

# YSV12 SERIES

## 12W



### Features

- Energy efficiency level VI
- Class II Power Supply
- 3 Years Warranty
- Universal AC input/Full range
- No load power consumption < 0.1W
- Protections: Short Circuit /Over Load / Over Voltage
- -20~+60℃ wide range working temperature

### Applications

- Blood glucose meter
- Blood pressure meter
- Nebulizer/Inhaler
- Portable medical device



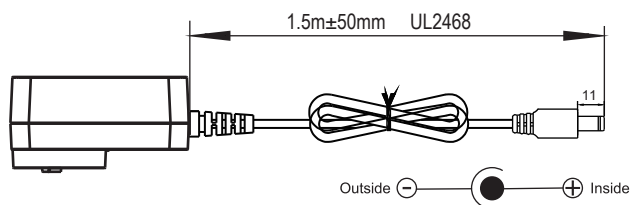
### Model Description

YSV12 - XXXYYYYM-□ - D1J

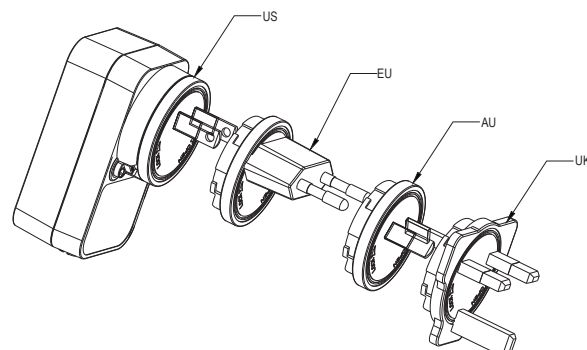
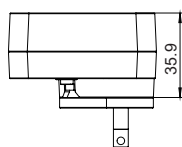
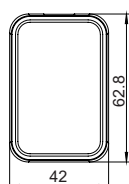
- DC Plug Type { D1J: standard model,  $\phi 2.1 \times \phi 5.5 \times 11\text{mm}$ , C+, tuning fork type  
Other options available by customer requested (see Page 3-5)
- AC Plug Type { Blank: All universal version with interchangeable plugs  
Separate plug available by customer requested (see page 3)
- Medical Type
- Output Current
- Output Voltage
- Series Name

### Dimensions and installation

(Unit: mm , tolerance:  $\pm 1\text{mm}$ )



| Standard Cable | 1.2m UL2468 (Option: UL2464, UL1185) |
|----------------|--------------------------------------|
| 5 ~ 12V        | 22AWG                                |
| 15 ~ 36V       | 24AWG                                |



