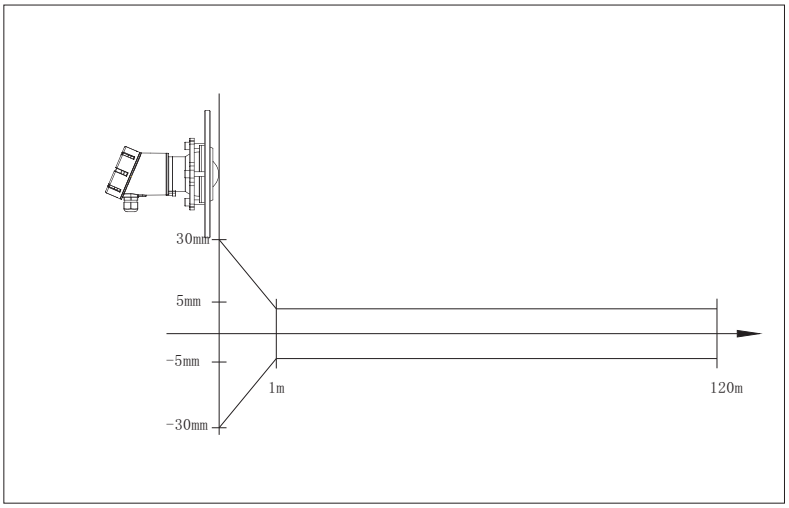
LR84,LR85,LR86	3dB Transmitting angle	4°
	Accuracy	Refer to the following diagram



8. Product model naming

8.1 LR80 Product model naming

LR80- | 1 | 2 | 3 | 4 | 5 |

1 — Approvals

P Standard (non-explosion-proof)

I Intrinsically safe (Ex ia IIC T6～T4 Ga)

F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

2 — Entry cable

T Upper outlet

S Side outlet

3 — Electronic building brick

B (4-20) mA/HART 2-Wire

R RS485/MODBUS Protocol (non-explosion-proof)

S SDI Protocol (non-explosion-proof)

4 — Installation form and Size

G G1″ (up) G1″ (down)

N 1″NPT (up) 1″NPT (down)

5 — Cable length

A 1m

B 5m

C 10m

X Special customized

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

8.2 LR81 Product model naming

LR81- [1][2][3][4][5]

1 — Approvals

- P Standard (non-explosion-proof)
- I Intrinsically safe (Ex ia IIC T6～T4 Ga)
- F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

2 — Entry cable

- T Upper outlet
- S Side outlet

3 — Electronic building brick

- B (4-20) mA/HART 2-Wire
- R RS485/MODBUS Protocol (non-explosion-proof)
- S SDI Protocol (non-explosion-proof)

4 — Installation form and Size

- G G1″ (up) G1½″ (down)
- N 1″NPT (up) 1½″NPT (down)

5 — Cable length

- A 1m
- B 5m
- C 10m
- X Special customized

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

8.3 LR82 Product model naming

LR82- [1][2][3][4][5]

1 — Approvals

- P Standard (non-explosion-proof)
- I Intrinsically safe (Ex ia IIC T6～T4 Ga)
- F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

2 — Entry cable

- T Upper outlet
- S Side outlet

3 — Electronic building brick

- B (4-20) mA/HART 2-Wire
- R RS485/MODBUS Protocol (non-explosion-proof)
- S SDI Protocol (non-explosion-proof)

4 — Installation form and Size

- G G1″ (up) G1½″ (down)
- N 1″NPT (up) 1½″NPT (down)

5 — Cable length

- A 1m
- B 5m
- C 10m
- X Special customized

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

8.4 LR83 Product model naming

LR83- [1][2][3][4][5]

1 — Approvals

- P Standard (non-explosion-proof)
- I Intrinsically safe (Ex ia IIC T6～T4 Ga)
- F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

2 — Display

- A Yes
- B None

3 — Electronic building brick

- B (4-20) mA/HART 2-Wire
- R RS485/MODBUS Protoco (non-explosion-proof)
- S SDI Protocol (non-explosion-proof)

4 — Installation form and Size

- G G1½″ (down)
- N 1½″NPT (down)

5 — Cable access interface

- M M20X1.5
- N ½″NPT

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

8.5 LR84 Product model naming

LR84- [1][2][3][4][5]

1 — Approvals

- P Standard (non-explosion-proof)
- I Intrinsically safe (Ex ia IIC T6～T4 Ga)
- F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

2 — Display

- A Yes

3 — Electronic building brick

- B (4-20) mA/HART 2-Wire
- R RS485/MODBUS Protocol (non-explosion-proof)
- S SDI Protocol (non-explosion-proof)

4 — Installation form and Size

- C M80X3 (down)

5 — Cable access interface

- M M20X1.5
- N ½″NPT

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

8.6 LR85 Product model naming

LR85- [1] [2] [3] [4]

[1] — Approvals

P Standard (non-explosion-proof)

I Intrinsically safe (Ex ia IIC T6～T4 Ga)

F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

[2] — Display

A Yes

[3] — Electronic building brick

B (4-20) mA/HART 2-Wire

R RS485/MODBUS Protocol (non-explosion-proof)

S SDI Protocol (non-explosion-proof)

[4] — Cable access interface

M M20X1.5

N ½″NPT

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

8.7 LR86 Product model naming

LR86- [1][2][3][4]

