

Incremental 38 mm Dia. Rotary Encoder

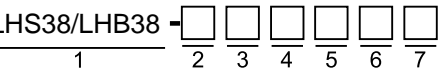
LHS38/LHB38 Hollow shaft type/Hollow shaft Built-in type

General purpose Encoder with External Diameter of 38mm

- Incremental model
- External diameter of 38mm
- Resolution up to 3600 ppr.
- Various output type
- Hollow type and built-in type



Ordering Information



Section 1: Basic model name

- LHS38:** 38mm Rotary Encoder(Hollow shaft)
LHB38: 38mm Rotary Encoder(Hollow shaft Built-in)

Section 2: Inner shaft size

- 5:** 5mm
6: 6mm
6.35: 6.35mm
8: 8mm
10: 10mm
12: 12mm
- Standard bore size is 8mm

Section 3: Resolution

- 10:** 10 ppr
20: 20 ppr

- 40 50 60 80 100 120 125 150
200 225 240 250 256 300 360 400 450
480 500 512 600 625 720 750 800 900
1000 1024 1080 1200...up to 3600

Not indicated resolution is customizable

Section 4: Output phase

- 3:** A B Z
6: A \bar{A} B \bar{B} Z \bar{Z}

Section 5: Output type

- C:** Complementary(also known as totem pole)
N: NPN Open collector
P: PNP Open collector
V: Voltage output
L: Line driver(**Power source 5VDC ONLY, Phase 6**)
T: Push-Pull(**With inverted signal, Phase 6**)

Section 6: Power Supply

- 8:** 8-30 VDC(+/- 5%)
5: 5 VDC(+/- 5%)

Section 7: Cable outgoing type

- G:** Side entry cable
▲ Standard cable length is 2M

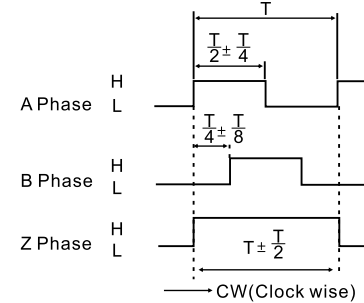
Ratings and Specifications

- Power supply:** 5 VDC / 8-30 VDC
Resolution: 1-3600 ppr
Current consumption: 100mA(Load disconnected)
Load current: 50mA maximum per channel 20mA maximum per channel (Line driver output)
Output type: NPN/PNP open collector/Complementary/Voltage/Line Driver/Push-Pull(HTL with reverse signal)
Frequency: 100K HZ Frequency=RPM*Resolution/60
Maximum permissible speed: 4000 rpm
Shaft loading radial: 10N
Shaft loading thrust: 20N
Weight: Approx 0.2KG
Protection level: IP50
Temperature: operation(-10°C~+70°C), storage(-30°C~+85°C)
Vibration resistance: 50m/s, 10-65 HZ, 1 mm double amplitude for 2 hours each in X, Y, and Z directions
Shock resistance: 980m/s, 6m/s 2 times each in X, Y, and Z directions
Starting torque: 1.5 x 10⁻³ N.m Maximum

Output circuits and wave forms

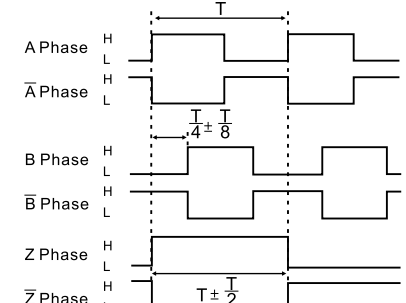
Wave forms

Complementary/Open collector(NPN&PNP)/Voltage output



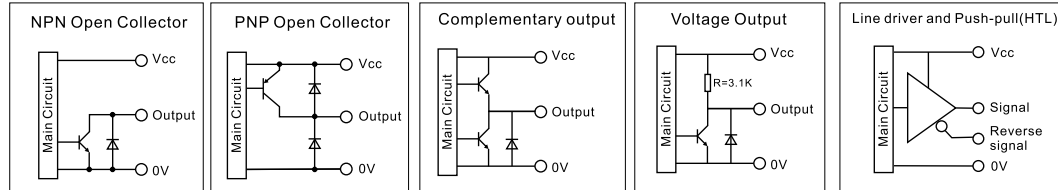
CW: As viewed from the shaft

Line Driver(RS422)/Push-pull(HTL with reverse signal)



