

## SmartLine Radar Level Meter RM70

## Model Selection Guide

Reliable measurement in difficult process conditions  
 +/- 3 mm / +/-0.12" standard accuracy  
 Operates up to a flange temperature of 200°C / 390°F and 40 bar / 580 psig  
 Measuring range up to 80 m / 260 ft.  
 Long antenna versions can be extended to suit any nozzle length  
 PACTware and DTMs included as standard  
 Optional second current output  
 Directly-accessible graphic touchscreen/wizard (optional)  
 Converter rotates 360°  
 Trippl barrier gas-tight protection available for working with dangerous gases (using pre-stressed fused glass)



### Instructions

Select the desired key number. The arrow to the right marks the selection available.  
 Make the desired selections from Tables I through V using the column below the proper arrow. A dot (•) denotes availability.

Table	I	II	III	IV	V
RM70	4	---	---	---	---

### KEY NUMBER

### Description

RM70

### Availability Selection

RM70 ↓

### TABLE I

#### Level Meter Code

4 •

### TABLE II

Key Number	Description	Availability
<b>Approvals</b>	None ATEX II G/D 1, 1/2, 2 Ex ia IIC T3...T6 ATEX II G/D 1/2, 2 Ex d[ia] IIC T3...T6 FM IS Cl. I Div. 1 Gr. A-G Dual Seal FM XP Cl. I Div. 1 Gr. A-G Dual Seal ATEX II 3G Ex nA II T3...T6 NEPSI Ex ia IIC T3...T6 NEPSI Ex d[ia] IIC T3...T6 CSA IS Cl. I Div. 1 Gr. A-G Dual Seal CSA XP Cl. I Div. 2 Gr. A-G Dual Seal IECEX Zone 0 Ex ia IIC T3...T6, Ex iaD 20 IECEX Zone 0/1 Exd [ia] IIC T3...T6, Ex tD [iaD] A21/20	0 --- a 2 --- a 3 --- b 6 --- c 7 --- d A --- a E --- a F --- b H --- c K --- d M --- e N --- b
<b>Material Process Connection and Antenna</b>	316L / 1.4404 + Drop PTFE (40 bar) - Drop PP (16 bar) - Hygienic PEEK (10 bar) Hastelloy C-22 / 2.4602 316L / 1.4404 / 100 bar Hastelloy C-22 / 2.4602 / 100 bar	- 0 --- • - 1 --- f - 2 --- g - 3 --- h
<b>Antenna</b>	Horn DN 80 dia. 75 mm (2.95 inch) - long Horn DN 40 dia. 39 mm (1.54 inch) - long Horn DN 50 dia. 43 mm (1.69 inch) - long Horn DN 80 dia. 75 mm (2.95 inch) - long - with purging system Horn DN 40 dia. 39 mm (1.54 inch) - long - with purging system Horn DN 50 dia. 43 mm (1.69 inch) - long - with purging system Horn DN 100 dia. 95 mm (3.7 inch) - long Horn DN 100 dia. 95 mm (3.7 inch) - long - with purging system PEEK Hygienic antenna (FDA conform) DROP PTFE DN 80 long ( Ø 75 mm / 2.95 inch) -50°C...+150°C DROP PP DN 80 long ( Ø 75 mm / 2.95 inch) -50°C...+100°C Sheet Metal Horn DN 80 dia. 75 mm (2.95 inch) - long Sheet Metal Horn DN 100 dia. 95 mm (3.7 inch) - long Sheet Metal Horn DN 80 dia. 75 mm (2.95 inch) - long - with purging system Sheet Metal Horn DN 100 dia. 95 mm (3.7 inch) - long - with purging system	--- 3 --- k --- 4 --- k --- 5 --- k --- 6 --- k --- 7 --- k --- 8 --- k --- F --- k --- G --- k --- H --- l --- P --- m --- S --- n --- U --- k --- V --- k --- W --- k --- X --- k
<b>Antenna Extension</b>	None Extension 105 mm (4.13 inch) Extension 210 mm (8.26 inch) Extension 315 mm (12.4 inch) Extension 420 mm (16.54 inch) Extension 525 mm (20.67 inch) Extension 630 mm (24.80 inch) Extension 735 mm (28.94 inch) Extension 840 mm (33.07 inch) Extension 945 mm (37.20 inch) Extension 1050 mm (41.34 inch) Flange plate protection (PP drop) for DN 80/100, 3" & 4", 80A & 100A Flange plate protection (PP drop) for DN 150, 6" & 8" Flange plate protection (PTFE drop) for DN 80/100, 3" & 4", 80A & 100A Flange plate protection (PTFE drop) for DN 150, 6" & 8"	--- 0 --- • --- 1 --- • --- 2 --- • --- 3 --- • --- 4 --- • --- 5 --- • --- 6 --- • --- 7 --- • --- 8 --- • --- A --- • --- B --- • --- P --- o --- R --- p --- S --- o --- T --- p

