SPECIAL PRICE OPTION
80 GHz RADAR

LEVEL GAUGE
FOR SOLIDS

HYCONTROL

WHY USE RADAR FOR SOLIDS LEVEL MEASUREMENT?

Unaffected by Changes In:

- Dielectric
- Pressure
- Vacuum
- Humidity
- Dust
- Viscosity
- Temperature

Key Features Include:

- Measuring range of up to 100 m (328 ft) with accuracy of +/- 2 mm (0.08”)
- Versatile technology for solid products including powders, granules, pellets and more
- Measures level, distance or volume
- Selection of antenna types to suit differing, challenging applications
- Two-wire loop powered 24 V DC
- Compact, durable IP66/68 design suitable for tough industrial environments
- Profibus outputs
- HART Protocol output for ease of system compatibility
- ATEX Ex ia hazardous area options available
- Powerful K-band 24 GHz (LPR and TLPR) or W-band 80 GHz transmitters
- Simple to install and retrofit with a wide selection of process connections
- 80 GHz ideal for low dielectric materials or materials with limited reflectivity
- Unaffected by solid product angle of repose within the vessel
- Empty tank spectrum function eliminates false reflections caused by silo internals

Applications in Many Industries

- Wastewater
- Quarry
- Chemical
- Food
- Plastics
- Power Generation
- Oil & Gas
- Construction
- Pharmaceutical
- Pulp & Paper
- Animal Feed
- Recycling

Effective Replacement For:

- Capacitance transmitters
- Yo-yo/plumbob
- TDR
- Ultrasonic transmitters

Manufactured to ISO9001 Q.M.S.

The standard of all Hycontrol products is strictly monitored to conform to all ISO quality requirements.

This ensures we meet the needs of customers as well as statutory and regulatory requirements.

Lime

Pellets

Plastics

Flakes

Fly ash

Granules

LOW-COST RD4 RADAR - 80 GHz FOR SOLIDS

The **Low-Cost RD4 two-wire 80 GHz FMCW radar level transmitter** is designed for demanding applications with **powders in very dusty atmospheres**. With its small beam angle, this radar is particularly suited for continuous, non-contact level measurement in high and narrow silos or hoppers **up to 100 m/328 ft**. Due to the high signal dynamics of the FMCW radar, the level transmitter is ideal for low-reflective media, dust, uneven surfaces or complex silo internal structures. As it features a flush-mounted PEEK lens antenna, there is no intrusion of the antenna into the silo, bin or hopper.

- Aluminium housing
- Measuring range up to 100 m (328 ft)
- Suitable for dusty environments
- PEEK antenna for zero intrusion
- Empty tank spectrum counters false echoes
- 4~20 mA & HART output
- Max. temperature 150°C (302°F)
- Large, backlit LCD display
- Accuracy of +/- 2 mm (0.08")
- Two-wire loop powered

RD Series Technical Data

Type	**RD Series FMCW Radar**		
Frequency range	W-band 80 GHz		
Dielectric constant	>1.4 (TBF 1.1)		
Measuring range	0 … 100 m (0 … 328 ft)		
Accuracy	±2 mm (±0.08")		
Repeatability	±1 mm (±0.04")		
Housing material ε_r	Aluminium		
Ingress protection	IP66/68		
Process connection	G3" BSPP + DN100 PN01 / 3" NPT + 4" ANSI 15 psig *max*		
Gasket	FKM/FPM		
Ambient temperature	-40°C - +80°C (-40°F - +176°F)		
Process temperature	-50°C - +150°C (-58°F - +302°F)		
Process pressure	-1 – 40 bar (-14.5 – 580 psi) *THREAD ONLY – NOT FLANGE*		
Power supply	24 V DC , 2-wire		
Output	2-wire: 4-20 mA (HART® 7)		
ATEX	No *(Available on other radar models, contact Hycontrol)*		
Antenna	**Lens**	**Size**	**Beam Angle**
	PEEK	DN70 (2.75")	4°

RAK

Optional Rotational Aiming Kit

In some cases, mounting the transmitter in an optimal location might be difficult; for example, you may be forced to put it closer to the edge of the silo. This could cause measurement problems, so a **Rotational Aiming Kit (RAK)** is recommended to target the correct space. This kit also helps if the vessel has internal structures, or if you need to target the bottom of the cone.

