

# 产品选型手册

Product selection guide



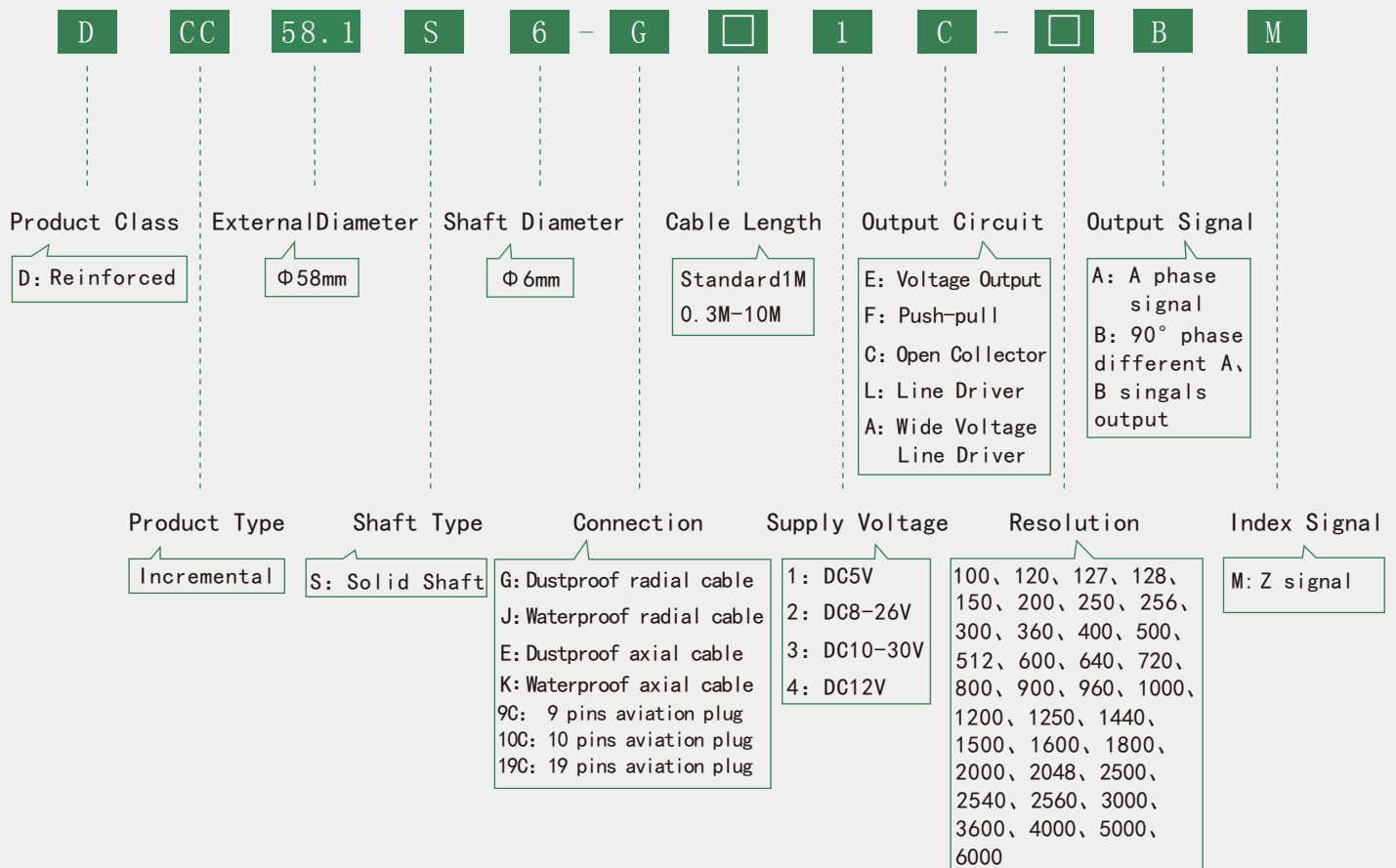
DCC58.1S6 · Series

## Applications & Features



DCC58.1S6 is widely applied to kinds of machinery and photoelectric light industry control industry. Multiple output signals are available, resolution up to 6000ppr, others on request. Optoelectronic devices with high reliability, long life, strong anti-interference ability, wide range of operating temperature.