File last modification time: 2025-2-25

# Specification

| Model      | Order P/N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | YSV12-0502000M-D1J                                                      | YSV12-0901330M-D1J              | YSV12-1201000M-D1J | YSV12-1500800M-D1J                                                           | YSV12-2400500M-D1J | YSV12-3600330M-D1J |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------|--------------------|------------------------------------------------------------------------------|--------------------|--------------------|
|            | Safety Model No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | YSV12-0502000M                                                          | YSV12-0901330M                  | YSV12-1201000M     | YSV12-1500800M                                                               | YSV12-2400500M     | YSV12-3600330M     |
| Output     | DC Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5V                                                                      | 9V                              | 12V                | 15V                                                                          | 24V                | 36V                |
|            | Rated Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2A                                                                      | 1.33A                           | 1A                 | 0.8A                                                                         | 0.5A               | 0.33A              |
|            | Rated Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10W                                                                     | 12W                             | 12W                | 12W                                                                          | 12W                | 12W                |
|            | Ripple & Noise(max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 100mVp-p                                                                | 100mVp-p                        | 120mVp-p           | 240mVp-p                                                                     | 240mVp-p           | 360mVp-p           |
|            | Voltage Tolerance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±5%                                                                     | ±5%                             | ±5%                | ±5%                                                                          | ±5%                | ±5%                |
|            | Line Regulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±3%                                                                     | ±3%                             | ±3%                | ±3%                                                                          | ±3%                | ±3%                |
|            | Load Regulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ±5%                                                                     | ±5%                             | ±5%                | ±5%                                                                          | ±5%                | ±5%                |
|            | Setup,Rise,Hold up Time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.0s,40ms,60ms/230VAC(at full load)                                     |                                 |                    | 2.0s,40ms,12ms/115VAC(at full load)                                          |                    |                    |
| Input      | Rated Voltage Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100-240VAC                                                              |                                 |                    |                                                                              |                    |                    |
|            | Voltage Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 90-264VAC                                                               |                                 |                    |                                                                              |                    |                    |
|            | Frequency Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50/60Hz                                                                 |                                 |                    |                                                                              |                    |                    |
|            | AC Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.6A/100VAC                                                             |                                 | 0.4A/240VAC        |                                                                              |                    |                    |
|            | Inrush Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cold Start 70A/200us at 240VAC 50Hz                                     |                                 |                    | Cold Start 35A/200us at 100VAC 50Hz                                          |                    |                    |
|            | Leakage Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <0.1mA/240VAC                                                           |                                 |                    |                                                                              |                    |                    |
|            | Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 82.5%                                                                   | 84%                             | 84%                | 84.5%                                                                        | 83%                | 83.5%              |
|            | No Load Power Consumption                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <0.1W                                                                   |                                 |                    |                                                                              |                    |                    |
| Protection | Over Load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 105~150%                                                                |                                 |                    |                                                                              |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Hiccup mode, recovers automatically after fault condition is removed.   |                                 |                    |                                                                              |                    |                    |
|            | Short Circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Hiccup mode, recovers automatically after fault condition is removed.   |                                 |                    |                                                                              |                    |                    |
| Ambient    | Working TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -20 ~ +60 ℃ (Please refer to “Derating Curve”section)                   |                                 |                    |                                                                              |                    |                    |
|            | Working Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 25 ~ 75%RH Non-condensing                                               |                                 |                    |                                                                              |                    |                    |
|            | Storage TEMP. Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -40 ~ +80 ℃ ,10 ~ 95%RH Non-condensing                                  |                                 |                    |                                                                              |                    |                    |
|            | TEMP. Coefficient                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±0.03%/(0 ~ 40 ℃ )                                                      |                                 |                    |                                                                              |                    |                    |
|            | Vibration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes |                                 |                    |                                                                              |                    |                    |
| Safety     | Safety Standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EN60601-1, ANSI/AAMI ES60601-1                                          |                                 |                    |                                                                              |                    |                    |
|            | Withstand Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I/P-O/P: 4KVAC/1min                                                     |                                 |                    |                                                                              |                    |                    |
|            | Isolation Resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I/P-O/P:100M Ohms / 500VDC / 25 ℃ / 70% RH                              |                                 |                    |                                                                              |                    |                    |
| EMC        | EMC Emission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Parameter                                                               | Standard                        |                    | Test Level                                                                   |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Conducted                                                               | EN55014<br>FCC Part 15(CISPR22) |                    | CLASS B                                                                      |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Radiated                                                                | EN55014<br>FCC Part 15(CISPR22) |                    | CLASS B                                                                      |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Harmonic Current                                                        | EN61000-3-2                     |                    | CLASS B                                                                      |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Voltage flicker                                                         | EN61000-3-3                     |                    | CLASS B                                                                      |                    |                    |
|            | EMC Immunity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Parameter                                                               | Standard                        |                    | Test Level                                                                   |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ESD                                                                     | EN61000-4-2                     |                    | Level 3, 8KV air, criteria A                                                 |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Radiated Susceptibility                                                 | EN61000-4-3                     |                    | Level 3, criteria A                                                          |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EFT/Burest                                                              | EN61000-4-4                     |                    | Level 3, criteria A                                                          |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Surge                                                                   | EN61000-4-5                     |                    | Level 4, 2KV/L-N, criteria A                                                 |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Conducted                                                               | EN61000-4-6                     |                    | Level 3, criteria A                                                          |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Magnetic Field                                                          | EN61000-4-8                     |                    | Level 4, criteria A                                                          |                    |                    |
|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Voltage Dips and interruptions                                          | EN61000-4-11                    |                    | > 95% dip 0.5 periods, 30% dip 25 periods,<br>>95% interruptions 250 periods |                    |                    |
| Others     | Packing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 150g/pcs; 44 x 33 x 43.5 cm; 100pcs/carton                              |                                 |                    |                                                                              |                    |                    |
|            | Dimension (LxWxH)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 62.8 x 42 x 35.9 mm                                                     |                                 |                    |                                                                              |                    |                    |
|            | Plug and Cable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | See page 3~5; Other type available by customer requested                |                                 |                    |                                                                              |                    |                    |
|            | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50.5Khrs min. MIL-HDBK-217F(25 ℃ )                                      |                                 |                    |                                                                              |                    |                    |
| Note       | 1. Tolerance: includes set up tolerance, line regulation and load regulation.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3.Line regulation is measured from low line to high line at rated load.<br>4.Load regulation is measured from 0% to 100% rated load.<br>5. All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 ℃ of ambient temperature.<br>6. De-rating may be needed under low input voltages. Please refer to “Static Characteristic” sections for details.<br>7. The power supply is considered as a component that will be operated in combination with final equipment.Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. |                                                                         |                                 |                    |                                                                              |                    |                    |

