

# LSR07 SERIES

## 80GHZ HIGH-FREQUENCY RADAR LEVEL TRANSMITTER

### FEATURES

- ⊙ Non-contact measurement, high accuracy
- ⊙ Smaller blind spot 15cm
- ⊙ Little impact from heavy dust environments
- ⊙ Various output 4-20mA+RS485+HART
- ⊙ Explosion proof ATEX Exdb IIC T6 Gb
- ⊙ Suitable for solid, powder, liquid etc



### INTRODUCTION

The DWEL LSR07 Series 80GHz Radar Level Transmitter is a high-performance FMCW radar for continuous level measurement of liquids, solids, powders, and granules. Operating at 76–81 GHz, it offers high accuracy, strong signal focusing, and stable performance in harsh process conditions.

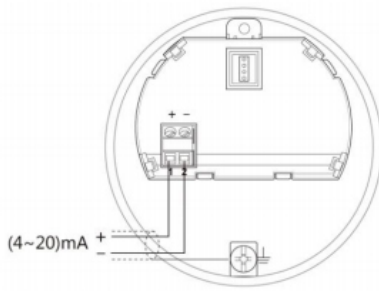
With a measuring range up to 85 m and a very small dead zone of 0.15 m, it is ideal for tanks, silos, hoppers, and process vessels. The narrow beam reduces interference from tank walls and internal structures, ensuring easy installation and reliable readings.

Its non-contact design is unaffected by dust, vapor, temperature, or pressure changes, and it supports high-temperature applications up to +200°C. The device offers 2-wire/4-wire options and Bluetooth or local configuration for easy setup and maintenance.

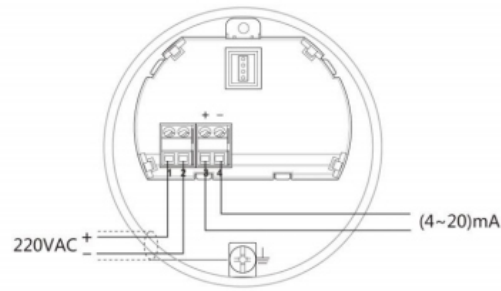
### SPECIFICATIONS

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| <b>Measuring medium</b>      | Liquid, powder, granules                                  |
| <b>Power supply</b>          | 18-28VDC                                                  |
| <b>Measuring Range</b>       | Up to 85 meters                                           |
| <b>Frequency</b>             | 76-81GHz                                                  |
| <b>Blind area</b>            | 0.15m                                                     |
| <b>Installation</b>          | Flange DN80 DN100 DN150 DN200, Thread G1½, Clamp 50.5 etc |
| <b>Electrical connection</b> | M20, 1/2NPT, others on request                            |
| <b>Material</b>              | PTFE+ SS304, PTFE+316L                                    |
| <b>Output signal</b>         | 4... 20mA/HART (Two-wire / Four) RS485/ Modbus            |
| <b>Accuracy</b>              | ±3mm                                                      |
| <b>Working temp.</b>         | -40~200°C                                                 |
| <b>Working pressure</b>      | (-0.1~2)MPa                                               |
| <b>Protection</b>            | IP67                                                      |