Part Number



## Electrical Specifications

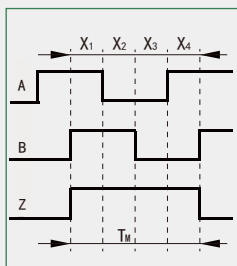
| Output Circuit | Supply Voltage<br>DC (V) | Current Requirement<br>(mA) | (Output Voltage V ) |                | Rise Time<br>(ns) | Fall Time<br>(ns) | Frequency Response<br>(kHz) |
|----------------|--------------------------|-----------------------------|---------------------|----------------|-------------------|-------------------|-----------------------------|
|                |                          |                             | V <sub>H</sub>      | V <sub>L</sub> |                   |                   |                             |
| E (Voltage )   | 5±0.25                   | ≤80                         | >3.5                | ≤0.7           | ≤500              | ≤100              | 0-300                       |
|                | 8-26                     | ≤120                        | >VCC-2.5            | ≤0.7           | ≤500              | ≤100              | 0-300                       |
|                | 10-30                    |                             |                     |                |                   |                   |                             |
|                | 12                       |                             |                     |                |                   |                   |                             |
| F (Push-pull)  | 5±0.25                   | ≤80                         | >3.5                | ≤0.7           | ≤500              | ≤100              | 0-300                       |
|                | 8-26                     | ≤120                        | >VCC-2.5            | ≤0.7           | ≤500              | ≤100              | 0-300                       |
|                | 10-30                    |                             |                     |                |                   |                   |                             |
|                | 12                       |                             |                     |                |                   |                   |                             |

|                              |        |      |          |      |      |      |       |
|------------------------------|--------|------|----------|------|------|------|-------|
| C (Open Collector)           | 5±0.25 | ≤60  | >VCC-2.5 | ≤0.7 | ≤500 | ≤100 | 0-300 |
|                              | 8-26   |      |          |      |      |      |       |
|                              | 10-30  |      |          |      |      |      |       |
|                              | 12     |      |          |      |      |      |       |
| L (Line Driver)              | 5±0.25 | ≤100 | >3.5     | ≤0.7 | ≤200 | ≤200 | 0-300 |
| A (Wide Voltage Line Driver) | 8-26   | ≤60  | >VCC-2.5 | ≤0.7 | ≤500 | ≤100 | 0-300 |
|                              | 10-30  |      |          |      |      |      |       |
|                              | 12     |      |          |      |      |      |       |

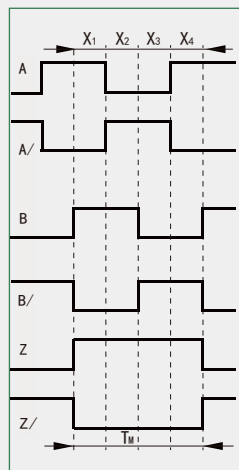
## Output Circuit

| E (Voltage ) |       | F (Push-pull) |       | C (Open Collector) | L, A (Line Driver) |
|--------------|-------|---------------|-------|--------------------|--------------------|
| 5V           | 8-26V | 5V            | 8-26V |                    |                    |
|              |       |               |       |                    |                    |

