## Selection guide

Radar



1	8
LG01	LR01
For liquids and solids in storage and process applications	For liquids in storage and process applications
L-band/1 GHz	X-band/10 GHz
≥1.4 (TBF 1.1)	≥1.8 (TBF 1.1)
0 to 40 m/0 to 130 ft	0 to 30 m/0 to 98 ft
±3 mm/±0.1"	±5 mm/±0.2"
±1 mm/±0.04"	±1 mm/±0.04"
C (compact), F (field remote)	C (compact), F (field remote)
Aluminum, stainless steel	Aluminum, stainless steel
IP 66, 67; NEMA 4X	IP 66, 67; NEMA 4X
LPR and TLPR*	TLPR*
Double rod, single rod, single rod (segmented), coaxial, double cable, single cable Ø2 mm/.08", single cable Ø4 mm/.15"	Metallic Horn: (316L) DN65/2.5" (for bypass chamber), Metallic H Wave Horn: (PP or PTFE) 043 mm/1.69" (20°), Metallic Wave Guid
Thread: G½, G¾, G1, G1½, ½ NPT, ¾ NPT, 1 NPT, 1½ NPT	Thread: G1½, G2, 1½ NPT, 2 NPT; Flange: DN50- 200, 2-8", 50-20
FKM/FPM, Kalrez <sup>®</sup> 6375, EPDM, PFA	FKM/FPM, Kalrez <sup>®</sup> 6375, EPDM, PFA
-40 to +80 °C/-40 to +176 °F	-40 to +80 °C/-40 to +176 °F
-60 to +300 °C/-58 to +572 °F (higher on request)	-60 to +250 °C/-76 to +482 °F (higher on request)
-1 – 40 barg/-14.5 – 580 psig (higher on request)	-1 – 40 barg/-14.5 – 580 psig
11.5-30 V DC (Exi), 13.5 – 36 V DC (Exd), 2-wire	11.5-30 V DC (Exi), 13.5 – 36 V DC (Exd), 2-wire
2-wire: 4-20 mA (HART® 6), FOUNDATION <sup>™</sup> Fieldbus, PROFIBUS PA	2-wire: 4-20 mA (HART® 6), FOUNDATION™ Fieldbus, PROFIBUS
Weather protection	Antenna extensions of various shapes and lengths, heating/coolir
METAGLAS <sup>®</sup> dual safety sealing probe made of Hastelloy <sup>®</sup> C-22 or probe with a PVC, PVDF or PP protective sheath	METAGLAS® dual safety sealing
ATEX, IECEx, cFMus, ÒÛÐÍ×ô, INMETRO, NACE, CRN	ATEX, IECEx, cFMus, ÒÛÐÍ×ô, INMETRO, NACE, CRN
SIL2	SIL2
PSS EML3010 A-(en)	PSS EML3010 A-(en)
	For liquids and solids in storage and process applications   L-band/1 GHz   ≥1.4 (TBF 1.1)   0 to 40 m/0 to 130 ft   ±3 mm/±0.1"   ±1 mm/±0.04"   C (compact), F (field remote)   Aluminum, stainless steel   IP 66, 67; NEMA 4X   LPR and TLPR*   Double rod, single rod, single rod (segmented), coaxial, double cable, single cable Ø2 mm/.08", single cable Ø4 mm/.15"   Thread: G½, G¾, G1, G1½, ½ NPT, ¾ NPT, 1 NPT, 1½ NPT   FKM/FPM, Kalrez® 6375, EPDM, PFA   -40 to +80 °C/-40 to +176 °F   -60 to +300 °C/-58 to +572 °F (higher on request)   -1 - 40 barg/-14.5 - 580 psig (higher on request)   11.5-30 V DC (Exi), 13.5 - 36 V DC (Exd), 2-wire   2-wire: 4-20 mA (HART® 6), FOUNDATION" Fieldbus, PROFIBUS PA   Weather protection   METAGLAS® dual safety sealing probe made of Hastelloy® C-22 or probe with a PVC, PVDF or PP protective sheath   ATEX, IECEx, cFMus, ÔÚĐÍ×ô, INMETRO, NACE, CRN   SIL2

\* LPR (Level Probing Radar): The antenna can be installed in a closed tank as well as outside. The antenna needs to point \*\*Approval pending

c Horn: (316L) DN80-200/3-8" (32-12°) uide: (316L) 030 mm/1.18"