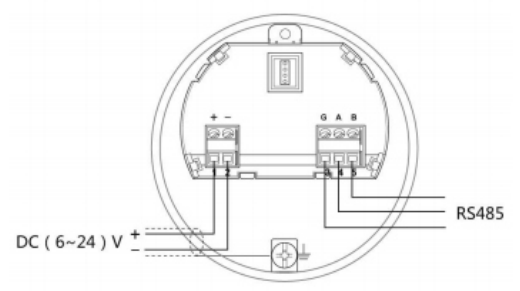
## WIRING



24VDC Two-wire wiring diagram

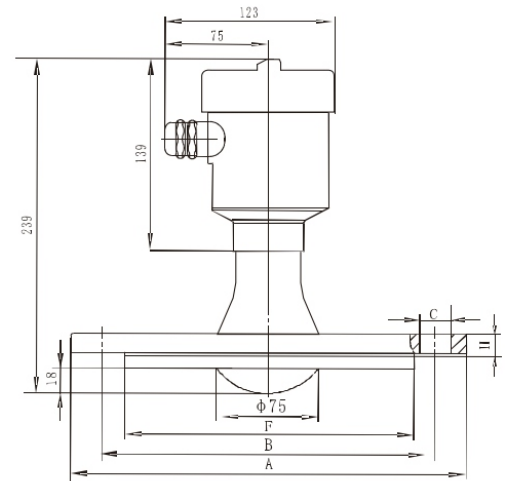
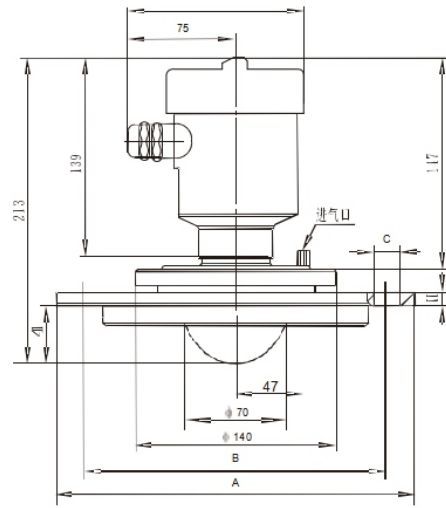
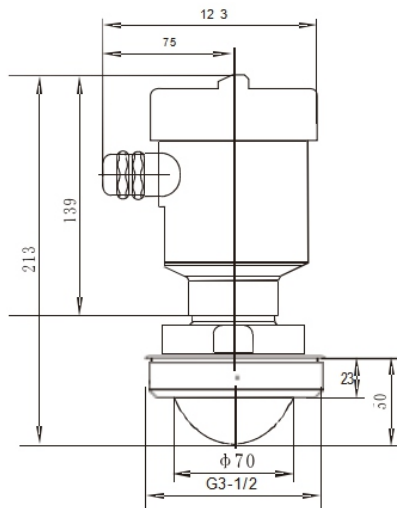


220VAC Four-wire wiring diagram

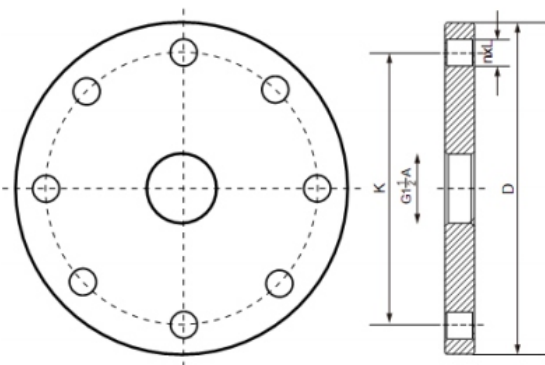


24VDC RS485/Modbus wiring diagram

## DRAWING



### Flange type



| Type  | Outer Diameter D | Center hole distance K | Number of holes N | Hole diameter L |
|-------|------------------|------------------------|-------------------|-----------------|
| DN50  | Φ165             | Φ125                   | 4                 | 18              |
| DN80  | Φ200             | Φ160                   | 8                 | 18              |
| DN100 | Φ220             | Φ180                   | 8                 | 18              |
| DN125 | Φ250             | Φ210                   | 8                 | 18              |
| DN150 | Φ285             | Φ240                   | 8                 | 22              |
| DN200 | Φ340             | Φ295                   | 12                | 22              |
| DN250 | Φ405             | Φ355                   | 12                | 26              |

## ORDER FORMAT

**LSR07 - 20U08S4F4C4DN4**

| Range       | Code |
|-------------|------|
| 0-5 meters  | 5    |
| 0-10 meters | 10   |
| ...         | ...  |
| 0-85 meters | 85   |

| Installation | Code             |
|--------------|------------------|
| Flange       | Universal flange |
| DN80 F08     | DN80 U08         |
| DN100 F10    | DN100 U10        |
| DN150 F15    | DN150 U15        |
| DN200 F20    | DN200 U20        |
| Thread       | Clamp            |
| G1½ T12      | 50.5mm C50       |
| G1 T8        |                  |
| G¾ T6        |                  |
| 1½NPT N12    |                  |
| 1NPT N8      |                  |

| Electrical port   | Code |
|-------------------|------|
| M20x1.5(Default)  | Null |
| 1/2NPT            | N4   |
| Others on request |      |

| Power supply | Code |
|--------------|------|
| 24VDC        | D    |
| 220VAC       | A    |

| Output signal | Code |
|---------------|------|
| 4-20mA+RS485  | C4   |
| 4-20mA+HART   | CH   |

| Antenna material | Code |
|------------------|------|
| PTFE (Standard)  | F4   |
| PEEK             | PK   |

| Connection material | Code |
|---------------------|------|
| SS304               | S4   |
| SS316L              | 3L   |