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COSEL DC-DC Converters Bus Converter·Power Module Type

# DHS50A

## Ordering information

| DH | S | 50 | A | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |






＊Providing heat sink as option

①Series name
②Single output
③Output wattage
④A : DC60-160V
⑤Output voltage
⑥Optional
T : with Mounting hole (φ3.4 thru)

| MODEL | DHS50A05 | DHS50A12 | DHS50A15 | DHS50A24 |
|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 50.0 | 50.4 | 51.0 | 50.4 |
| DC OUTPUT | 5V 10A | 12V 4.2A | 15V 3.4A | 24V 2.1A |

## SPECIFICATIONS

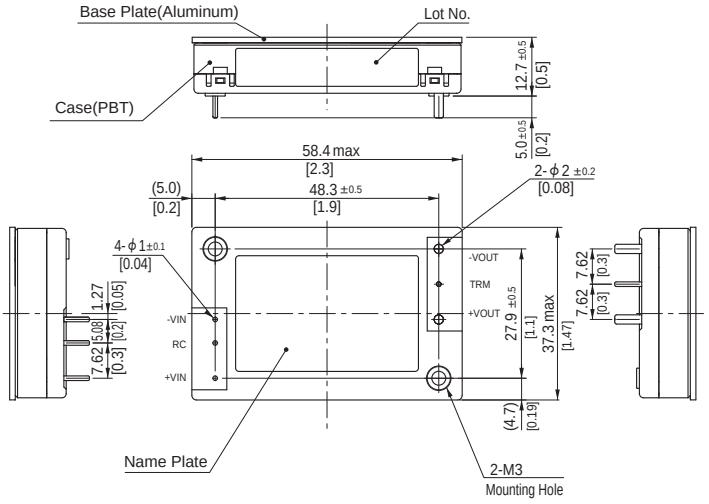
| | MODEL | | DHS50A05 | DHS50A12 | DHS50A15 | DHS50A24 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC60 - 160 | | | |
| | CURRENT[A] | ＊1 | 0.55A | 0.55A | 0.55A | 0.55A |
| | EFFICIENCY[%] | ＊1 | 84.0typ | 86.0typ | 86.0typ | 86.0typ |
| OUTPUT | VOLTAGE[V] | | 5 | 12 | 15 | 24 |
| | CURRENT[A] | | 10 | 4.2 | 3.4 | 2.1 |
| | LINE REGULATION[mV] | | 10max | 24max | 30max | 48max |
| | LOAD REGULATION[mV] | | 10max | 24max | 30max | 48max |
| | RIPPLE[mVp-p] | 0 to +100℃ ＊2 | 80max | 120max | 120max | 120max |
| | | -40 to 0℃ ＊2 | 120max | 150max | 150max | 150max |
| | | 0 to 15% Load ＊2 | 160max | 240max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | 0 to +100℃ ＊2 | 120max | 150max | 150max | 150max |
| | | -40 to 0℃ ＊2 | 200max | 200max | 200max | 250max |
| | | 0 to 15% Load ＊2 | 240max | 300max | 300max | 300max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 50max | 120max | 150max | 240max |
| | | -40 to +100℃ | 100max | 240max | 300max | 480max |
| | DRIFT[mV] | ＊3 | 20max | 40max | 60max | 90max |
| | START-UP TIME[ms] | | 200max (DCIN 110V, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] ＊4 | | Fixed (TRM pin open), adjustable by external VR or external voltage | | | |
| | | | 4.50 - 6.00 | 10.80 - 13.20 | 13.50 - 16.50 | 21.60 - 26.40 |
| | OUTPUT VOLTAGE SETTING[V] | | 4.97 - 5.13 | 11.91 - 12.29 | 14.76 - 15.24 | 23.62 - 24.38 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION[V] | | 6.30 - 7.60 | 13.90 - 17.55 | 17.25 - 21.75 | 27.60 - 34.80 |
| | REMOTE SENSING | | nothing | | | |
| | REMOTE ON/OFF | | Provided (Negative Logic L : ON, H :OFF) | | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃ (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | | |
| | VIBRATION | | 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis Complies with IEC61373 Category 1 Class B | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis Complies with IEC61373 Category 1 Class B | | | |
| SAFETY | AGENCY APPROVALS | | UL60950-1, C-UL (CSA60950-1), EN60950-1 | | | |
| OTHERS | CASE SIZE/WEIGHT | | 58.4×12.7×37.3mm [2.3×0.5×1.47 inches] (W×H×D) / 60g max | | | |
| | COOLING METHOD | | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | |

＊1 At rated input(DC110V) and rated load.
＊2 Ripple and ripple noise is measured by using measuring board. Refer to the manual
＊3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊4 Refer to the manual for input range.

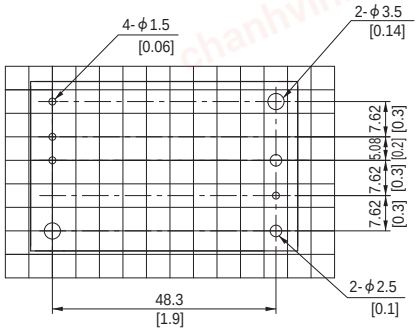
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## External view




Recomending size for processing PCB
(TOP VIEW)




※ Dimensions in mm, [ ]=inches

※ Div. : 0.2inch

※ Tolerance : ±0.3 [±0.012]
※ Weight : 60g max
※ Dimensions in mm, [ ]=inches
※ Mounting hole screwing torque : 0.49N・m (5.0kgf・cm) max