)-200A

US PA

oling systems for metallic horn antennas, weather protection

## Selection guide

Radar (continued)





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	LR54	LR74
Application	For liquids in basic process applications	For agitated and corrosive liquids applications
Frequency range	K-band/24 GHz	K-band/24 GHz
Dielectric constant	≥1.4 (TBF 1.1)	≥1.4 (TBF 1.1)
Measuring range	0 to 100 m/0 to 328 ft	0 to 100 m/0 to 328 ft
Accuracy	±2 mm/±0.08"	±2 mm/±0.08"
Repeatability	1 mm/±0.04"	1 mm/±0.04"
Converter	C (compact), F (field remote)**	C (compact), F (field remote)**
Housing material	Aluminum, stainless steel	Aluminum, stainless steel
Ingress protection	IP66, 68; 0.1 barg/1.45 psig	IP66, 68; 0.1 barg/1.45 psig
Antenna installation*	LPR and TLPR*	LPR and TLPR*
Antenna type (material), size (beam angle — if applicable)	Metallic Horn: (316L) DN40-200/1.5-8" (17-5°) Drop (PP): DN80/3" (9°), DN100/4" (7°), DN150/6" (5°)	Metallic Horn: (316L) DN40-200/1.5-8" (17-5°) Drop (PEEK): DN80/3" (9°), Drop (PTFE): DN80/3" (8°), DN100/4"
Process connection	Thread: G1, G1½, 1 NPT, 1½ NPT; Flange: DN40-200, 1½ – 8", 40-200A	Thread: G1½, 1½ NPT; Flange: DN40-200, 1½ – 8", 40-200A
Gasket	FKM/FPM, EPDM, Kalrez® 6375	FKM/FPM, EPDM, Kalrez® 6375
Ambient temperature	-40 to +80 °C/-40 to +176 °F	-40 to +80 °C/-40 to +176 °F
Process temperature	-50 to +130 °C/-58 to +266 °F	-50 to +200 °C/-58 to +392 °F (higher on request)
Process pressure	-1 – 16 barg/-14.5 – 232 psig	-1 – 100 barg/-14.5 – 1450 psig (higher on request)
Power supply	12 – 30 V DC (Exi), 16 – 36 V DC (Exd), 2-wire	12 – 30 V DC (Exi), 16 – 36 V DC (Exd), 2-wire
Output	2-wire: 4-20 mA (HART® 7), FOUNDATION™ Fieldbus**, PROFIBUS PA**	2-wire: 4-20 mA (HART® 7), FOUNDATION™ Fieldbus**, PROFIBL
Accessories	Antenna extensions in metal or PP, purging system, flange plate protection made of PP, weather protection, mounting brackets	Antenna extensions in metal or PTFE, purging/heating/cooling sys of PTFE or PEEK, weather protection, mounting brackets
Options	M12 4-pin connector eliminates mis-wiring and speeds install	METAGLAS <sup>®</sup> dual safety sealing; M12 4-pin connector eliminates
Approvals	ATEX, IECEx, cQPSus, NEPSI, NACE, CRN - ASME B31.3**	ATEX, IECEx, cQPSus, NEPSI, NACE, CRN - ASME B31.3**
SIL approval	Developed acc. to SIL2/3, IEC 61508 – 2010. The SIL approval is in the process of validation by TÜV Süd, Germany.**	Developed acc. to SIL2/3, IEC 61508 – 2010. The SIL approval is
PSS link	PSS 2A-7A5 A en	PSS 2A-7A3 A en

)/4" (7°), DN150/6" (4°)

IBUS PA\*\*

systems for metallic horn antennas, flange plate protection made

es mis-wiring and speeds install

l is in the process of validation by TÜV Süd, Germany.\*\*

\* LPR (Level Probing Radar): The antenna can be installed in a closed tank as well as outside. The antenna needs to point \*\*Approval pending

## Selection guide

Radar (continued)





