DIN2501) flange
D2C	PN40, Alloy C-22, EN1092-1-B1 (DIN2501) flange
D3C	PN63, Alloy C-22, EN1092-1-B2 (DIN2501) flange
D4C	PN100, Alloy C-22, EN1092-1-B2 (DIN2501) flange
D5C	PN16 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
D6C	PN40 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
D7C	PN63 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
D8C	PN100 groove, Alloy C-22, EN1092-1-D (DIN2512N) flange
AAC	Cl.150, Alloy C-22, flange ANSI B16.5
ABC	Cl.300, Alloy C-22, flange ANSI B16.5
ACC	Cl.600, Alloy C-22, flange ANSI B16.5
999	Special version, to be specified

030 Additional Test, Certificate

A	Basic version
B	pressure test (tube) + type test (containment)
C	Cleaned from oil+grease (wetted parts) (not for high temperature version)

- D Cleaned from oil+grease (wetted parts) + Pressure test (tube) + type test (containment) (not for high temperature version)
- F Purge + Pressure test (tube) + type test (containment) (not for high temperature version)
- G Rupture disk + pressure test (tube) + (not for high temperature version)
- 5 CRN approval
- 6 CRN approval + pressure test (tube) + Type test (containment)
- 9 Special version, to be specified

040 Calibration Massflow; Density:

- A 0.1%, 0.01g/ccm
- B 0.1%, 0.001g/ccm (not for high temperature version)
- C 0.1% 5-point, 0.01g/ccm (specify customer flow range)
- D 0.1% 5-point, 0.001g/ccm (specify customer flow range: mass or volume)
- G 0.1% 5-point, 0.01g/ccm, traceable ISO/IEC17025 (specify customer flow range)
- H 0.1% 5-point, 0.001g/ccm, traceable ISO/IEC17025 (specify customer flow range: mass or volume)
- L MID Type Examination MI-002
- M PremiumCal 0.05% 5-point, 0.01g/ccm, traceable ISO/IEC17025 (not for high temperature version) (only mass calibration)
- N PremiumCal 0.05% 5-point, 0.001g/ccm, traceable ISO/IEC17025 (not for high temperature version) (only mass calibration)
- 9 FMC (Canada, U.S., Mexico)
-Specify on order if calibration is different than option A

050 Approval:

- B ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC Ex tD A21 Z= Zone (only for field housing, Ex)
- C ATEX II 2GD+ IECEx Z1,21 Ex d ia IIB Ex tD A21 Z= Zone (only for field housing, Ex)
- D ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC Ex tD A21 Z= Zone (only for field housing, Ex)
- E ATEX II 2GD+ IECEx Z1,21 Ex d ia IIB Ex tD A21 Z= Zone (only for field housing, Ex)
- F *ATEX II 2GD+ IECEx Z1,21 Ex di a IIC. Ex tD A21 Z= Zone
- G *ATEX II 2GD+ IECEx Z1,21 Ex d ia IIC. Ex tD A21 Z= Zone

- N XP FM Cl.I Div.1/CSA Cl.I Div.1, ABCD + Zone 1 (only for field housing, Ex)
- O *XP FM Cl.I Div.1/CSA Cl.I Div.1, ABCD+ Zone 1
- P XP FM Cl.I Div.1/CSA Cl.I Div.1, CD + Zone 1 (only for field housing, Ex)
- 1 *ATEX II 1/2GD+IECEX Z0/1,21 Ex d ia IIC. Z= Zone
- 2 *ATEX II 1/2GD+IECEX Z0/1,21 Ex d ia IIC. Z= Zone
- 3 ATEX II 1/2GD+ IECEx Z0/1,21 Ex dia IIC Z= Zone (only for field housing, Ex)
- 4 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIB Z= Zone (only for field housing, Ex)
- 5 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIC Z= Zone (only for field housing, Ex)
- 6 ATEX II 1/2GD+ IECEx Z0/1,21 Ex d ia IIB Z= Zone (only for field housing, Ex)
- 9 Special version, to be specified