## Output Waveform



Waveform for C, E, F output



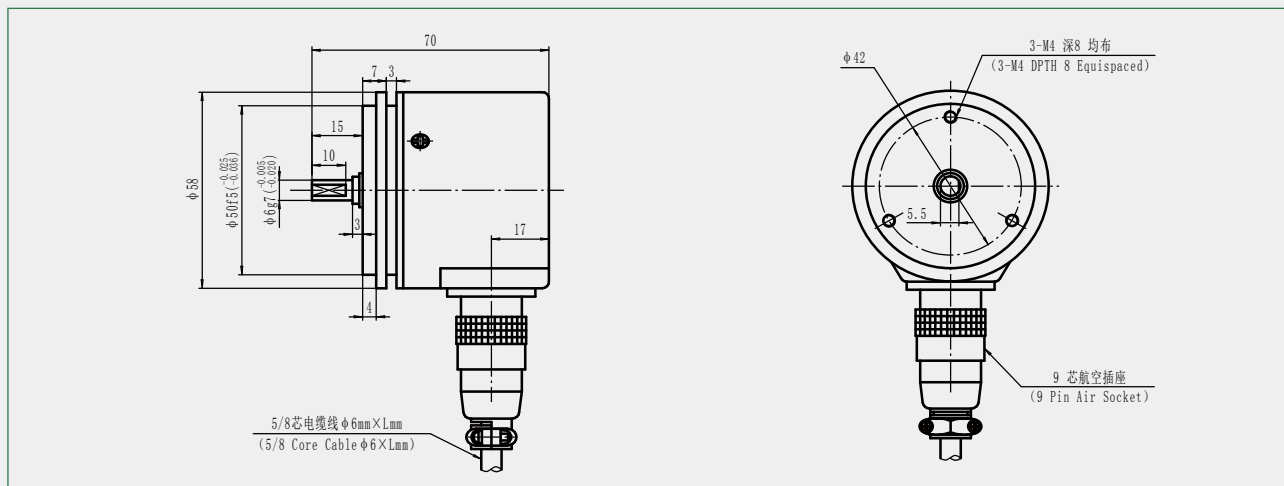
Waveform for L, A output

|                                                                       |                                                  |
|-----------------------------------------------------------------------|--------------------------------------------------|
| Wave Ratio                                                            | : $X1+X2=0.5T \pm 0.1T$<br>$X2+X3=0.5T \pm 0.1T$ |
| Phase Different                                                       | : $Xn \geq 0.125T$ ( $n=1, 2, 3, 4$ )            |
| Absolute Angle Error                                                  | : $\leq 0.2T$                                    |
| Cycle Error                                                           | : $\leq 0.05T$                                   |
| $T=360^\circ / N$ ( $N$ =lines count per revolution)                  |                                                  |
| Width of Z signal                                                     |                                                  |
| 1、 $T_m=1T \pm 0.5T$                                                  |                                                  |
| $T_m=nT \pm 0.1T$ ( $n \geq 2$ )                                      |                                                  |
| The phase relationship of Z signal and A, B signal is not stipulated. |                                                  |
| 2、 $T_m=0.5T \pm 0.25T$                                               |                                                  |
| $T_m=0.25T \pm 0.125T$                                                |                                                  |
| $T_m=0.25T \pm 0.125T$                                                |                                                  |

The picture shows the clockwise (CW) waveform from the shaft side.

## Mechanical Specifications

| Max Speed<br>(r/min) | Starting Torque<br>(N. M) | Max Load (N) |       | Rotary Inertia<br>(kgm <sup>2</sup> ) | Weight<br>(kg) |
|----------------------|---------------------------|--------------|-------|---------------------------------------|----------------|
|                      |                           | Radial       | Axial |                                       |                |
| 6000                 | $6 \times 10^{-3}$        | 30           | 20    | $8.5 \times 10^{-6}$                  | ≈0.255         |



## Environmental Specifications

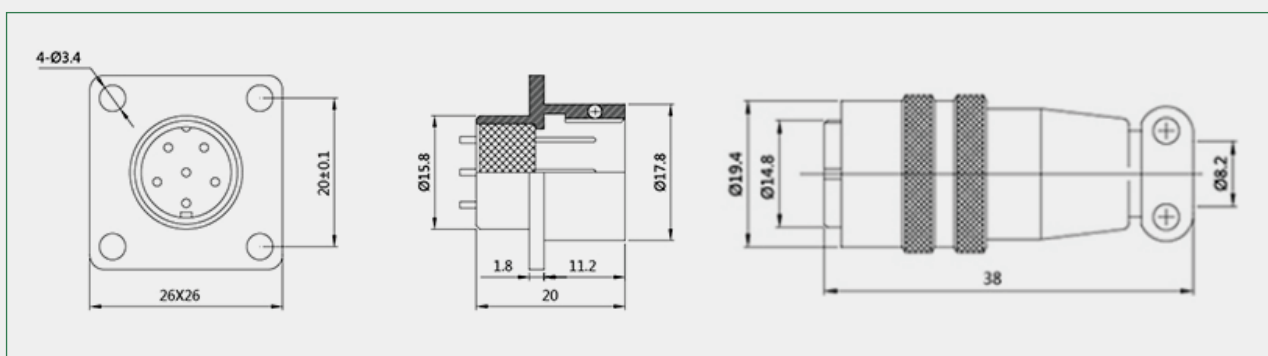
|                                          |                                                                  |
|------------------------------------------|------------------------------------------------------------------|
| Operating Temperature (°C)               | -20~+85                                                          |
| Storage Temperature (°C)                 | -30~+95                                                          |
| Relative Humidity                        | 35~85%RH no condensation                                         |
| Impact Resistance (m/s <sup>2</sup> )    | 50 (Three times each on x, y, z directions, each time lasts 6ms) |
| Vibration Resistance (m/s <sup>2</sup> ) | 20 (10~200Hz, 2h on x, y, z directions)                          |
| Protection Class                         | Reinforced IP65                                                  |