Type	**Rotational Aiming Kit**
Material	316L Stainless Steel
Antenna connection	3" G, 3" NPT
Orientation range	25°
Disc connection	Holes drilled according to DN150, PN2.5 … PN40 + 6" 150 lb
Pressure	Atmospheric

HYCONTROL LEVEL TECHNOLOGIES

Product Range for Solids:

(1) TDR radar

(2) 80 GHz FMCW radar

(3) 2-wire ultrasonic transmitter

(4) RF admittance level switch

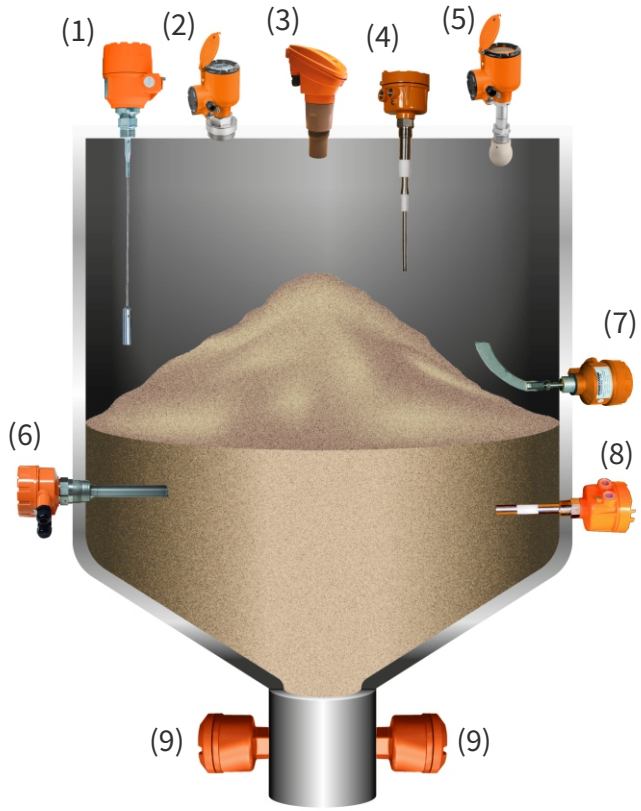
(5) 24 GHz FMCW radar

(6) Vibrating level probe

(7) Rotary paddle switch

(8) Capacitance level switch

(9) Microwave flow & blockage switch



Product Range for Liquids:

(1) Bypass level indicator

(2) 80 GHz FMCW radar

(3) Foam control system

(4) 24 GHz FMCW radar

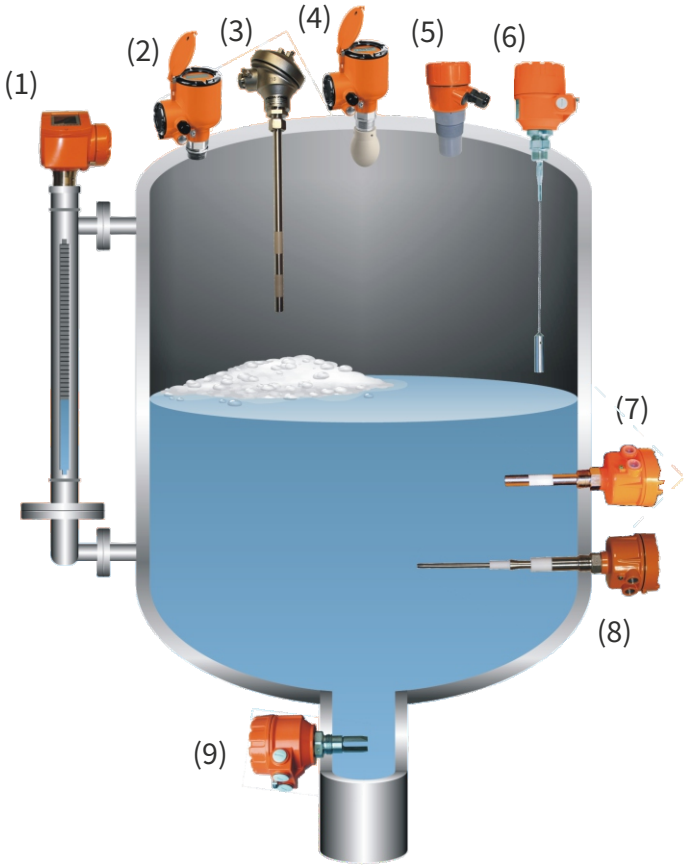
(5) 2-wire ultrasonic transmitter

(6) TDR radar

(7) Capacitance level switch

(8) RF admittance level switch

(9) Tuning fork vibrating level switch



Hycontrol Ltd, Larchwood House, Orchard Street, Redditch, Worcestershire, England, B98 7DP
Tel : 01527 406800, Fax : 01527 406810, sales@hycontrol.com, www.siloprotection.com