DHS

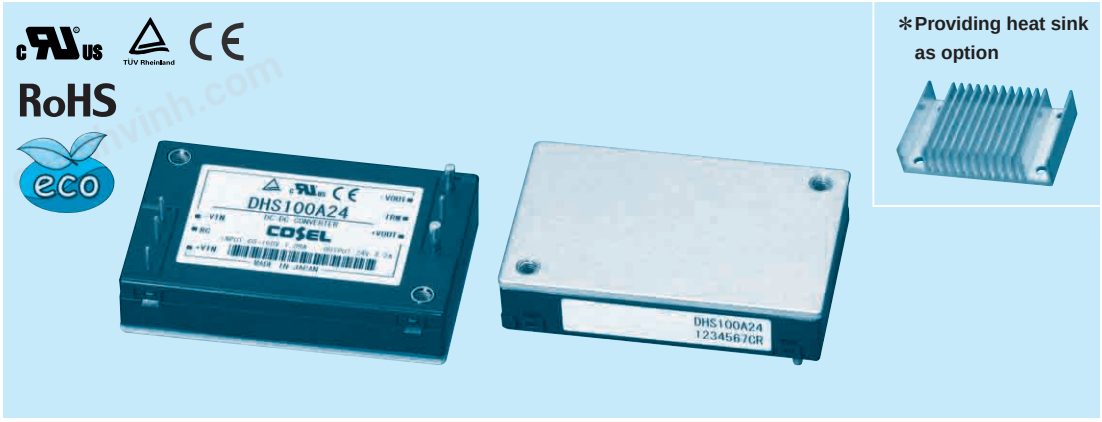
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COSEL DC-DC Converters Bus Converter·Power Module Type

# DHS100A

## Ordering information

| DH | S | 100 | A | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |






＊Providing heat sink as option

①Series name
②Single output
③Output wattage
④A : DC60-160V
⑤Output voltage
⑥Optional
T : with Mounting hole (φ3.4 thru)

| MODEL | DHS100A05 | DHS100A12 | DHS100A15 | DHS100A24 |
|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 100.0 | 100.8 | 100.5 | 100.8 |
| DC OUTPUT | 5V 20A | 12V 8.4A | 15V 6.7A | 24V 4.2A |

## SPECIFICATIONS

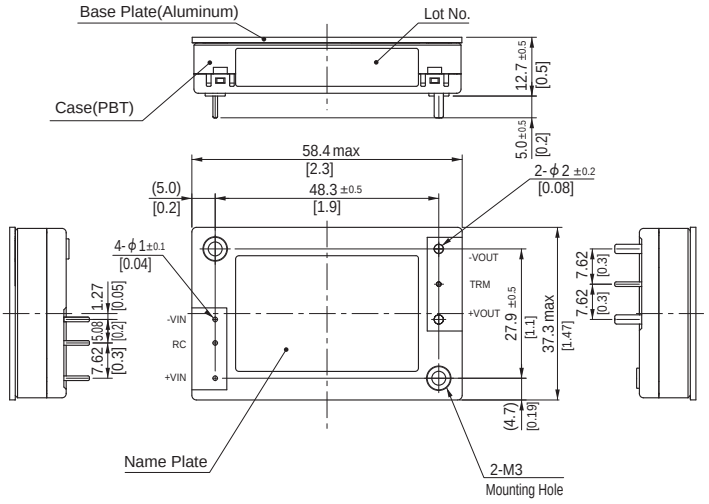
| | MODEL | | DHS100A05 | DHS100A12 | DHS100A15 | DHS100A24 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC60 - 160 | | | |
| | CURRENT[A] | ＊1 | 1.1A | 1.1A | 1.1A | 1.1A |
| | EFFICIENCY[%] | ＊1 | 85.0typ | 88.0typ | 88.0typ | 88.0typ |
| OUTPUT | VOLTAGE[V] | | 5 | 12 | 15 | 24 |
| | CURRENT[A] | | 20 | 8.4 | 6.7 | 4.2 |
| | LINE REGULATION[mV] | | 10max | 24max | 30max | 48max |
| | LOAD REGULATION[mV] | | 10max | 24max | 30max | 48max |
| | RIPPLE[mVp-p] | 0 to +100℃ ＊2 | 80max | 120max | 120max | 120max |
| | | -40 to 0℃ ＊2 | 120max | 150max | 150max | 150max |
| | | 0 to 15% Load ＊2 | 160max | 240max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | 0 to +100℃ ＊2 | 120max | 150max | 150max | 150max |
| | | -40 to 0℃ ＊2 | 200max | 200max | 200max | 250max |
| | | 0 to 15% Load ＊2 | 240max | 300max | 300max | 300max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 50max | 120max | 150max | 240max |
| | | -40 to +100℃ | 100max | 240max | 300max | 480max |
| | DRIFT[mV] | ＊3 | 20max | 40max | 60max | 90max |
| | START-UP TIME[ms] | | 200max (DCIN 110V, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] ＊4 | | Fixed (TRM pin open), adjustable by external VR or external voltage | | | |
| | | | 4.50 - 6.00 | 10.80 - 13.20 | 13.50 - 16.50 | 21.60 - 26.40 |
| | OUTPUT VOLTAGE SETTING[V] | | 4.97 - 5.13 | 11.91 - 12.29 | 14.76 - 15.24 | 23.62 - 24.38 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION[V] | | 6.30 - 7.60 | 13.90 - 17.55 | 17.25 - 21.75 | 27.60 - 34.80 |
| | REMOTE SENSING | | nothing | | | |
| | REMOTE ON/OFF | | Provided (Negative Logic L : ON, H :OFF) | | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃ (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | | |
| | VIBRATION | | 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis Complies with IEC61373 Category 1 Class B | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis Complies with IEC61373 Category 1 Class B | | | |
| SAFETY | AGENCY APPROVALS | | UL60950-1, C-UL (CSA60950-1), EN60950-1 | | | |
| OTHERS | CASE SIZE/WEIGHT | | 58.4×12.7×37.3mm [2.3×0.5×1.47 inches] (W×H×D) / 60g max | | | |
| | COOLING METHOD | | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | |

＊1 At rated input(DC110V) and rated load.
＊2 Ripple and ripple noise is measured by using measuring board. Refer to the manual.
＊3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊4 Refer to the manual for input range.