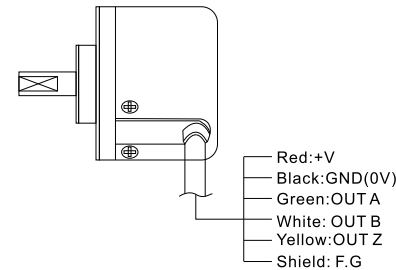
CW(Clock wise)

Output circuits

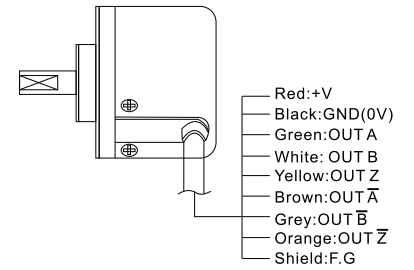


Wiring Details

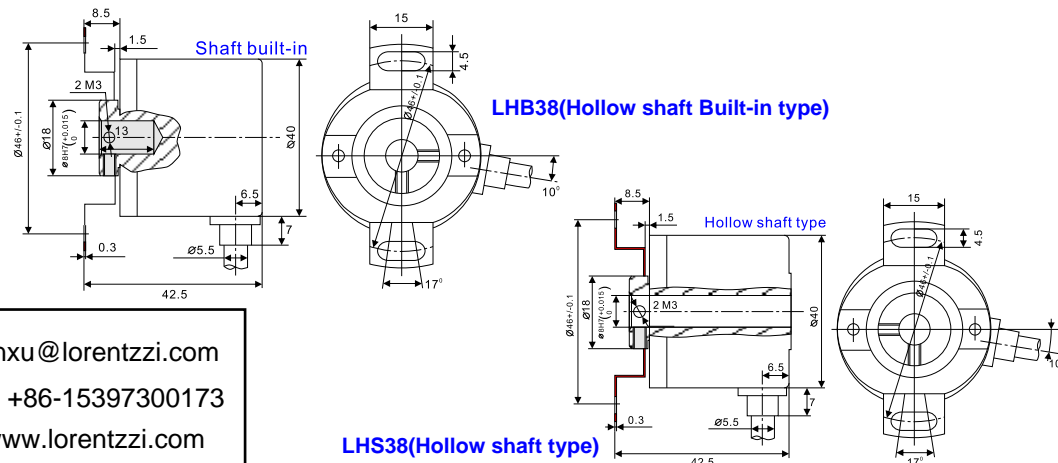
Complementary/Open collector(NPN/PNP)/Voltage output



Line Driver/ Push-pull(HTL with reverse signal)



Mounting and Dimensions



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Incremental 50 mm Dia. Rotary Encoder

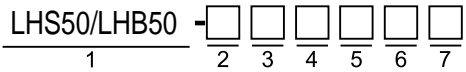
LHS50/THB50 Hollow shaft type/hollow shaft built-in type

General purpose Encoder with External Diameter of 50mm



- Incremental model
- External diameter of 50mm
- Resolution up to 5400 ppr.
- Various output type
- Hollow type and built-in type

Ordering Information



Section 1: Basic model name

- LHS50:** 50mm Rotary Encoder(hollow shaft)
- LHB50:** 50mm Rotary Encoder(hollow shaft built-in)

Section 2: Inner shaft size

- 12:** 12mm
- 8:** 8mm
- 9.52:** 9.52mm
- 10:** 10mm

Section 3: Resolution

- 10:** 10 ppr
- 20:** 20 ppr

- 40 50 60 80 100 120 125 150
200 225 240 250 256 300 360 400 450
480 500 512 600 625 720 750 800 900
1000 1024 1080 1200...up to 5400

Not indicated resolution is customizable

Section 4: Output phase

- 3:** A B Z
- 6:** A \bar{A} B \bar{B} Z \bar{Z}

Section 5: Output type

- C:** Complementary(also known as totem pole)
- N:** NPN Open collector
- P:** PNP Open collector
- V:** Voltage output
- L:** Line driver(**Power source 5VDC ONLY, Phase 6**)
- T:** Push-Pull(**With inverted signal, Phase 6**)