TABLE II

<b>Feedthrough / Temperature / Sealing Gasket</b>	Standard / -40°C...+150°C / FKM/FPM for Non Ex Drop antennas Standard / -50°C...+150°C / EPDM for Non-Ex Drop antennas Standard: -40°C (-4°F)...+150°C (302°F), 40 bar (580 psi) max. / FKM/FPM Standard: -20°C (-4°F)...+150°C (302°F), 40 bar (580 psi) max. / Kalrez 6375 Dual: Metaglas / -30°C (-22°F)...+150°C (302°F), 40 bar (580 psi) / FKM/FPM Dual: Metaglas / -20°C (-4°F)...+150°C (302°F), 40 bar (580 psi) / Kalrez 6375 Standard: -50°C...+150°C / EPDM Dual Metaglas: -30°C...+150°C / EPDM Standard/-20°C...+150°C / Without for Tri-Clamp, SMS, DIN 11851 Standard/-20°C...+150°C / EPDM for Bio Control Standard/-20°C...+150°C / FKM/FPM for Bio Control Standard / -40°C...+200°C / FKM/FPM (distance piece included) Standard / -20°C...+200°C / Kalrez 6375 (distance piece included) Metaglas® / -30°C...+200°C / FKM/FPM (distance piece included) Metaglas® / -20°C...+200°C / Kalrez 6375 (distance piece included)	---X s ---Y s ---0 t ---1 t ---2 t ---3 t ---4 t ---5 t ---A q ---B r ---C r ---F t ---G t ---H t ---K t
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TABLE III