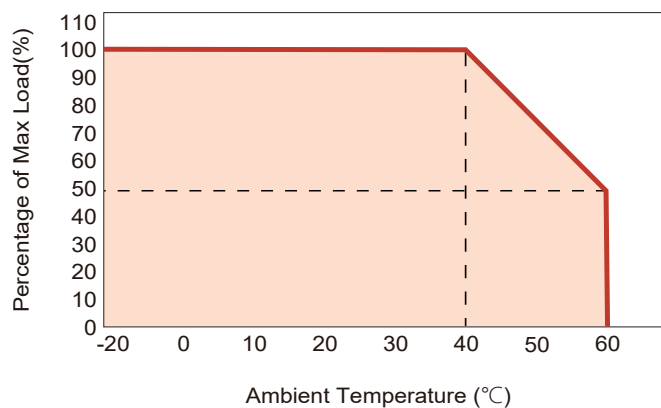
File last modification time: 2025-2-25

# YSV12 SERIES

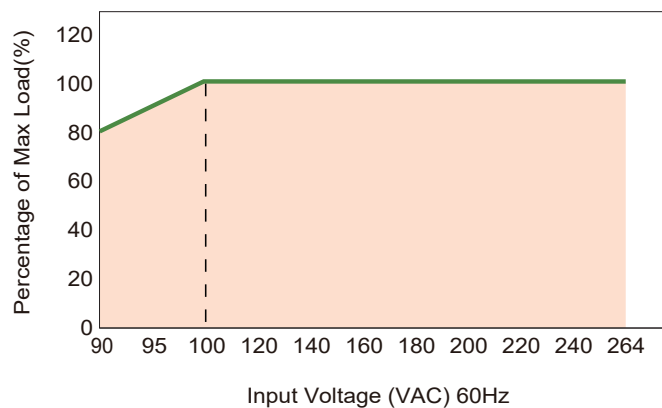
## 12W

## Feature Curves

## 1. Derating Curve



## 2. Static Characteristics



### Input Plug Type (Option)

Standard models: All

| Interchangeable Type(Unfoldable; AC Pin fixed) |    |    |    |    |
|------------------------------------------------|----|----|----|----|
| AC Plug                                        | US | EU | AU | UK |
| Dimension                                      |    |    |    |    |

### DC Output Plug (Option)

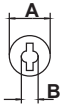
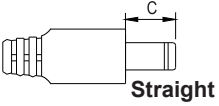
Standard Model : D1J