## Connections

| Cable Color        | Red | Black | Green | Brown | White | Gray | Yellow | Orange | Shield |
|--------------------|-----|-------|-------|-------|-------|------|--------|--------|--------|
| E (Voltage)        | Vcc | 0V    | A     |       | B     |      | Z      |        | G      |
| F (Push Pull)      | Vcc | 0V    | A     |       | B     |      | Z      |        | G      |
| C (Open Collector) | Vcc | 0V    | A     |       | B     |      | Z      |        | G      |
| L, A (Line Driver) | Vcc | 0V    | A     | A/    | B     | B/   | Z      | Z/     | G      |

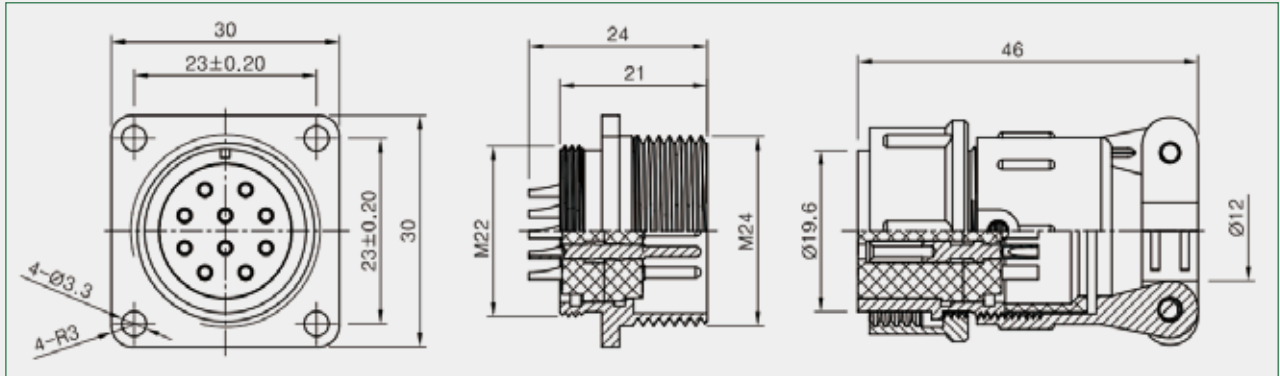
### 9 Pins Aviation Plug

| Pins No.           | 1   | 2      | 3     | 4     | 5     | 6    | 7     | 8      | 9      |
|--------------------|-----|--------|-------|-------|-------|------|-------|--------|--------|
| Cable Color        | Red | Yellow | White | Black | Green | Gray | Brown | Orange | Shield |
| E (Voltage)        | Vcc | Z      | B     | 0V    | A     |      |       |        | G      |
| F (Push Pull)      | Vcc | Z      | B     | 0V    | A     |      |       |        | G      |
| C (Open Collector) | Vcc | Z      | B     | 0V    | A     |      |       |        | G      |
| L, A (Line Driver) | Vcc | Z      | B     | 0V    | A     | B/   | A/    | Z/     | G      |



## 10 Pins Aviation Plug

| Pins No.           | 1   | 2      | 3     | 4     | 5     | 6    | 7     | 8      | 9     | 10     |
|--------------------|-----|--------|-------|-------|-------|------|-------|--------|-------|--------|
| Cable Color        | Red | Yellow | White | Black | Green | Gray | Brown | Orange | Black | Shield |
| E (Voltage)        | Vcc | Z      | B     | 0V    | A     |      |       |        | 0V    | G      |
| F (Push Pull)      | Vcc | Z      | B     | 0V    | A     |      |       |        | 0V    | G      |
| G (Open Collector) | Vcc | Z      | B     | 0V    | A     |      |       |        | 0V    | G      |
| L、A (Line Driver)  | Vcc | Z      | B     | 0V    | A     | B/   | A/    | Z/     | 0V    | G      |



## 19 Pins Aviation Plug

| Pins No.           | 1     | 2      | 3     | 8   | 10    | 12    | 13    | 14     | 15   | 17     |
|--------------------|-------|--------|-------|-----|-------|-------|-------|--------|------|--------|
| Cable Color        | Green | Yellow | White | Red | Black | Black | Brown | Orange | Gray | Shield |
| E (Voltage)        | A     | Z      | B     | Vcc | 0V    | 0V    |       |        |      | G      |
| F (Push Pull)      | A     | Z      | B     | Vcc | 0V    | 0V    |       |        |      | G      |
| G (Open Collector) | A     | Z      | B     | Vcc | 0V    | 0V    |       |        |      | G      |
| L、A (Line Driver)  | A     | Z      | B     | Vcc | 0V    | 0V    | A/    | Z/     | B/   | G      |

