

Radar Level Instrumentation Selection Guide

	LG01 Guided-Wave Radar	LR01 Free-Space Radar 10 GHz FMCW	LR54 Free-Space Radar 24 GHz FMCW	LR64 Free-Space Radar 24 GHz FMCW	LR74 Free-Space Radar 24 GHz FMCW	LR65 Free-Space Radar 80 GHz FMCW	LR75 Free-Space Radar 80 GHz FMCW
Why choose this technology	<ul style="list-style-type: none"> Contact liquid and solid applications Applications with foam Independent of media Wide measurement range Quick and easy setup 	<ul style="list-style-type: none"> Noncontact liquid applications Applications with foam Independent of media Wide measurement range Quick and easy setup 	<ul style="list-style-type: none"> Noncontact liquid applications Easy mounting position Independent of media Wide measurement range Quick and easy setup 	<ul style="list-style-type: none"> Noncontact solids applications Applications with larger solids material such as granulates or rocks Installations with heavy buildup potential Material forms large angle of repose 	<ul style="list-style-type: none"> Noncontact liquid applications Agitated and corrosive media Dual safety seal requirements High pressure / high temperature applications 	<ul style="list-style-type: none"> Noncontact solids applications Applications with powders and dust High and narrow silos installations Applications with long nozzles and internal obstructions Installation close to tank wall 	<ul style="list-style-type: none"> Noncontact liquid applications Very low dielectric constants Applications with long nozzles and internal obstructions Installation close to tank wall
Contact/Non-Contact measurement	contact measurement	noncontact	noncontact	noncontact	noncontact	noncontact	noncontact
Application Type	Liquid (clean) level	↑	↑	↑	↑	↑	↑
	Liquid level measurement with changing density	↑	↑	↑	↑	↑	↑
	Interface (liquid/liquid)	↑ (1)	↓	↓	↓	↓	↓
	Open-channel volume flow	↓	↑	↑	↓	↑	↓
Media Conditions	Measuring volume	↑	↑	↑	↑	↑	↑
	Applications with foam	↔	↔	↓	↓	↓	↓
	High viscosity or waxy fluids	↔	↑	↑	↓	↑	↓
	Buildup/Coating	↔	↑	↑	↑	↑	↑
	Slurries	↔	↑	↑	↓	↑	↓
	Wavy/turbulence	↑	↔	↔	↓	↔	↓
	Corrosive media (15)	↔	↑	↔	↓	↑	↓
	Fast moving processes (≤60 m/min / 196.85 ft/min)	↓	↓	↑	↑	↑	↑
	Low dielectric <2.0	↑	↔	↔	↔	↔	↑
	Temperature up to 392 F	↑	↑	↓	↓	↑	↑
	Vacuum pressure	↑	↑	↑	↑	↑	↑
	Pressure up to 1450 PSIG	↓	↓	↓	↓	↑	↓
	Solids - granulates	↑	↓	↓	↑	↓	↔
	Solids - powders, dust	↑	↓	↓	↑	↓	↑
	Solids - angle of repose	↑	↓	↓	↑	↓	↑
Installation	Agitator/obstacles in way of measurement	↓	↔	↔	↔	↔	↑
	High, long narrow nozzles	↔	↔	↔	↔	↔	↑
	Small tank height 8"	↓	↓	↑	↓	↑	↓
	Stilling wells and bypass chambers	↑	↑	↑	↓	↑	↓
	Open (vented to atmosphere) vessel (2)	↑	↑	↑	↑	↑	↑
	Open pit / Open air (2)	↑	↑	↑	↑	↑	↑
	Mount outside and measure through non-conductive (plastic) tanks (2)	↓	↓	↑	↓	↑	↓
Process Connection Conditions	Compatible with threaded connection	↑	↑	↑	↑	↑	↑
	Uses process flanged connection	↑	↑	↑	↑	↑	↑
	Top of tank connection/entry	↑	↑	↑	↑	↑	↑
	Side/top of tank connection/entry	↓	↑	↓	↓	↓	↓

(1) available 2020

(2) when using any type of radar in an open vessel, check local regulations for rules/laws regarding potential stray radar emissions

recommended



limited



not recommended



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