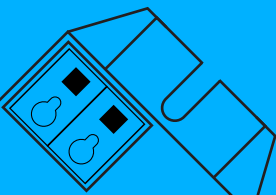


# COLOSSUS<sup>TM</sup>

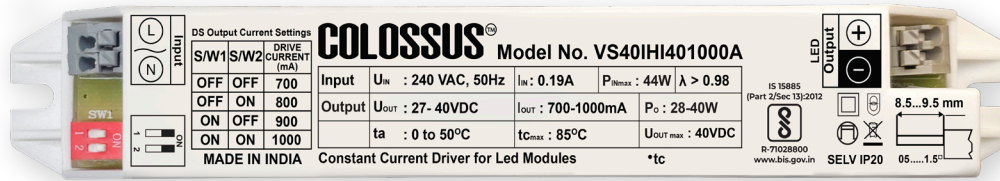
*Excellence inside*

## DATASHEET

**VS40IH1401000A**



Version: 01



<https://colossusworld.com/>

\*Image is for viewing purpose. Technical Data not to be drawn from above image.

### Approval Markings:



### Product Description

- Constant current driver for led modules
- Input Voltage 240VAC
- High efficiency >90%(@100% Load)
- Power factor >0.98, THD<10%(@100%Load)
- For use in combination with luminaries of protection class II.
- Protection against Abnormal Operating Conditions Like Input Over Voltage Protection, Under Voltage Protection, Short Circuit Protection, Open Voltage Protection, Overload Protection.
- Surge protection 4KV
- Nominal Life Time: 30,000 hours @  $t_c \leq t_{cmax}$

### Functions

- Application oriented operation for maximum compatibility

### Applications



Office



Shops



House

### Technical Data

#### Mains Voltage Supply

|   |   |
|---|---|
| Rated Voltage Range                     | 240VAC                                      |
| Rated Frequency                         | 50/60 Hz                                    |
| Max. Admissible Input Voltage Range(AC) | 175-265VAC                                  |
| Total Harmonic Distortion (THD)         | <10% (@Full Load)                           |
| Mains Voltage Withstanding Capacity     | 440VAC for 2hrs (with overvoltage shutdown) |

#### Output Data

##### Constant current

|                          |     |
|--------------------------|-----|
| Output Current Tolerance | ±5% |
| Max Starting Time        | <1s |

#### Interface And Dimming Operation

|                   |      |
|-------------------|------|
| Dimming Interface | None |
|-------------------|------|

#### Power Factor

|                   |       |
|-------------------|-------|
| 240V(@ Full Load) | >0.98 |
|-------------------|-------|

#### Efficiency(typ.)

|           |      |
|-----------|------|
| Full Load | >90% |
|-----------|------|

#### Protections

|                                |             |
|--------------------------------|-------------|
| Open Circuit                   | <50VDC      |
| Output Short Circuit Operation | YES         |
| Input Over Voltage Cutoff      | 290VAC ±10% |
| Input Under Voltage Cutoff     | 100VAC ±10% |

#### Connection Terminals

|                       |   |
|-----------------------|---|
| Type                  | For solid Or stranded wire              |
| Wire Cross Section    | Push Terminal                           |
| Wire Stripping Length | 0.5mm <sup>2</sup> - 1.5mm <sup>2</sup> |
|                       | 8.5mm - 9.5mm                           |

#### Wire Lengths

|                                |     |
|--------------------------------|-----|
| Max. Wire Length To Led Module | <1m |
|--------------------------------|-----|

### Protection

|              |      |
|--------------|------|
| Surge        | 4kV  |
| High Voltage | 440V |

### Temperatures (Operation)

| Model No.      | Ambient(ta)  | Case (tc)  |
|----------------|--------------|------------|
| VS40IHI401000A | 0°C... +50°C | Max + 85°C |

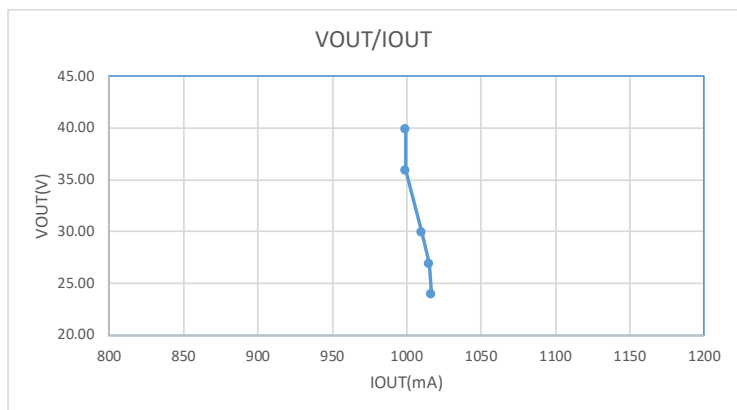
### Product Specifications

| Model No.      | Input Current (max) | Input Power (max) | THD  | Power Factor | Efficiency | Output Current | Output Voltage | Output Power (max) |
|----------------|---------------------|-------------------|------|--------------|------------|----------------|----------------|--------------------|
| VS40IHI401000A | 190mA               | 44W               | <10% | >0.98        | >90%       | 700-1000mA     | 27-40V         | 40W                |