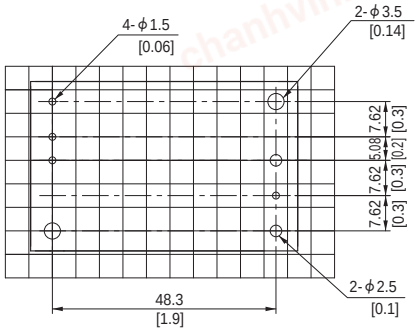
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## External view




Recomending size for processing PCB
(TOP VIEW)




※ Dimensions in mm, [ ]=inches

※ Div. : 0.2inch

※ Tolerance : ±0.3 [±0.012]
※ Weight : 60g max
※ Dimensions in mm, [ ]=inches
※ Mounting hole screwing torque : 0.49N・m (5.0kgf・cm) max

DHS

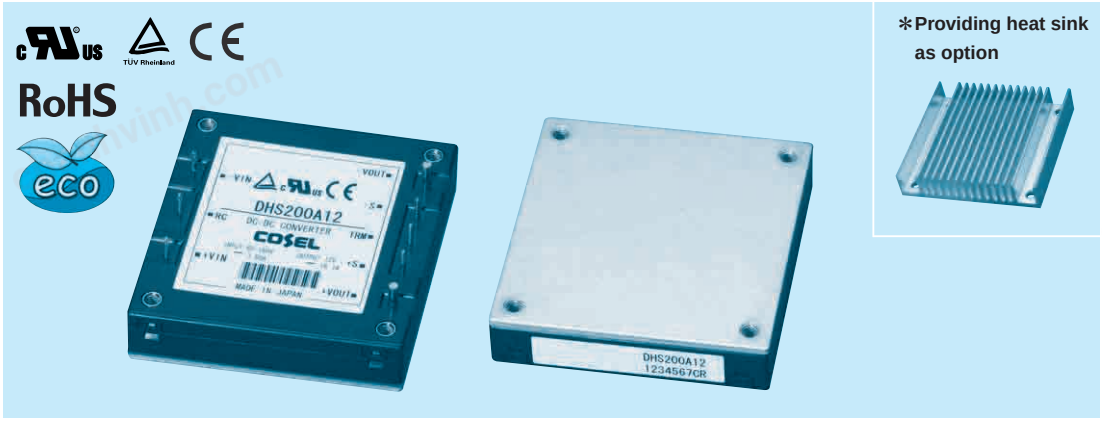
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COSEL DC-DC Converters Bus Converter·Power Module Type

# DHS200A

## Ordering information

| DH | S | 200 | A | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |




＊Providing heat sink as option



①Series name
②Single output
③Output wattage
④A : DC60-160V
⑤Output voltage
⑥Optional
T : with Mounting hole (φ3.4 thru)

| MODEL | DHS200A05 | DHS200A12 | DHS200A15 | DHS200A24 |
|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 200.0 | 200.4 | 201.0 | 201.6 |
| DC OUTPUT | 5V 40A | 12V 16.7A | 15V 13.4A | 24V 8.4A |

## SPECIFICATIONS

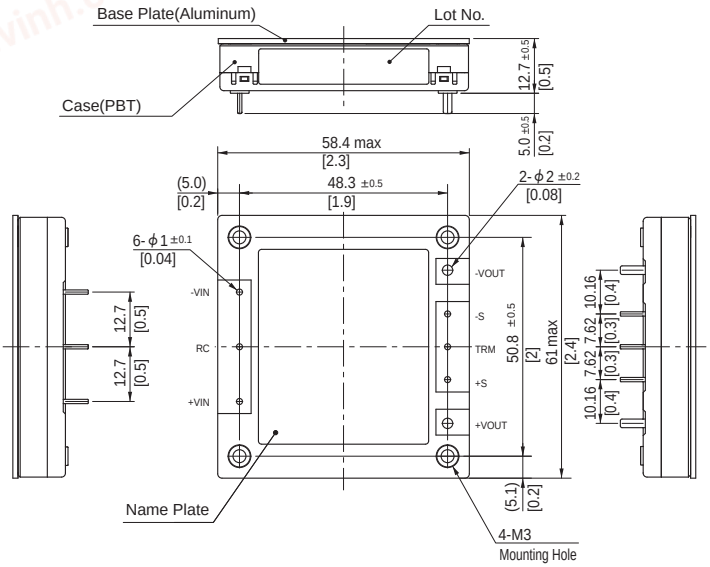
| | MODEL | | DHS200A05 | DHS200A12 | DHS200A15 | DHS200A24 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC60 - 160 | | | |
| | CURRENT[A] | ＊1 | 2.1A | 2.1A | 2.1A | 2.1A |
| | EFFICIENCY[%] | ＊1 | 87.0typ | 88.0typ | 88.0typ | 88.0typ |
| OUTPUT | VOLTAGE[V] | | 5 | 12 | 15 | 24 |
| | CURRENT[A] | | 40 | 16.7 | 13.4 | 8.4 |
| | LINE REGULATION[mV] | | 10max | 24max | 30max | 48max |
| | LOAD REGULATION[mV] | | 10max | 24max | 30max | 48max |
| | RIPPLE[mVp-p] | 0 to +100℃ ＊2 | 80max | 120max | 120max | 120max |
| | | -40 to 0℃ ＊2 | 120max | 150max | 150max | 150max |
| | | 0 to 15% Load ＊2 | 160max | 240max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | 0 to +100℃ ＊2 | 120max | 150max | 150max | 150max |
| | | -40 to 0℃ ＊2 | 200max | 200max | 200max | 250max |
| | | 0 to 15% Load ＊2 | 240max | 300max | 300max | 300max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 50max | 120max | 150max | 240max |
| | | -40 to +100℃ | 100max | 240max | 300max | 480max |
| | DRIFT[mV] | ＊3 | 20max | 40max | 60max | 90max |
| | START-UP TIME[ms] | | 200max (DCIN 110V, Io=100%) | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | ＊4 | Fixed (TRM pin open), adjustable by external VR or external voltage | | | |
| | | | 3.00 - 6.00 | 7.20 - 13.20 | 9.00 - 16.50 | 14.40 - 26.40 |
| | OUTPUT VOLTAGE SETTING[V] | | 4.97 - 5.13 | 11.91 - 12.29 | 14.76 - 15.24 | 23.62 - 24.38 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | |
| | OVERVOLTAGE PROTECTION[V] | | 6.30 - 7.30 | 13.90 - 16.35 | 17.25 - 20.25 | 27.60 - 32.40 |
| | REMOTE SENSING | | Provided | | | |
| | REMOTE ON/OFF | | Provided (Neqative Logic L : ON, H :OFF) | | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃ (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | | |
| | VIBRATION | | 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis Complies with IEC61373 Category 1 Class B | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis Complies with IEC61373 Category 1 Class B | | | |
| SAFETY | AGENCY APPROVALS | | UL60950-1, C-UL (CSA60950-1), EN60950-1 | | | |
| OTHERS | CASE SIZE/WEIGHT | | 58.4×12.7×61mm [2.3×0.5×2.4 inches] (W×H×D) / 100g max | | | |
| | COOLING METHOD | | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | |

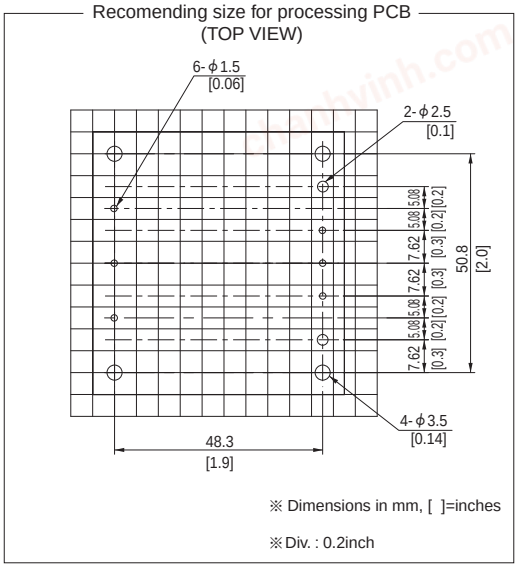
＊1 At rated input(DC110V) and rated load.
＊2 Ripple and ripple noise is measured by using measuring board. Refer to the manual.
＊3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊4 Refer to the manual for input range.

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## External view




※ Tolerance : ±0.3 [±0.012]
※ Weight : 100g max
※ Dimensions in mm, [ ]=inches
※ Mounting hole screwing torque : 0.49N・m (5.0kgf・cm) max

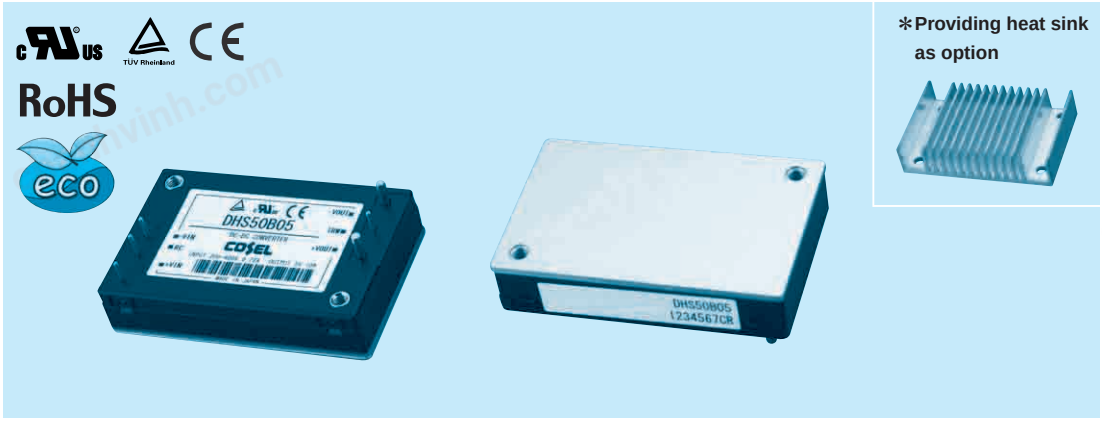
DHS

COSEL DC-DC Converters Bus Converter·Power Module Type

# DHS50B

## Ordering information

| DH | S | 50 | B | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |






＊Providing heat sink as option

①Series name
②Single output
③Output wattage
④B : DC200-400V
⑤Output voltage
⑥Optional
T : with Mounting hole (φ3.4 thru)

| MODEL | DHS50B03 | DHS50B05 | DHS50B12 | DHS50B15 | DHS50B24 | DHS50B28 |
|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 33.0 | 50.0 | 50.4 | 51.0 | 50.4 | 50.4 |
| DC OUTPUT | 3.3V 10A | 5V 10A | 12V 4.2A | 15V 3.4A | 24V 2.1A | 28V 1.8A |