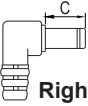
| D1J                                                                                 |                                                                                     | Pin Assignment                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
|                                                                                     |                                                                                     |  |

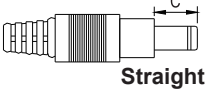
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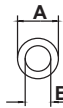
DC Output Plug (Option)

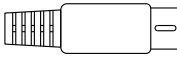
(Unit: mm , tolerance: ±0.5mm)

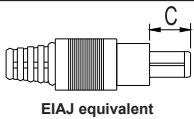
|                   |                                                                                   |                                                                                   |                                                                                   |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Tuning Fork Style |  |  |  |
| Type No.          | A                                                                                 | B                                                                                 | C                                                                                 |
|                   | OD                                                                                | ID                                                                                | L                                                                                 |
| D1I               | 5.5                                                                               | 2.1                                                                               | 9.5                                                                               |
| D1L               | 5.5                                                                               | 2.5                                                                               | 9.5                                                                               |
| D1M               | 5.5                                                                               | 2.5                                                                               | 11.0                                                                              |

|                   |                                                                                     |                                                                                     |                                                                                     |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Tuning Fork Style |  |  |  |
| Type No.          | A                                                                                   | B                                                                                   | C                                                                                   |
|                   | OD                                                                                  | ID                                                                                  | L                                                                                   |
| D1IR              | 5.5                                                                                 | 2.1                                                                                 | 9.5                                                                                 |
| D1JR              | 5.5                                                                                 | 2.1                                                                                 | 11.0                                                                                |
| D1LR              | 5.5                                                                                 | 2.5                                                                                 | 9.5                                                                                 |
| D1MR              | 5.5                                                                                 | 2.5                                                                                 | 11.0                                                                                |

|              |                                                                                     |                                                                                     |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Barrel Style |  |  |  |
| Type No.     | A                                                                                   | B                                                                                   | C                                                                                   |
|              | OD                                                                                  | ID                                                                                  | L                                                                                   |
| D2I          | 5.5                                                                                 | 2.1                                                                                 | 9.5                                                                                 |
| D2J          | 5.5                                                                                 | 2.1                                                                                 | 11.0                                                                                |
| D2L          | 5.5                                                                                 | 2.5                                                                                 | 9.5                                                                                 |
| D2M          | 5.5                                                                                 | 2.5                                                                                 | 11.0                                                                                |

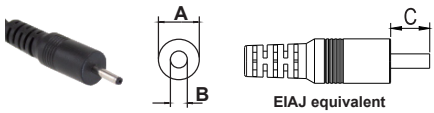
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|--------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Barrel Style |  |  |  |
| Type No.     | A                                                                                     | B                                                                                     | C                                                                                     |
|              | OD                                                                                    | ID                                                                                    | L                                                                                     |
| D2IR         | 5.5                                                                                   | 2.1                                                                                   | 9.5                                                                                   |
| D2JR         | 5.5                                                                                   | 2.1                                                                                   | 11.0                                                                                  |
| D2LR         | 5.5                                                                                   | 2.5                                                                                   | 9.5                                                                                   |
| D2MR         | 5.5                                                                                   | 2.5                                                                                   | 11.0                                                                                  |

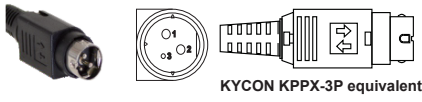
|              |                                                                                     |                                                                                     |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Barrel Style |  |  |  |
| Type No.     | Pin Assignment                                                                      |                                                                                     |                                                                                     |
|              | PIN No.                                                                             | Output                                                                              |                                                                                     |
| M1B          | 1                                                                                   | -Vo                                                                                 |                                                                                     |
|              | 2                                                                                   | -Vo                                                                                 |                                                                                     |
|              | 3                                                                                   | +Vo                                                                                 |                                                                                     |
|              | 4                                                                                   | -Vo                                                                                 |                                                                                     |
|              | 5                                                                                   | +Vo                                                                                 |                                                                                     |