	LR75	LR64	LR65
Application	For liquids in narrow tanks with internal obstructions	For solids from granulates to rocks	For powders and dusty atmosphere
Frequency range	W-band/80 GHz	K-band/24 GHz	W-band/80 GHz
Dielectric constant	≥ 1.4 (TBF 1.1)	≥1.4 (TBF 1.1)	≥1.4 (TBF 1.1)
Measuring range	0 to 100m/0 to 328 ft	0 to 100m/0 to 328 ft	0 to 100m/0 to 328 ft
Accuracy	±2 mm/±0.08"	±2 mm/±0.08"	±2 mm/±0.08"
Repeatability	±1 mm/±0.04"	±1 mm/±0.04"	±1 mm/±0.04"
Converter	C (compact)	C (compact)	C (compact)
Housing material	Aluminum, stainless steel	Aluminum, stainless steel	Aluminum, stainless steel
Ingress protection	IP66, 68; 0.1 barg/1.45 psig	IP66, 68; 0.1 barg/1.45 psig	IP66, 68; 0.1 barg/1.45 psig
Antenna installation*	LPR and TLPR*	LPR*	LPR*
Antenna type (material), size (beam angle — if applicable)	Lens (PEEK): DN20; 3/4" (15°), DN25; 1" (10°), DN40; 1.5" (8°), DN70; 2.75" (4°)	Metallic Horn: (316L) DN80200; 38" (95°); Drop (PP): DN80; 3" (9°), DN100 4" (7°), DN150; 6" (5°); Drop (PTFE): DN80; 3" (8°), DN100; 4" (7°), DN150; 6" (4°)	Lens (PEEK): DN40; 1.5" (8°), DN70; 2.75" (4°)
Process connection	Thread: G3/4, G1, G11/2, G3, 3/4 NPT, 1 NPT, 11/2 NPT, 3 NPT Flange: DN50200, 28", 50200A	Thread: G1, G1½, 1 NPT, 1½ NPT; Flange: DN80-200, 3-8", 80-200A	Thread: G1½, G3, 1½ NPT, 3 NPT Flange: DN50-200, 2-8", 50-200A
Gasket	FKM/FPM, EPDM, Kalrez <sup>®</sup> 6375	FKM/FPM, EPDM, Kalrez <sup>®</sup> 6375	FKM/FPM, EPDM, Kalrez® 6375
Ambient temperature	-40 to +80°C/-40 to +176°F	-40 to +80 °C/-40 to +176 °F	-40 to +80 °C/-40 to +176 °F
Process temperature	-50 to +200°C/-58 to +392°F	-50 to +130 °C/-58 to +266 °F	-50 to +200 °C/-58 to +392 °F
Process pressure	-1 – 40 barg/-14.5 – 580 psig	-1 – 16 barg/-14.5 – 232 psig	-1 – 40 barg/-14.5 – 580 psig
Power supply	12 – 30 V DC (Exi), 16 – 36 V DC (Exd), 2-wire	12 – 30 V DC (Exi), 16 – 36 V DC (Exd), 2-wire	12 – 30 V DC (Exi), 16 – 36 V DC (Exd), 2-wire
Output	2-wire: 4-20 mA (HART® 7), FOUNDATION™ Fieldbus**, PROFIBUS PA**	2-wire: 4-20 mA (HART® 7), FOUNDATION™ Fieldbus**, PROFIBUS PA**	2-wire: 4-20 mA (HART® 7), FOUNDATION™ Fieldbus**, PROFIBUS PA**
Accessories	Antenna extensions in metal, purging system, flange plate protection made of PEEK, weather protection, mounting brackets	Antenna extensions, slanted flange, purging system, weather protection, mounting brackets	Antenna extensions, slanted flange, purging system, weather protection, mounting brackets
Options	M12 4-pin connector eliminates mis-wiring and speeds install	M12 4-pin connector eliminates mis-wiring and speeds install	M12 4-pin connector eliminates mis-wiring and speeds install
Approvals	ATEX, IECEx, cQPSus, NEPSI, NACE, CRN - ASME B31.3**	ATEX, IECEx, cQPSus, NEPSI, NACE, CRN - ASME B31.3**	ATEX, IECEx, cQPSus, NEPSI, NACE, CRN - ASME B31.3**
SIL approval	Developed acc. to SIL2/3, IEC 61508 – 2010. The SIL approval is in the process of validation by TÜV Süd, Germany.**	Developed acc. to SIL2/3, IEC 61508 – 2010. The SIL approval is in the process of validation by TÜV Süd, Germany.**	Developed acc. to SIL2/3, IEC 61508 – 2010. The SIL approval is in the process of validation by TÜV Süd, Germany.**
PSS link	PSS 2A-7A4 A en	PSS 2A-7A1 A en	PSS 2A-7A2 A en



<sup>\*</sup> LPR (Level Probing Radar): The antenna can be installed in a closed tank as well as outside. The antenna needs to point \*\*Approval pending