## SPECIFICATIONS

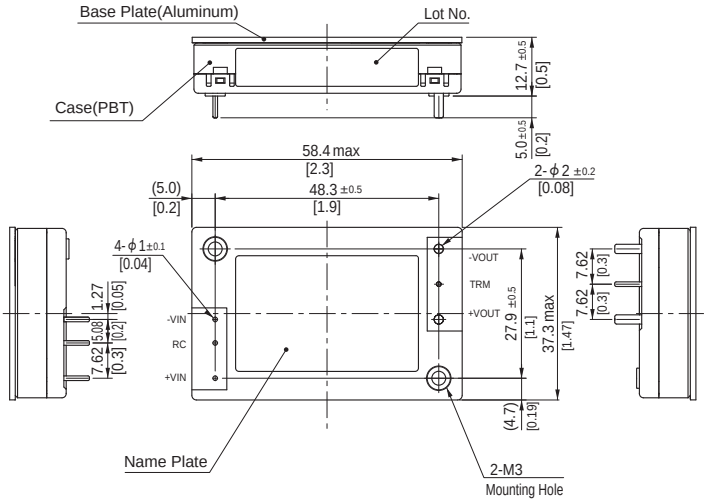
| | MODEL | | DHS50B03 | DHS50B05 | DHS50B12 | DHS50B15 | DHS50B24 | DHS50B28 |
|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC200 - 400 | | | | | |
| | CURRENT[A] | ＊1 | 0.15A | 0.22A | 0.22A | 0.22A | 0.22A | 0.22A |
| | EFFICIENCY[%] | ＊1 | 77.0typ | 80.0typ | 83.0typ | 83.0typ | 83.0typ | 82.0typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 24 | 28 |
| | CURRENT[A] | | 10 | 10 | 4.2 | 3.4 | 2.1 | 1.8 |
| | LINE REGULATION[mV] | | 10max | 10max | 24max | 30max | 48max | 56max |
| | LOAD REGULATION[mV] | | 10max | 10max | 24max | 30max | 48max | 56max |
| | RIPPLE[mVp-p] | 0 to +100℃ ＊2 | 80max | 80max | 120max | 120max | 120max | 120max |
| | | -40 to 0℃ ＊2 | 120max | 120max | 150max | 150max | 150max | 150max |
| | | 0 to 15% Load ＊2 | 160max | 160max | 240max | 240max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | 0 to +100℃ ＊2 | 120max | 120max | 150max | 150max | 150max | 150max |
| | | -40 to 0℃ ＊2 | 200max | 200max | 200max | 200max | 250max | 250max |
| | | 0 to 15% Load ＊2 | 240max | 240max | 300max | 300max | 300max | 300max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 35max | 50max | 120max | 150max | 240max | 280max |
| | | -40 to +100℃ | 66max | 100max | 240max | 300max | 480max | 560max |
| | DRIFT[mV] | ＊3 | 16max | 20max | 40max | 60max | 90max | 90max |
| | START-UP TIME[ms] | | 200max (DCIN 280V, Io=100%) | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | ＊4 | Fixed (TRM pin open), adjustable by external VR or external voltage | | | | | |
| | | | 2.97 - 3.96 | 4.50 - 6.00 | 10.80 - 13.20 | 13.50 - 16.50 | 21.60 - 26.40 | 25.20 - 30.80 |
| | OUTPUT VOLTAGE SETTING[V] | | 3.30 - 3.40 | 4.97 - 5.13 | 11.91 - 12.29 | 14.76 - 15.24 | 23.62 - 24.38 | 27.56 - 28.44 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION[V] | | 4.20 - 5.70 | 6.30 - 7.60 | 13.90 - 17.55 | 17.25 - 21.75 | 27.60 - 34.80 | 32.20 - 40.60 |
| | REMOTE SENSING | | None | | | | | |
| | REMOTE ON/OFF | | Provided (Negative Logic L : ON, H :OFF) | | | | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃ (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | | | | |
| | VIBRATION | | 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis | | | | | |
| SAFETY | AGENCY APPROVALS | | UL60950-1, C-UL, EN60950-1 | | | | | |
| OTHERS | CASE SIZE/WEIGHT | | 58.4×12.7×37.3mm [2.3×0.5×1.47 inches] (W×H×D) / 60g max | | | | | |
| | COOLING METHOD | | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | | | |

＊1 At rated input(DC280V) and rated load.
＊2 Ripple and ripple noise is measured by using measuring board. Refer to the manual
＊3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊4 Refer to the manual for input range.

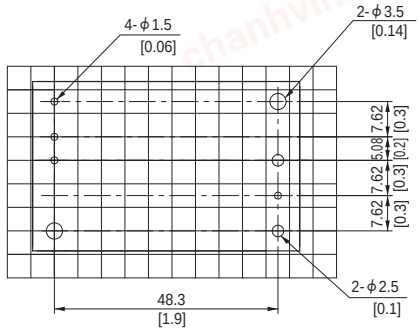
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## External view




Recomending size for processing PCB
(TOP VIEW)




※ Dimensions in mm, [ ]=inches

※ Div. : 0.2inch

※ Tolerance : ±0.3 [±0.012]
※ Weight : 60g max
※ Dimensions in mm, [ ]=inches
※ Mounting hole screwing torque : 0.49N・m (5.0kgf・cm) max