060 Housing:

- E Remote, field IP67 NEMA4X + 10m/30ft Cable (not for approval A,H,J,R)
- F Remote, field IP67 NEMA4X + 20m/65ft Cable (not for approval A,H,J,R)
- J Remote, field, for heating + 10m/30ft Cable (not for approval A,H,J,R) (not for high temperature version)
- K Remote, field, for heating + 20m/65ft cable (not for approval A,H,J,R) (not for high temperature version)
- L Compact IP67 NEMA4X, stainless, Ex (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)
- M Compact IP67 NEMA4X, stainless, Ex, -40°C/°F T-amb. (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)
- N Compact IP67 NEMA4X, stainless, Ex, HE, -40°C/°F T-amb., HE = harsh environment (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)
- 1 Compact IP67 NEMA4X, Alu, -40°C/°F T-amb. (only for approval A,B,C,D,E,N,P,R,3,4,5,6) (not for high temperature version)
- 7 Remote,field IP67 NEMA4X,-40°C/°F T-amb. + 20m/65ft cable (only for approval B,C,D,E,N,P,3,4,5,6) (not for high temperature version)

- 4 Compact IP67 NEMA 4X, Alu, HE, -40°C/°F T-amb., HE = harsh environment (only for approval A,B,C,N,P,R,3,4) (not for high temperature version)
- 8 Remote, field IP67 NEMA4X, HE, -40°C/°F T-amb. + 20m/65 ft cable, HE = harsh environment (only for approval B,C,N,P,3,4) (not for high temperature version)
- 9 Special version, to be specified

070 Cable Entry:

- A Gland M20 (EEx d > thread M20) (for approval B,C,3,4 threads only) (only for appr. A,B,C,D,E,H,J,3,4,5,6)
- B Thread NPT 1/2 (not for approval U,W)
- C Thread G 1/2 (not for approval N,P,U,W)
- X Not used, sensor only (only for compact version)
- 9 Special version, to be specified

080 Power Supply; Display:

- 7 85-260VAC; WEA, w/o display, Remote configuration, WEA= language DE+EN+FR+IT+ES+PT+NL (not for wall-mount/stainless housing) (not for approval U,W)
- 8 20-55VAC / 16-62VDC; WEA, w/o display, Remote configuration, WEA= language DE+EN+FR+IT+ES+PT+NL (not for wall-mount/stainless housing) (not for approval U,W)
- A 85-260VAC; WEA, 4-line + Touch control WEA= language DE+EN+FR+IT+ES+PT+NL
- B 20-55VAC / 16-62VDC; WEA, 4-line + Touch control, WEA= language DE+EN+FR+IT+ES+PT+NL
- E 85-260VAC; EES, 4-line + Touch control EES= language SV+FI+NO+RU+PL+CS+EN (not for approval U,W)

- F 20-55VAC / 16-62VDC; EES, 4-line + Touch control, EES= language SV+FI+NO+RU+PL+CS+EN (not for approval U,W)
- X Sensor only
- 9 Special version, to be specified

090 Custody Transfer Approval:

- A PTB (Germany)
- K MC (Canada)
- U NTEP (USA)
- X Sensor only
- 9 Special version, to be specified

100 Output; Input:

- 1 Relay + 20mA active + 2x pulse freq. (phase-shifted), modules exchangeable
- 2 4-20mA HART + freq.+relay+20mA out modules exchangeable
- 7 Modbus RS485 + 2x relay + stat.In modules exchangeable
- D 4-20mA HART + freq.+ relay+stat.In modules exchangeable
- N Modbus RS485 + 20mA +freq.+stat.In modules exchangeable
- Q Modbus RS485
- S 4-20mA HART active + freq., Ex-i, freq. = passive
- T 4-20mA HART passive + freq., Ex-i, freq. = passive
- M Stat. In + 20mA aktive + 2x pulse/freq. (phase-shifted)
- X Sensor only
- 9 Special version, to be specified

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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