Section 6: Power Supply

- 8:** 8-30 VDC(+/- 5%)
- 5:** 5 VDC(+/- 5%)

Section 7: Cable outgoing type

- G:** Side entry cable
- ▲Standard cable length is 2M

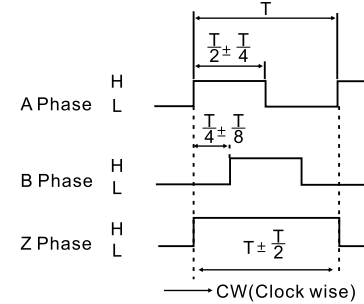
Ratings and Specifications

- Power supply:** 5 VDC / 8-30 VDC
- Resolution:** 5-5400 ppr
- Current consumption:** 100mA(Load disconnected)
- Load current:** 50mA maximum per channel 20mA maximum per channel (Line driver output)
- Output type:** NPN/PNP open collector/Complementary/Voltage/Line Driver/Push-Pull(HTL with reverse signal)
- Frequency:** 100K HZ Frequency=RPM*Resolution/60
- Maximum permissible speed:** 6000 rpm
- Shaft loading radial:** 25N
- Shaft loading thrust:** 35N
- Weight:** Approx 0.25KG
- Protection level:** IP50
- Temperature:** operation(-10°C~+70°C), storage(-30°C~+85°C)
- Vibration resistance:** 50m/s, 10-65 HZ, 1 mm double amplitude for 2 hours each in X, Y, and Z directions
- Shock resistance:** 980m/s, 6m/s 2 times each in X, Y, and Z directions
- Starting torque:** 5x 10⁻² N.m Maximum

Output circuits and wave forms

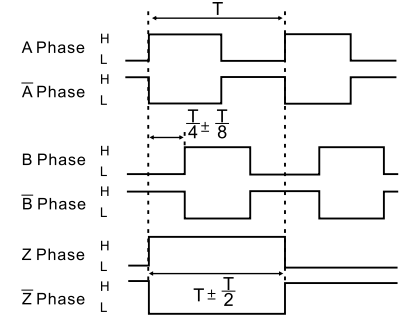
Wave forms

Complementary/Open collector(NPN&PNP)/Voltage output



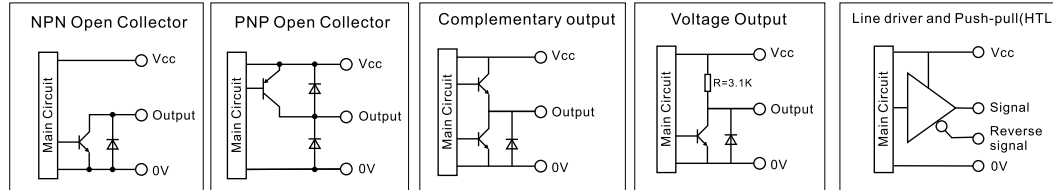
CW: As viewed from the shaft

Line Driver(RS422)/Push-pull(HTL with reverse signal)



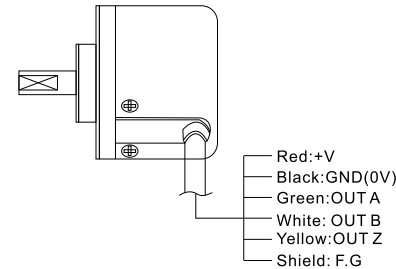
CW(Clock wise)