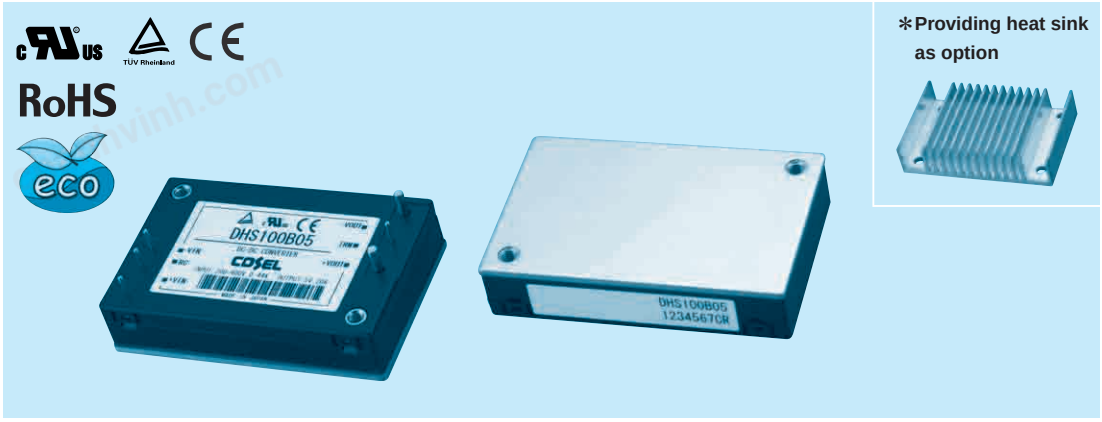
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COSEL DC-DC Converters Bus Converter・Power Module Type

# DHS100B

## Ordering information

| DH | S | 100 | B | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |






＊Providing heat sink as option

①Series name
②Single output
③Output wattage
④B : DC200-400V
⑤Output voltage
⑥Optional
T : with Mounting hole (φ3.4 thru)

| MODEL | DHS100B03 | DHS100B05 | DHS100B12 | DHS100B15 | DHS100B24 | DHS100B28 |
|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 66.0 | 100.0 | 100.8 | 100.5 | 100.8 | 100.8 |
| DC OUTPUT | 3.3V 20A | 5V 20A | 12V 8.4A | 15V 6.7A | 24V 4.2A | 28V 3.6A |

## SPECIFICATIONS

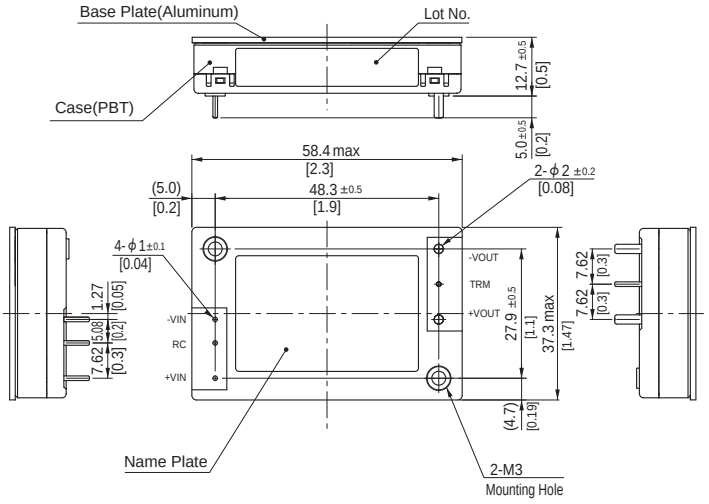
| | MODEL | | DHS100B03 | DHS100B05 | DHS100B12 | DHS100B15 | DHS100B24 | DHS100B28 |
|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC200 - 400 | | | | | |
| | CURRENT[A] | ＊1 | 0.30A | 0.44A | 0.42A | 0.42A | 0.42A | 0.42A |
| | EFFICIENCY[%] | ＊1 | 79.0typ | 82.0typ | 85.0typ | 86.0typ | 86.0typ | 86.0typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 24 | 28 |
| | CURRENT[A] | | 20 | 20 | 8.4 | 6.7 | 4.2 | 3.6 |
| | LINE REGULATION[mV] | | 10max | 10max | 24max | 30max | 48max | 56max |
| | LOAD REGULATION[mV] | | 10max | 10max | 24max | 30max | 48max | 56max |
| | RIPPLE[mVp-p] | 0 to +100℃＊2 | 80max | 80max | 120max | 120max | 120max | 120max |
| | | -40 to 0℃ ＊2 | 120max | 120max | 150max | 150max | 150max | 150max |
| | | 0 to 15% Load＊2 | 160max | 160max | 240max | 240max | 240max | 240max |
| | RIPPLE NOISE[mVp-p] | 0 to +100℃＊2 | 120max | 120max | 150max | 150max | 150max | 150max |
| | | -40 to 0℃ ＊2 | 200max | 200max | 200max | 200max | 250max | 250max |
| | | 0 to 15% Load＊2 | 240max | 240max | 300max | 300max | 300max | 300max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 35max | 50max | 120max | 150max | 240max | 280max |
| | | -40 to +100℃ | 66max | 100max | 240max | 300max | 480max | 560max |
| | DRIFT[mV] | ＊3 | 16max | 20max | 40max | 60max | 90max | 90max |
| | START-UP TIME[ms] | | 200max (DCIN 280V, Io=100%) | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | ＊4 | Fixed (TRM pin open), adjustable by external VR or external voltage | | | | | |
| | | | 2.97 - 3.96 | 4.50 - 6.00 | 10.80 - 13.20 | 13.50 - 16.50 | 21.60 - 26.40 | 25.20 - 30.80 |
| | OUTPUT VOLTAGE SETTING[V] | | 3.30 - 3.40 | 4.97 - 5.13 | 11.91 - 12.29 | 14.76 - 15.24 | 23.62 - 24.38 | 27.56 - 28.44 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | |
| | OVERVOLTAGE PROTECTION[V] | | 4.20 - 5.70 | 6.30 - 7.60 | 13.90 - 17.55 | 17.25 - 21.75 | 27.60 - 34.80 | 32.20 - 40.60 |
| | REMOTE SENSING | | None | | | | | |
| | REMOTE ON/OFF | | Provided (Negative Logic L : ON, H :OFF) | | | | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃ (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | | | | |
| | VIBRATION | | 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis | | | | | |
| SAFETY | AGENCY APPROVALS | | UL60950-1, C-UL, EN60950-1 | | | | | |
| OTHERS | CASE SIZE/WEIGHT | | 58.4×12.7×37.3mm [2.3×0.5×1.47 inches] (W×H×D) / 60g max | | | | | |
| | COOLING METHOD | | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | | | |

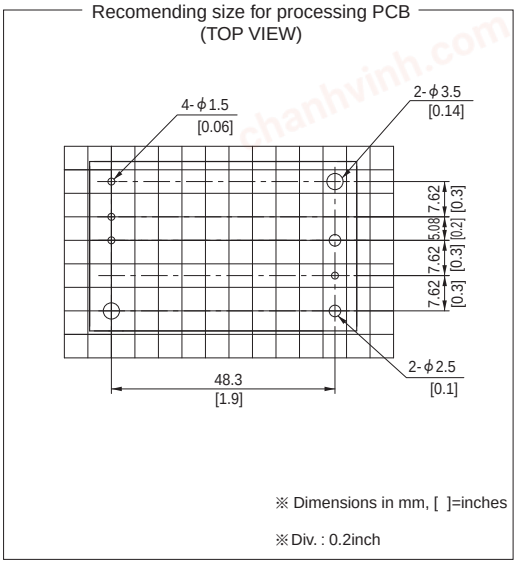
＊1 At rated input(DC280V) and rated load.
＊2 Ripple and ripple noise is measured by using measuring board. Refer to the manual.
＊3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊4 Refer to the manual for input range.

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## External view




※ Tolerance : ±0.3 [±0.012]
※ Weight : 60g max
※ Dimensions in mm, [ ]=inches
※ Mounting hole screwing torque : 0.49N・m (5.0kgf・cm) max

DHS

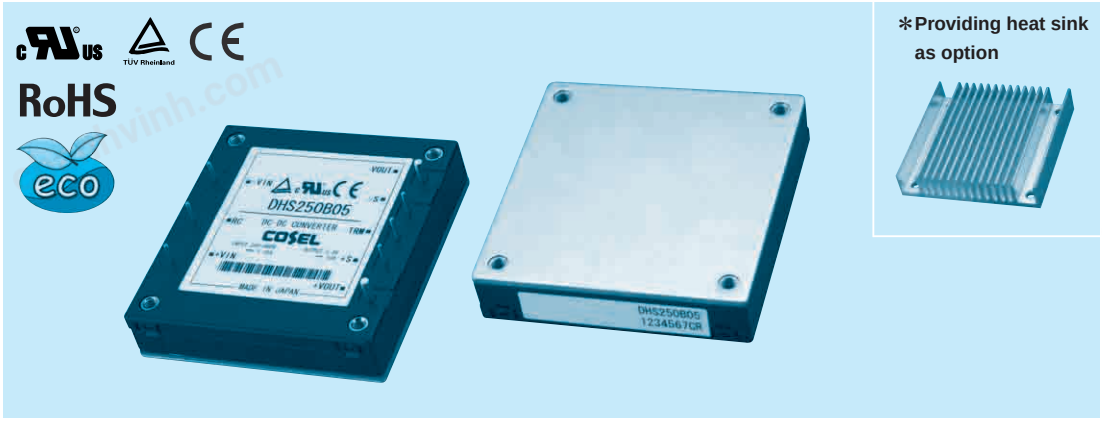
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COSEL DC-DC Converters Bus Converter·Power Module Type

# DHS250B

## Ordering information

| DH | S | 250 | B | 05 | -□ |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ |






＊Providing heat sink as option

①Series name
②Single output
③Output wattage
④B : DC200-400V
⑤Output voltage
⑥Optional
T : with Mounting hole (φ3.4 thru)

| MODEL | DHS250B03 | DHS250B05 | DHS250B07 | DHS250B12 | DHS250B15 | DHS250B24 | DHS250B28 | DHS250B48 |
|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | 165.0 | 250.0 | 247.5 | 252.0 | 247.5 | 252.0 | 252.0 | 249.6 |
| DC OUTPUT | 3.3V 50A | 5V 50A | 7.5V 33A | 12V 21A | 15V 16.5A | 24V 10.5A | 28V 9.0A | 48V 5.2A |