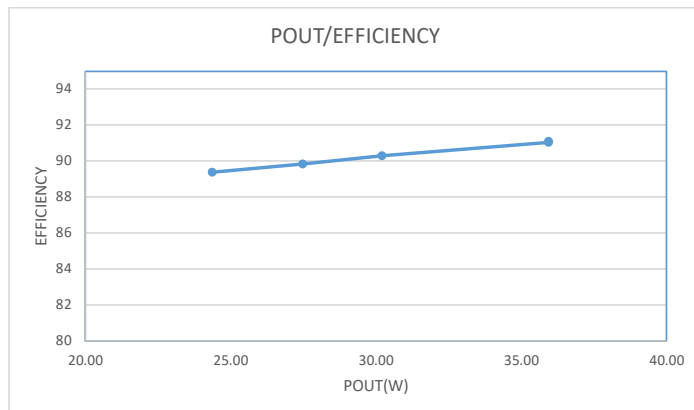
All specifications with 240 VAC are nominal operation and 100% load.

### Graphs

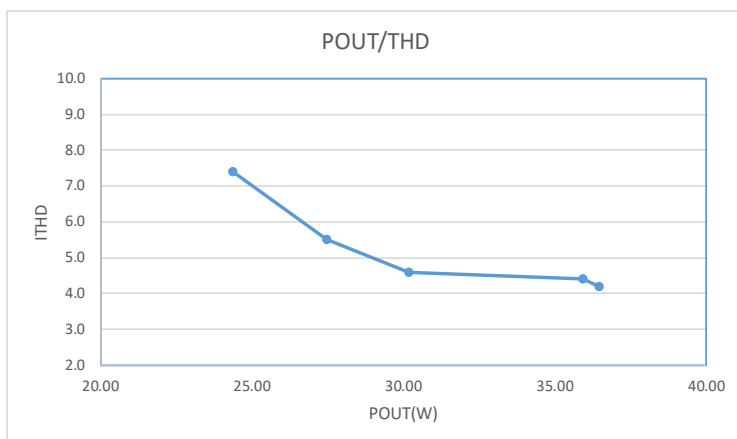
Operating Window



Efficiency Vs Output Power



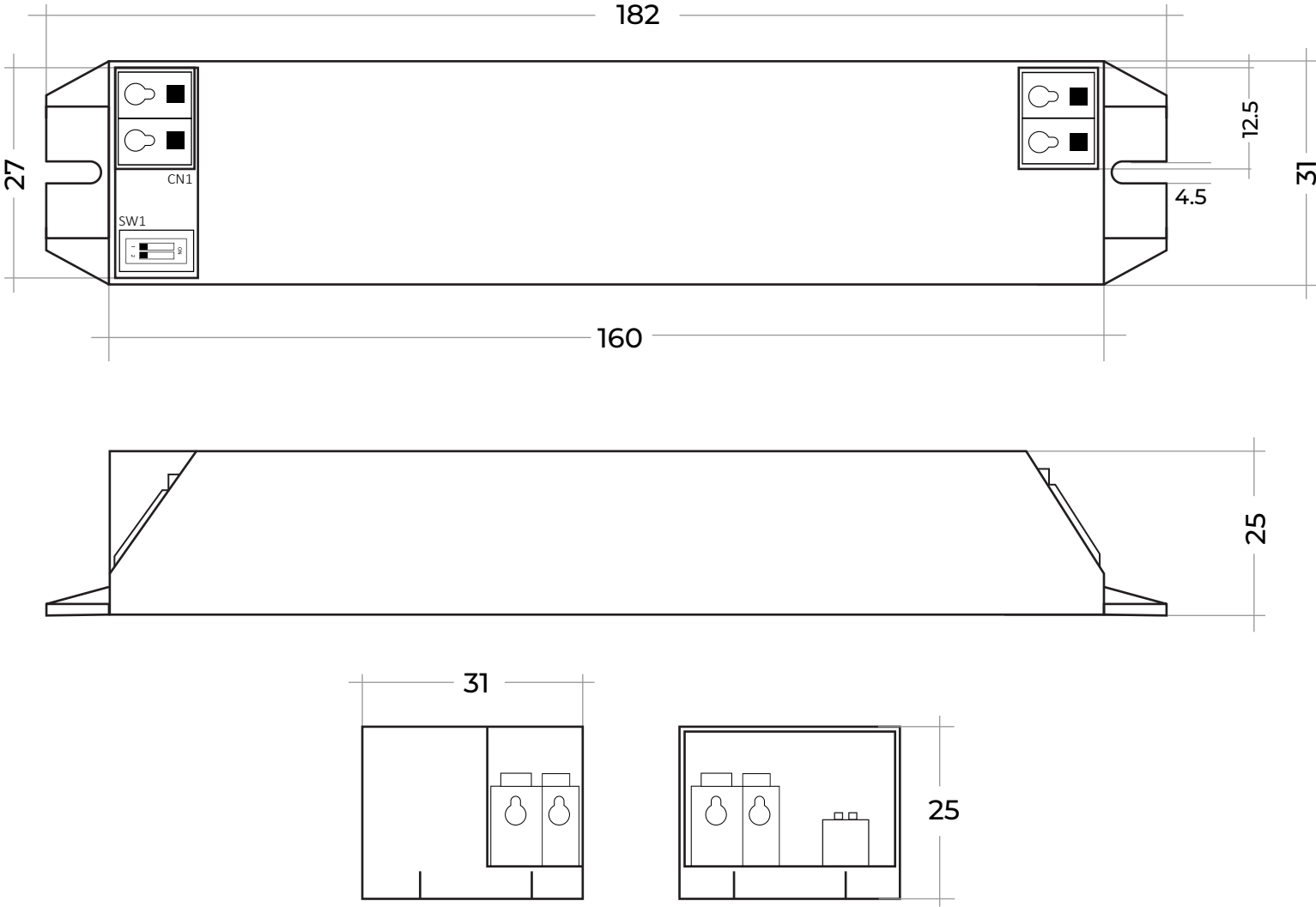
THD Vs Output Power



Housing Properties

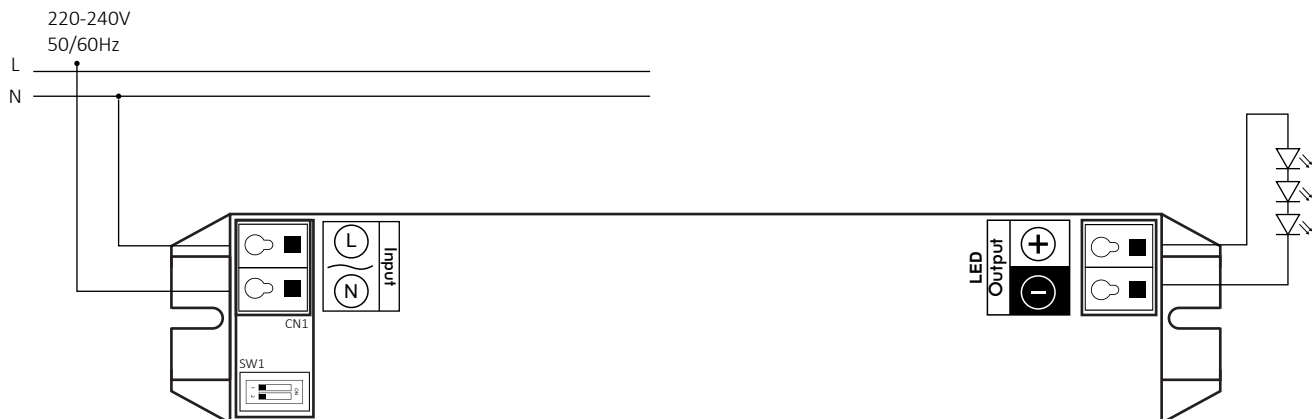
|                      |                      |
|----------------------|----------------------|
| Degree of protection | IP20                 |
| Casing               | Polycarbonate, White |

Housing Dimensions

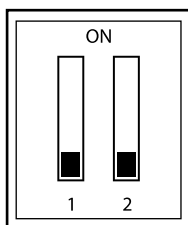


|            |             |
|------------|-------------|
| Dimensions | 182x31x25mm |
| Tolerance  | ± 1mm       |
| Weight     | 110 gm      |

### Wiring Diagrams



### Switch Configuration



| SW1 | SW2 | Current(mA) |
|-----|-----|-------------|
| OFF | OFF | 700         |
| OFF | ON  | 800         |
| ON  | OFF | 900         |
| ON  | ON  | 1000        |

| SW1 | SW2 | Input Voltage (V) | Input Current (mA) | Input Power (P) | THD | Power Factor | Efficiency | Output Current (mA) | Output Voltage (V) | Output Power (P) |
|-----|-----|-------------------|--------------------|-----------------|-----|--------------|------------|---------------------|--------------------|------------------|
| OFF | OFF | 240               | 128.10             | 29.22           | 5.7 | 0.99         | 90         | 702                 | 38.68              | 26.36            |
| OFF | ON  | 240               | 148.23             | 33.85           | 4.8 | 0.99         | 90         | 805                 | 38.68              | 30.55            |
| ON  | OFF | 240               | 170.27             | 38.59           | 4.7 | 0.99         | 90         | 898                 | 39.16              | 34.75            |
| ON  | ON  | 240               | 190.40             | 43.38           | 4.0 | 0.99         | 90         | 991                 | 39.16              | 38.82            |

\*Only for reference with respect to DIP Switch.

### Expected Lifetime

|          |              |
|----------|--------------|
| Lifetime | 30,000 hours |
| Warranty | 2 years      |

### Logistics Data

|             |                |
|-------------|----------------|
| Model No.   | VS40IHI401000A |
| Weight (gm) | 110 gm         |