

## 5 Watts DIP Type Wide Input DC - DC Converter



### FEATURES

- ◆ 5-6W Isolated Output / 24-Pin DIP Package
- ◆ Regulated Outputs / 2:1 & 4:1 Input Range
- ◆ Continuous Short Circuit Protection / Efficiency 70%~ 87%
- ◆ Meet EMI EN55022 Class B, Conducted (Optional)
- ◆ Remote On/off (Optional)

### SPECIFICATIONS

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Input Filter.....                  | Pi Type                                                 |
| Voltage Accuracy.....              | ± 2% max.                                               |
| Voltage Balance(Dual).....         | ± 1% max.                                               |
| Temperature Coefficient.....       | ± 0.05%/°C                                              |
| Ripple&Noise (20MHz BW).....       | (3.3V/5V).....100mVp-p max.<br>(12/15V).....1%Vp-p max. |
| Short Circuit Protection.....      | Continuous                                              |
| Line Regulation, Single/Dual ..... | (LL-HL).....± 0.5% max.                                 |
| Load Regulation, Single.....       | (10%FL-FL).....± 0.5% max.                              |
| Dual.....                          | (25%FL-FL).....± 1.0% max.                              |
| I/O Isolation.....                 | (Standard Model).....500VDC min.                        |
| Switching Frequency.....           | 100KHz min.                                             |
| Operating Temperature Range.....   | -25°C To +71°C                                          |
| Storage Temperature Range.....     | -40°C To +100°C                                         |
| Case Material.....                 | Non-Conductive Black Plastic                            |
| Dimension.....Standard.....        | 31.8x20.3x10.2mm                                        |
| SMD.....                           | 31.8x20.3x11.4mm                                        |
| Weight.....                        | 12.5g                                                   |

| Model Number             | Input Voltage | Output Voltage (VDC) | Output Current (mA) |
|--------------------------|---------------|----------------------|---------------------|
| E05-x0 (B/M/M1/P3/T/S/E) | See Note      | 3.3                  | 1000                |
| E05-x1 (B/M/M1/P3/T/S/E) | See Note      | 5                    | 1000                |
| E05-x2 (B/M/M1/P3/T/S/E) | See Note      | 12                   | 470                 |
| E05-x3 (B/M/M1/P3/T/S/E) | See Note      | 15                   | 400                 |
| E05-x4 (B/M/M1/P3/T/S/E) | See Note      | ± 5                  | ± 500               |
| E05-x5 (B/M/M1/P3/T/S/E) | See Note      | ± 12                 | ± 230               |
| E05-x6 (B/M/M1/P3/T/S/E) | See Note      | ± 15                 | ± 190               |

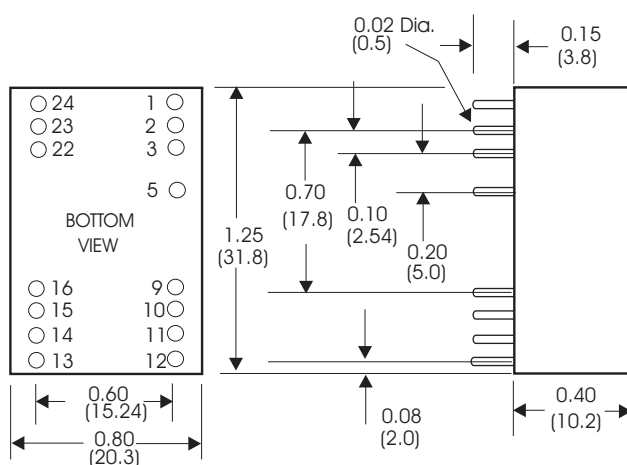
#### Note:

x=1, Input Voltage= 9~18VDC, Nominal=12VDC, Pin connection A or B.  
x=2, Input Voltage=18~36VDC, Nominal=24VDC, Pin connection A or B.  
x=3, Input Voltage=36~72VDC, Nominal=48VDC, Pin connection A or B.  
x=4, Input Voltage= 9~36VDC, Nominal=24VDC, Pin connection B only.  
x=5, Input Voltage=18~72VDC, Nominal=48VDC, Pin connection B only

#### Model Number Suffix:

- (1) "B": Optional for EN55022 class B, for Input Range 2:1 only.
- (2) "M": Optional for 500V I/O Isolation; black coated copper with non-conductive base
- (3) "M1": Optional for 1.5KV I/O Isolation ; black coated copper with non-conductive base
- (4) "P3": Optional for 3KV I/O Isolation with plastic case.
- (5) "T": Remote On/Off for class B version Isolation 3KV & Input Range 2:1 Only
- (6) "S" : for SMD type
- (7) "E" : for -40°C to +85°C operating temperature with derating
- (8) UL Approved Models optional for Input Range 2:1 & Class B Version with Isolation 1.5KV/3KV Models only.

### MECHANICAL DRAWING (Unit: inch(mm))



\* Pin # 5 for Remote on/off (optional) function only .  
All other conditions Pin # 5 will be No Pin (N.P.) .

| Pin Connections A                                |        |      |      |        |      |      |        |      |
|--------------------------------------------------|--------|------|------|--------|------|------|--------|------|
| Standard Models 500VDC Suffix "M" For Metal Case |        |      |      |        |      |      |        |      |
| Pin#                                             | Single | Dual | Pin# | Single | Dual | Pin# | Single | Dual |
| 1                                                | +Vi    | +Vi  | 11   | +Vo    | +Vo  | 16   | N.P.   | N.P. |
| 2                                                | N.C.   | -Vo  | 12   | -Vi    | -Vi  | 22   | N.C.   | Com. |
| 3                                                | N.C.   | Com. | 13   | -Vi    | -Vi  | 23   | N.C.   | -Vo  |
| 9                                                | N.P.   | N.P. | 14   | +Vo    | +Vo  | 24   | +Vi    | +Vi  |
| 10                                               | -Vo    | Com. | 15   | -Vo    | Com. |      |        |      |

| Pin Connections B                     |        |      |      |        |      |      |        |      |
|---------------------------------------|--------|------|------|--------|------|------|--------|------|
| 1.5KVDC SUFFIX "M1" 3KVDC Suffix "P3" |        |      |      |        |      |      |        |      |
| Pin#                                  | Single | Dual | Pin# | Single | Dual | Pin# | Single | Dual |
| 1                                     | N.P.   | N.P. | 11   | N.C.   | -Vo  | 16   | -Vo    | Com. |
| 2                                     | -Vi    | -Vi  | 12   | N.P.   | N.P. | 22   | +Vi    | +Vi  |
| 3                                     | -Vi    | -Vi  | 13   | N.P.   | N.P. | 23   | +Vi    | +Vi  |
| 9                                     | N.C.   | Com. | 14   | +Vo    | +Vo  | 24   | N.P.   | N.P. |
| 10                                    | N.C.   | N.C. | 15   | N.C.   | N.C. |      |        |      |

\* Specify Pin connection type ( A or B ) when ordering .