## SPECIFICATIONS

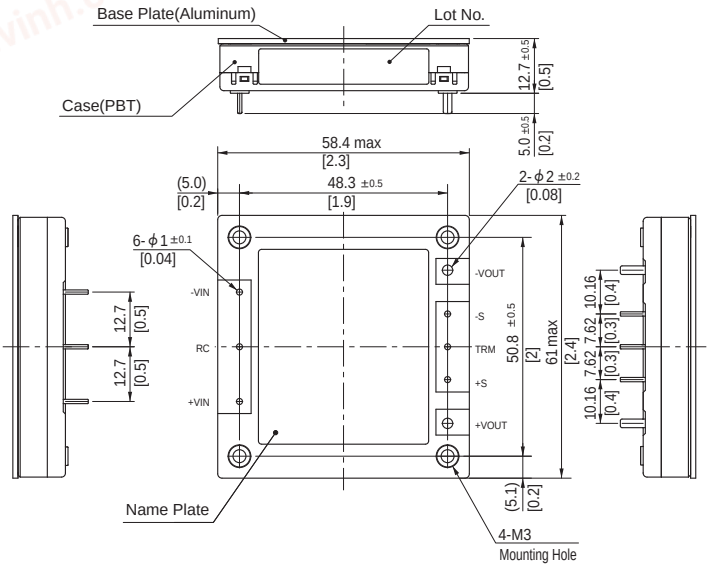
| | MODEL | | DHS250B03 | DHS250B05 | DHS250B07 | DHS250B12 | DHS250B15 | DHS250B24 | DHS250B28 | DHS250B48 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC200 - 400 | | | | | | | |
| | CURRENT[A] | ＊1 | 0.67A | 1.0A | 1.0A | 1.0A | 1.0A | 1.0A | 1.0A | 1.0A |
| | EFFICIENCY[%] | ＊1 | 88.0typ | 90.0typ | 88.0typ | 88.0typ | 88.0typ | 88.0typ | 88.0typ | 89.0typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 7.5 | 12 | 15 | 24 | 28 | 48 |
| | CURRENT[A] | | 50 | 50 | 33 | 21 | 16.5 | 10.5 | 9.0 | 5.2 |
| | LINE REGULATION[mV] | | 10max | 10max | 20max | 24max | 30max | 48max | 56max | 96max |
| | LOAD REGULATION[mV] | | 10max | 10max | 20max | 24max | 30max | 48max | 56max | 96max |
| | RIPPLE[mVp-p] | 0 to +100℃ ＊2 | 80max | 80max | 100max | 120max | 120max | 120max | 120max | 200max |
| | | -40 to 0℃ ＊2 | 120max | 120max | 130max | 150max | 150max | 150max | 150max | 250max |
| | | 0 to 15% Load ＊2 | 160max | 160max | 200max | 240max | 240max | 240max | 240max | 400max |
| | RIPPLE NOISE[mVp-p] | 0 to +100℃ ＊2 | 120max | 120max | 130max | 150max | 150max | 150max | 150max | 250max |
| | | -40 to 0℃ ＊2 | 200max | 200max | 200max | 200max | 200max | 250max | 250max | 400max |
| | | 0 to 15% Load ＊2 | 240max | 240max | 260max | 300max | 300max | 300max | 300max | 500max |
| | TEMPERATURE REGULATION[mV] | 0 to +65℃ | 35max | 50max | 70max | 120max | 150max | 240max | 280max | 480max |
| | | -40 to +100℃ | 66max | 100max | 140max | 240max | 300max | 480max | 560max | 960max |
| | DRIFT[mV] | ＊3 | 16max | 20max | 30max | 40max | 60max | 90max | 90max | 180max |
| | START-UP TIME[ms] | | 200max (DCIN 280V, Io=100%) | | | | | | | |
| | OUTPUT VOLTAGE ADJUSTMENT RANGE[V] | ＊4 | Fixed (TRM pin open), adjustable by external VR or external voltage | | | | | | | |
| | | | 1.98 - 3.96 | 3.00 - 6.00 | 4.50 - 8.25 | 7.20 - 13.20 | 9.00 - 16.50 | 14.40 - 26.40 | 16.80 - 30.80 | 28.80 - 52.80 |
| | OUTPUT VOLTAGE SETTING[V] | | 3.30 - 3.40 | 4.97 - 5.13 | 7.43 - 7.67 | 11.91 - 12.29 | 14.76 - 15.24 | 23.62 - 24.38 | 27.56 - 28.44 | 47.24 - 48.76 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | OVERVOLTAGE PROTECTION[V] | | 4.20 - 4.85 | 6.30 - 7.30 | 8.70 - 10.20 | 13.90 - 16.35 | 17.25 - 20.25 | 27.60 - 32.40 | 32.20 - 37.80 | 55.20 - 64.80 |
| | REMOTE SENSING | | Provided | | | | | | | |
| | REMOTE ON/OFF | | Provided (Neqative Logic L : ON, H :OFF) | | | | | | | |
| ISOLATION | INPUT-OUTPUT | | AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | | | | | |
| | INPUT-FG | | AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) | | | | | | | |
| | OUTPUT-FG | | AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (20±15℃) | | | | | | | |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃ (On aluminum base plate), 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max | | | | | | | |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000 feet) max | | | | | | | |
| | VIBRATION | | 10 - 55Hz, 49.0m/s² (5G), 3minutes period, 60minutes each along X, Y and Z axis | | | | | | | |
| | IMPACT | | 196.1m/s² (20G), 11ms, once each along X, Y and Z axis | | | | | | | |
| SAFETY | AGENCY APPROVALS | | UL60950-1, C-UL, EN60950-1 | | | | | | | |
| OTHERS | CASE SIZE/WEIGHT | | 58.4×12.7×61mm [2.3×0.5×2.4 inches](W×H×D) / 100g max | | | | | | | |
| | COOLING METHOD | | Conduction cooling (e.g. heat radiation from the aluminum base plate to the attached heat sink) | | | | | | | |

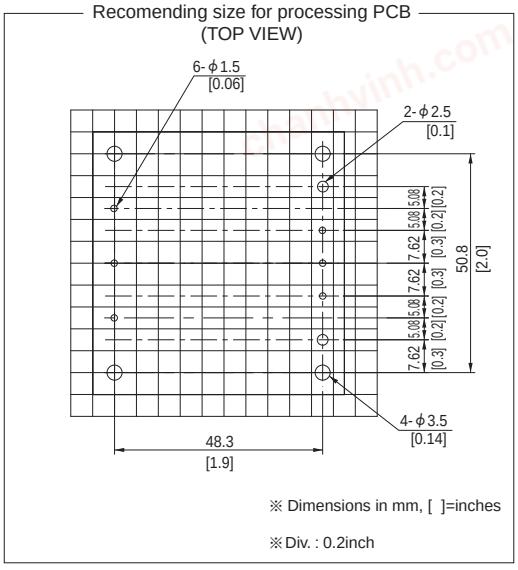
＊1 At rated input(DC280V) and rated load.
＊2 Ripple and ripple noise is measured by using measuring board. Refer to the manual.
＊3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊4 Refer to the manual for input range.

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## External view




※ Tolerance : ±0.3 [±0.012]
※ Weight : 100g max
※ Dimensions in mm, [ ]=inches
※ Mounting hole screwing torque : 0.49N・m (5.0kgf・cm) max

DHS