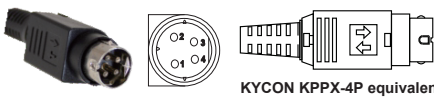
|                  |                                                                                                                                                                                                                                                                            |     |      |            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|------------|
| Center Pin Style | <div></div> |     |      |            |
| Type No.         | A                                                                                                                                                                                                                                                                          | B   | C    | D          |
|                  | OD                                                                                                                                                                                                                                                                         | ID  | L    | Center Pin |
| D4A              | 5.5                                                                                                                                                                                                                                                                        | 3.4 | 11.0 | 1.0        |
| D4B              | 6.5                                                                                                                                                                                                                                                                        | 4.4 | 11.0 | 1.4        |
| D4C              | 7.4                                                                                                                                                                                                                                                                        | 5.1 | 11.0 | 0.6        |

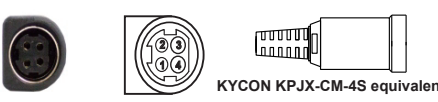
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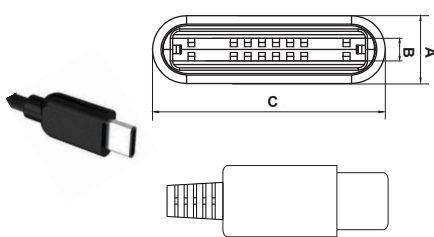
DC Output Plug (Option)

|                   |                                                                                   |     |      |
|-------------------|-----------------------------------------------------------------------------------|-----|------|
| Tuning Fork Style |  |     |      |
|                   | A                                                                                 | B   | C    |
| Type No.          | OD                                                                                | ID  | L    |
| D3A               | 2.35                                                                              | 0.7 | 11.0 |
| D3B               | 4.0                                                                               | 1.7 | 11.0 |
| D3C               | 4.75                                                                              | 1.7 | 11.0 |

|                              |                                                                                     |        |
|------------------------------|-------------------------------------------------------------------------------------|--------|
| MIN.Din 3Pin with Lock(male) |  |        |
| Type No.                     | Pin Assignment                                                                      |        |
|                              | PIN No.                                                                             | Output |
|                              | 1                                                                                   | +Vo    |
| M6B                          | 2                                                                                   | -Vo    |
|                              | 3                                                                                   | +Vo    |

|                              |                                                                                     |        |
|------------------------------|-------------------------------------------------------------------------------------|--------|
| MIN.Din 4Pin with Lock(male) |  |        |
| Type No.                     | Pin Assignment                                                                      |        |
|                              | PIN No.                                                                             | Output |
|                              | 1                                                                                   | +Vo    |
| M7B                          | 2                                                                                   | -Vo    |
|                              | 3                                                                                   | -Vo    |
|                              | 4                                                                                   | +Vo    |

|                                |                                                                                       |        |
|--------------------------------|---------------------------------------------------------------------------------------|--------|
| MIN.Din 4Pin with Lock(female) |  |        |
| Type No.                       | Pin Assignment                                                                        |        |
|                                | PIN No.                                                                               | Output |
|                                | 1                                                                                     | +Vo    |
| M7BF                           | 2                                                                                     | -Vo    |
|                                | 3                                                                                     | -Vo    |
|                                | 4                                                                                     | +Vo    |

|          |                                                                                     |     |      |
|----------|-------------------------------------------------------------------------------------|-----|------|
| Type-C   |  |     |      |
| Type No. | A                                                                                   | B   | C    |
|          | OD                                                                                  | ID  | L    |
| C1       | 2.4                                                                                 | 1.3 | 8.25 |

|                           |                                                                                       |        |
|---------------------------|---------------------------------------------------------------------------------------|--------|
| Stripped and tinned leads |  |        |
| Type No.                  | Pin Assignment                                                                        |        |
|                           | PIN No.                                                                               | Output |
|                           | 1                                                                                     | +Vo    |
| by customer               | 2                                                                                     | -Vo    |