[1] — Approvals

P Standard (non-explosion-proof)

I Intrinsically safe (Ex ia IIC T6～T4 Ga)

F Intrinsically safe+Dust version (Ex ia IIIC T80℃～T120℃)

[2] — Electronic building brick

B (4-20) mA/HART 2-Wire

R RS485/MODBUS Protocol (non-explosion-proof)

S SDI Protocol (non-explosion-proof)

[3] — Installation form and Size

G G1″(up)

[4] — Cable length

A 1m

B 5m

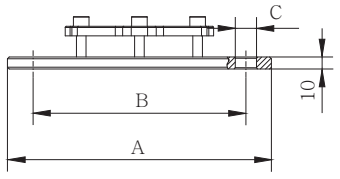
C 10m

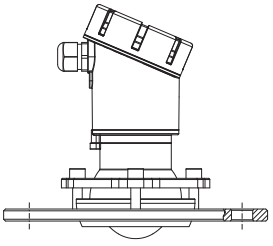
X Special customized

Warning:

1. The housing includes the materials of plastic to avoid the ignition risk caused by impact or friction.
2. Sunshine will cause the aging of plastic parts, shade shade should be used for plastic shell and window.
3. Avoid the impact of external force on the whole meter.
4. Do not impact transparent windows.

9. Accessories





No.	Size	A	B	C
FB	DN80 PN16	Φ200	Φ160	4-Φ18
FC	DN100 PN16	Φ220	Φ180	4-Φ18
FD	DN125 PN16	Φ250	Φ210	4-Φ18
FE	DN150 PN16	Φ285	Φ240	4-Φ22
FF	DN200 PN16	Φ340	Φ295	4-Φ22
FG	DN250 PN16	Φ405	Φ355	4-Φ26
FX	None standard flange			

A
Flange assembly
for gimbal

FCC

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé.
Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

IC

This device complies with Industry Canada's licence-exempt RSS standard. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. The installation of the TLPR device shall be done by trained installers in strict compliance with the manufacturer's instructions.
4. The use of this device is on a "no-interference, no-protection" basis. That is, the user shall accept operations of high-powered radar in the same frequency band which may interfere with or damage this device. However, devices found to interfere with primary licensing operations will be required to be removed at the user's expense.
5. This device shall be installed and operated in a completely enclosed container to prevent RF emissions, which can otherwise interfere with aeronautical navigation.
6. The installer/user of this device shall ensure that it is at least 10 km from the Dominion Astrophysical Radio Observatory (DRAO) near Penticton, British Columbia. The coordinates of the DRAO are latitude 49°19′15″N and longitude 119°37′12″ W. For devices not meeting this 10 km separation (e.g., those in the Okanagan Valley, British Columbia,) the installer/user must coordinate with, and obtain the written concurrence of, the Director of the DRAO before the equipment can be installed or operated. The Director of the DRAO may be contacted at 250-497-2300 (tel.) or 250-497-2355 (fax). (Alternatively, the Manager, Regulatory Standards, Industry Canada, may be contacted.)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux conditions suivantes:

1. l'appareil ne doit pas produire de brouillage.
2. l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
3. L'installation d'un dispositif TLPR doit être effectuée par des installateurs qualifiés, en pleine conformité avec les instructions du fabricant.
4. Ce dispositif ne peut être exploité qu'en régime de non-brouillage et de non-protection, c'est-à-dire que l'utilisateur doit accepter que des radars de haute puissance de la même bande de fréquences puissent brouiller ce dispositif ou même l'endommager. D'autre part, les capteurs de niveau qui perturbent une exploitation autorisée par licence de fonctionnement principal doivent être enlevés aux frais de leur utilisateur.
5. Un dispositif visé comme TLPR doit être installé et exploité dans un réservoir entièrement fermé afin de prévenir les rayonnements RF qui pourraient autrement perturber la navigation aéronautique.
6. La personne qui installe/utilise ce capteur de niveau doit s'assurer qu'il se trouve à au moins 10 km de l'Observatoire fédéral de radioastrophysique (OFR) de Penticton en Colombie-Britannique. Les coordonnées de l'OFR sont: latitude N 49° 19′ 15″, longitude O 119° 37′ 12″. La personne qui installe/utilise un dispositif ne pouvant respecter cette distance de 10 km (p. ex. dans la vallée de l'Okanagan [Colombie-Britannique]) doit se concerter avec le directeur de l'OFR afin d'obtenir de sa part une autorisation écrite avant que l'équipement ne puisse être installé ou mis en marche. Le directeur de l'OFR peut être contacté au 250-497-2300 (tél.) ou au 250-497-2355 (fax). (Le Directeur des Normes réglementaires d'Industrie Canada peut également être contacté).

Radio Equipment Directive (RED) 2014/53/EU

This device complies with ETSI EN 302 372 (TLPR), ETSI EN 302 729 (LPR) and EN 62311.

For the receiver test that covers the influence of an interferer signal to the device, the performance criterion has at least the following level of performance according to ETSI TS 103 361 [6].

- Performance criterion: measurement value variation Δd over time during a distance measurement
- Level of performance: $\Delta d \leq \pm 2$ mm

TLPR (Tank Level Probing Radar)

- The device must be installed in closed tanks. Install according to requirements in ETSI EN 302 372 (Annex E).

LPR (Level Probing Radar)

- Install according to requirements in ETSI EN 302 729 (Annex E).

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