<b>Process Connection EN</b>	G1 1/2" A ISO228 DN 40 PN 40 Form B1 EN1092 DN 50 PN 40 Form B1 EN1092 DN 80 PN 40 Form B1 EN1092 DN 100 PN 16 Form B1 EN1092 DN 100 PN 40 Form B1 EN1092 DN 150 PN 16 Form B1 EN1092 DN 150 PN 40 Form B1 EN1092 DN 50 PN 63 Form B1 EN1092 DN 80 PN 63 Form B1 EN1092 DN 100 PN 63 Form B1 EN1092 DN 40 PN 63 / PN 100 Form B1 EN1092 DN 50 PN 100 Form B1 EN1092 DN 80 PN 100 Form B1 EN1092 DN 100 PN 100 Form B1 EN1092 (distance piece included) DN 150 PN 63 Form B1 EN1092 (distance piece included) DN 150 PN 100 Form B1 EN1092 (distance piece included)	Be certain to confirm the size of the antenna to the size of the tank opening. While it is possible to use all of the combinations shown on this MSG as valid, certain antennas may need to be mounted via the inside of the vessel if the opening in the tank is not of a sufficient diameter.	<b>Selection iliability</b>	300_ • 500_ • 600_ • 700_ • 800_ • A00_ • B00_ • C00_ • D00_ • E00_ • F00_ • L00_ • M00_ • N00_ • P00_ • R00_ • S00_ •
<b>Process Connection ASME</b>	1 1/2" NPT 1 1/2" 150 lb RF ASME B16.5 1 1/2" 300 lb RF ASME B16.5 2" 150 lb RF ASME B16.5 2" 300 lb RF ASME B16.5 3" 150 lb RF ASME B16.5 3" 300 lb RF ASME B16.5 4" 150 lb RF ASME B16.5 4" 300 lb RF ASME B16.5 6" 150 lb RF ASME B16.5 8" 150 lb RF ASME B16.5 6" 300 lb RF ASME B16.5 (distance piece included) 1" 1/2 600 lb RF ASME B16.5 2" 600 lb RF ASME B16.5 3" 600 lb RF ASME B16.5 (distance piece included) 4" 600 lb RF ASME B16.5 (distance piece included) 1.5" 900 lb / 1500 lb RF ASME B16.5 (distance piece included) 2" 900 lb / 1500 lb RF ASME B16.5 (distance piece included) 3" 900 lb RF ASME B16.5 (distance piece included) 4" 900 lb RF ASME B16.5 (distance piece included)		030_ • 050_ • 060_ • 070_ • 080_ • 0A0_ • 0B0_ • 0C0_ • 0D0_ • 0E0_ • 0F0_ • 0G0_ • 0N0_ • 0P0_ • 0R0_ • 0S0_ • 0U0_ • 0V0_ • 0W0_ • 0X0_ •	
<b>Process Connection Other</b>	10K 40A RF JIS B2220 10K 50A RF JIS B2220 10K 80A RF JIS B2220 10K 100A RF JIS B2220 ----- Bio Control DN 50 Tri-Clamp 2" DIN 11851 DN 50 SMS 51		005_ • 006_ • 007_ • 008_ • 00C_ • 00F_ • 00L_ • 00P_ •	
<b>Output</b>	1 Output 4...20mA (Hart) 2 Outputs 4...20mA (Hart) + 4...20mA Foundation Fieldbus (4 wire + local HART) Profibus PA (4 wire + local HART)		---0 • ---2 • ---A • ---D •	

TABLE IV

<b>Housing/Cable Entry/Cable gland</b>	Aluminum / M20 x 1.5 / without	0 _ _ _ _	•
	Aluminum / 1/2" NPT / without	1 _ _ _ _	•
	Aluminum / G 1/2" / without	2 _ _ _ _	•
	Aluminum / M20 x 1.5 / Plastic (Non-Ex: black, Ex i: blue)	3 _ _ _ _	•
	Aluminum / M20 x 1.5 / Metal (only for Ex d devices)	4 _ _ _ _	•
	Stainless Steel / M25 x 1.5 / without	A _ _ _ _	•
	Stainless Steel / 1/2" NPT / without	B _ _ _ _	•
	Stainless Steel / M25 x 1.5 / plastic M20 (Non-Ex: Black, Exi blue)	D _ _ _ _	•
	Stainless Steel / M25 x 1.5 / metal M20 (only for Ex d devices)	E _ _ _ _	•
<b>Housing Option</b>	None	_ 0 _ _ _	•
	Weather Protection Option	_ 2 _ _ _	•
<b>HMI (display &amp; keys)</b>	None - No Display	_ _ 0 _ _	•
	English	_ _ 1 _ _	•
	German	_ _ 2 _ _	•
	French	_ _ 3 _ _	•
	Italian	_ _ 4 _ _	•
	Spanish	_ _ 5 _ _	•
	Portugese	_ _ 6 _ _	•
	Japanese	_ _ 7 _ _	•
	Chinese (Mandarin)	_ _ 8 _ _	•
	Russian	_ _ A _ _	•
<b>Version</b>	Honeywell	_ _ _ V _	•
<b>No Selection</b>	None	_ _ _ _ 0	•

TABLE V

<b>Calibration Certificates</b>	None	0 0 0 _ _	•
	Calibration certificate 2 points	0 0 1 _ _	•
	Calibration certificate 5 points (min. distance of 1.3 m (4.26 ft.))	0 0 2 _ _	•
<b>Construction</b>	Without	_ _ _ 0 _	•
	NACE MR 0175 / MR 0103	_ _ _ 3 _	•
<b>Drawing / Tag Number</b>	None	_ _ _ _ 0	•
	Tag No. stainless steel plate (1 line; 12 characters)	_ _ _ _ 2	•