Output circuits

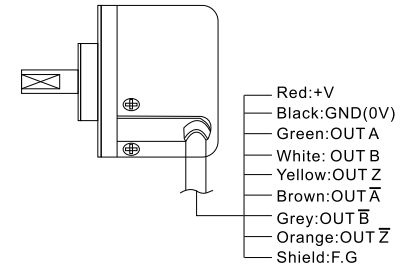


Wiring Details

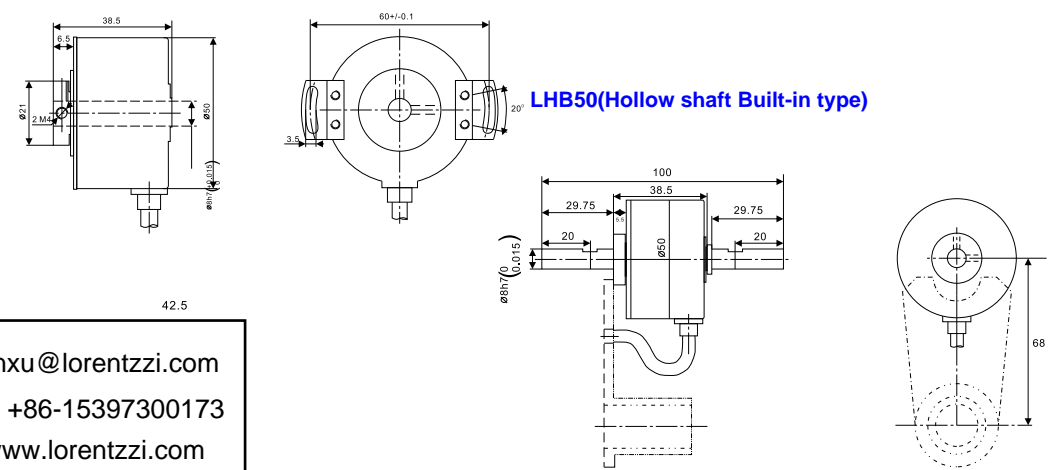
Complementary/Open collector(NPN/PNP)/Voltage output



Line Driver/ Push-pull(HTL with reverse signal)



Mounting and Dimensions



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Incremental 58-mm-Dia. Rotary Encoder

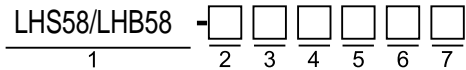
LHS58/LHB58 Hollow shaft type/Hollow shaft Built-in type

General purpose Encoder with External Diameter of 58mm

- Incremental model
- External diameter of 58mm
- Resolution up to 5400 ppr.
- Various output type
- Hollow shaft type and built-in type



Ordering Information



Section 1: Basic model name

- LHS58:** 58mm Rotary Encoder(Hollow Shaft Type)
- LHB58:** 58mm Rotary Encoder(Semi-Hollow Shaft Type)

Section 2: Inner shaft size

- 6:** 6mm **12:** 12mm
- 8:** 8mm **14:** 14mm
- 9.52:** 9.52mm **15:** 15mm
- 10:** 10mm

Section 3: Resolution

- 10:** 10 ppr
 - 20:** 20 ppr
- | | | | | | | | | |
|------|------|------|------|---------------|-----|-----|-----|-----|
| 40 | 50 | 60 | 80 | 100 | 120 | 125 | 150 | |
| 200 | 225 | 240 | 250 | 256 | 300 | 360 | 400 | 450 |
| 480 | 500 | 512 | 600 | 625 | 720 | 750 | 800 | 900 |
| 1000 | 1024 | 1080 | 1200 | ...up to 5400 | | | | |

Not indicated resolution is customizable

Section 4: Output phase

- 3:** A B Z
- 6:** A \bar{A} B \bar{B} Z \bar{Z}

Section 5: Output type

- C:** Complementary(also known as totem pole)
- N:** NPN Open collector
- P:** PNP Open collector
- V:** Voltage output
- L:** Line driver(**Power source 5VDC ONLY, Phase 6**)
- T:** Push-Pull(**With inverted signal, Phase 6**)

Section 6: Power Supply

- 8:** 8-30 VDC(+/- 5%)
- 5:** 5 VDC(+/- 5%)

Section 7: Cable outgoing type

- G:** Side entry cable
 - X:** Side entry plug
- ▲ Standard cable length is 2M**

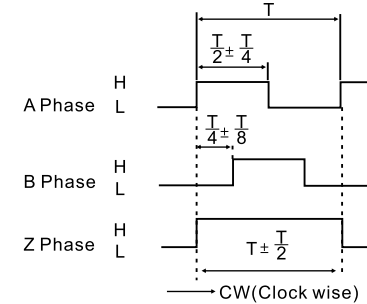
Ratings and Specifications

- Power supply:** 5 VDC / 8-30 VDC
- Resolution:** 5-5400 ppr
- Current consumption:** 100mA(Load disconnected)
- Load current:** 50mA maximum per channel 20mA maximum per channel (Line driver output)
- Output type:** NPN/PNP open collector/Complementary/Voltage/Line Driver/Push-Pull(HTL with reverse signal)
- Frequency:** 100K HZ Frequency=RPM*Resolution/60
- Maximum permissible speed:** 6000 rpm
- Shaft loading radial:** 30N
- Shaft loading thrust:** 50N
- Weight:** Approx 0.36KG
- Protection level:** IP50
- Temperature:** operation(-10°C~+70°C), storage(-30°C~+85°C)
- Vibration resistance:** 50m/s, 10-65 HZ, 1 mm double amplitude for 2 hours each in X, Y, and Z directions
- Shock resistance:** 980m/s, 6m/s 2 times each in X, Y, and Z directions
- Starting torque:** 5x 10⁻² N.m Maximum

Output circuits and wave forms

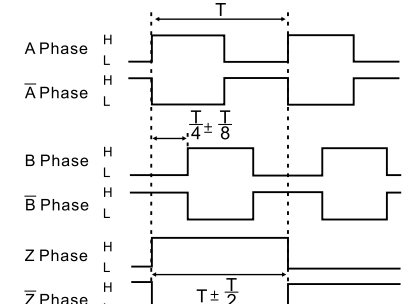
Wave forms

Complementary/Open collector(NPN&PNP)/Voltage output



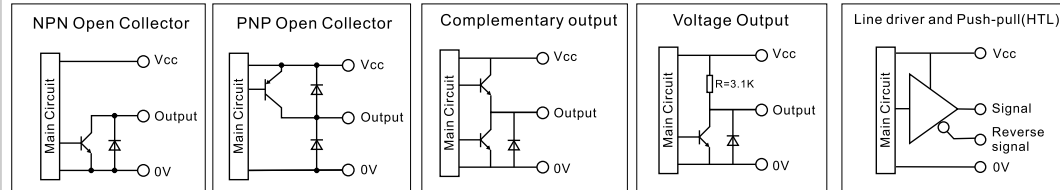
CW: As viewed from the shaft

Line Driver(RS422)/Push-pull(HTL with reverse signal)



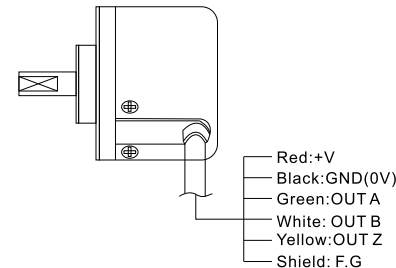
CW(Clock wise)

Output circuits

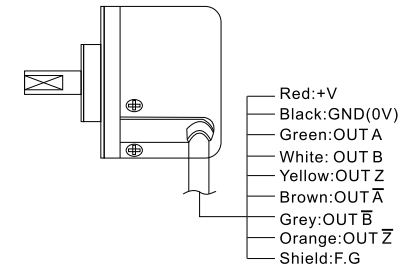


Wiring Details

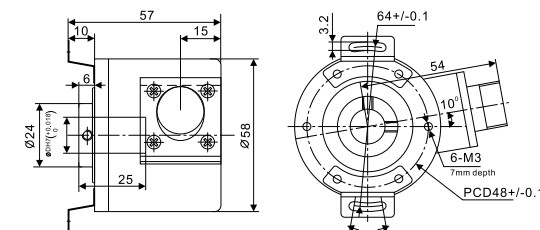
Complementary/Open collector(NPN/PNP)/Voltage output



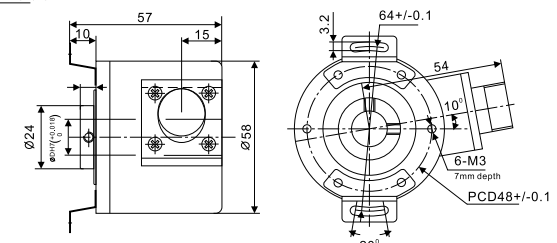
Line Driver/Push-pull(HTL with reverse signal)



Mounting and Dimensions



LHB58(hollow shaft built-in type)



LHS58(hollow shaft type)

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