RESTRICTIONS

Restrictions		Available only with		Not Available with	
Letter	Table	Selection		Table	Selection
a				IV	4 ____, E ____
b				III	__ A, __ D
				IV	3 ____, B ____, D ____
c	III	030_, 050_, 060_, 070_, 080_, 0A0_, 0B0_, 0C0_, 0D0_, 0E0_, 0F0_, 005_, 006_, 007_, 008_, __ 0, __ 2		II	__ U __, __ V __, __ W __, __ X __
				IV	2 ____, 4 ____, A ____, B ____, D ____, E ____
d	III	030_, 050_, 060_, 070_, 080_, 0A0_, 0B0_, 0C0_, 0D0_, 0E0_, 0F0_, 005_, 006_, 007_, 008_, __ 0, __ 2		II	__ U __, __ V __, __ W __, __ X __
				IV	2 ____, 3 ____, A ____, B ____, D ____, E ____
e				III	__ A, __ D
				IV	4 ____, B ____, E ____
f	II	__ 0 __		II	__ H __, __ P __, __ S __, __ U __, __ V __, __ W __, __ X __, __ 2 __, __ 3 __, __ 5 __, A __, __ B __, __ C __, __ H __, __ K __
				III	00C __, 00F __, 00L __, 00P __
g				II	__ 6 __, __ 7 __, __ 8 __, __ G __, __ H __, __ P __, __ S __, __ U __, __ V __, __ W __, __ X __, __ P __, __ R __, __ S __, __ T __, __ A __, __ B __, __ C __
				III	500 __, 600 __, 700 __, 800 __, A00 __, B00 __, C00 __, 050 __, 060 __, 070 __, 080 __, 0A0 __, 0B0 __, 0C0 __, 0D0 __, 0E0 __, 0F0 __, 0G0 __, 005 __, 006 __, 007 __, 008 __, 00C __, 00F __, 00L __, 00P __
h				II	__ 6 __, __ 7 __, __ 8 __, __ G __, __ H __, __ P __, __ S __, __ U __, __ V __, __ W __, __ X __, __ A __, __ B __, __ C __
	II	__ 0 __		III	500 __, 600 __, 700 __, 800 __, A00 __, B00 __, C00 __, 050 __, 060 __, 070 __, 080 __, 0A0 __, 0B0 __, 0C0 __, 0D0 __, 0E0 __, 0F0 __, 0G0 __, 005 __, 006 __, 007 __, 008 __, 00C __, 00F __, 00L __, 00P __
k				II	__ P __, __ R __, __ S __, __ T __
				II	__ A __, __ B __, __ C __, __ X __, __ Y __
				III	00C __, 00F __, 00L __, 00P __

	III	00C_,00F_,00L_,00P_		
m	II	___0_,___1_,___2_,___3_, ___4_,___5_,___S_,___T_	II	___A_,___B_,___C_,___F_, ___G_,___H_,___K
	III	300_,700_,800_,A00_,B00_,C00_, 0A0_,030_,0B0_,0C0_,0D0_,0E0_, 0F0_,0G0_,007_,008_		
n	II	___0_,___1_,___2_,___3_, ___4_,___5_,___P_,___R_		
	III	300_,700_,800_,A00_,B00_,C00_, 030_,0A0_,0B0_,0C0_,0D0_,0E0_, 0F0_,0G0_,007_,008_	II	___A_,___B_,___C_,___F_, ___G_,___H_,___K
o			II	___A_,___B_,___C_,___F_, ___G_,___H_,___K
	III	700_,800_,A00_,0A0_,0B0_, 0C0_,0D0_,007_,008_		
p	III	B00_,C00_,0E0_,0F0_,0G0_	II	___A_,___B_,___C_,___F_, ___G_,___H_,___K
q	III	00F_,00L_		
r	III	00C_		
s	II	0_P_,0_S_		
t			II	0_P_,0_S_