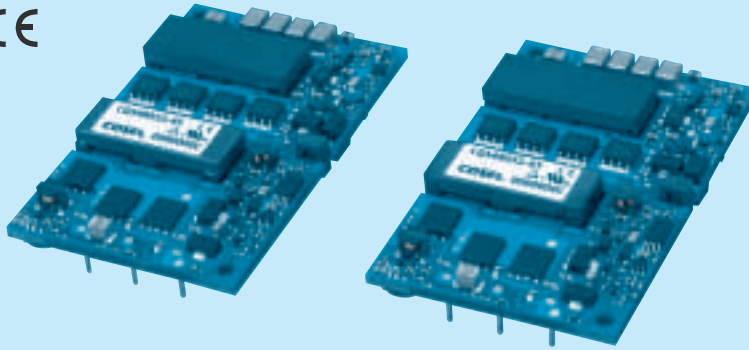
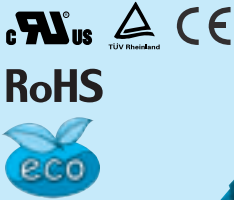




- ① Series name  
② Single output  
③ Input voltage  
24:DC18 - 36V  
48:DC36 - 76V  
④ Output voltage  
015:1.5V  
018:1.8V  
025:2.5V  
033:3.3V  
050:5V  
120:12V  
150:15V  
⑤ Output current  
⑥ Optional  
R :with Remote ON/OFF  
Positive logic control  
V :Output voltage setting  $\pm 1\%$   
N :Auto restart from thermal protection

| MODEL                 | CQS24033-40 | CQS24050-28 | CQS24120-12 | CQS24150-8 |
|-----------------------|-------------|-------------|-------------|------------|
| MAX OUTPUT WATTAGE[W] | 132.0       | 140.0       | 144.0       | 120.0      |
| DC OUTPUT             | 3.3V 40A    | 5V 28A      | 12V 12A     | 15V 8A     |

## SPECIFICATIONS

|                               | MODEL                           | CQS24033-40                                                                         | CQS24050-28       | CQS24120-12        | CQS24150-8         |
|-------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-------------------|--------------------|--------------------|
| INPUT                         | VOLTAGE[V]                      | DC18 - 36                                                                           |                   |                    | DC20 - 33          |
|                               | CURRENT[A]                      | 6.05typ                                                                             | 6.45typ           | 6.59typ            | 5.44typ            |
|                               | EFFICIENCY[%]                   | 91typ                                                                               | 91typ             | 92typ              | 92typ              |
|                               | START-UP VOLTAGE[V]             | DC16 - 18                                                                           |                   |                    | DC18 - 20          |
|                               | HYSTERESIS VOLTAGE[V]           | DC1 min                                                                             |                   |                    |                    |
| OUTPUT                        | VOLTAGE[V]                      | 3.3                                                                                 | 5                 | 12                 | 15                 |
|                               | CURRENT[A]                      | 40                                                                                  | 28                | 12                 | 8                  |
|                               | LINE REGULATION[mV]             | $\pm 5\text{max}$                                                                   | $\pm 5\text{max}$ | $\pm 12\text{max}$ | $\pm 15\text{max}$ |
|                               | LOAD REGULATION[mV]             | $\pm 5\text{max}$                                                                   | $\pm 5\text{max}$ | $\pm 12\text{max}$ | $\pm 15\text{max}$ |
|                               | RIPPLE                          | [mVrms]                                                                             | 20max             | 25max              | 40max              |
|                               |                                 | [mVp-p]                                                                             | 60max             | 80max              | 120max             |
|                               | RIPPLE NOISE[mVp-p]             | 100max                                                                              | 120max            | 150max             | 150max             |
|                               | TEMPERATURE REGULATION[mV]      | 66max                                                                               | 100max            | 240max             | 300max             |
|                               | DRIFT[mV]                       | 16max                                                                               | 20max             | 40max              | 50max              |
|                               | START-UP TIME[ms]               | 200max (DCIN 24V, $I_o=100\%$ )                                                     |                   |                    |                    |
| PROTECTION CIRCUIT AND OTHERS | OUTPUT VOLTAGE ADJUSTMENT RANGE | Fixed (TRM pin open), adjustable by external resistor<br>-15% / +15%                |                   |                    |                    |
|                               | OUTPUT VOLTAGE SETTING          | $\pm 1.6\%$                                                                         |                   |                    |                    |
|                               | OVERCURRENT PROTECTION          | Works over 105% of rating, low voltage protection (shut down) function is built-in. |                   |                    |                    |
|                               | OVERVOLTAGE PROTECTION          | 125% - 135%                                                                         | 125% - 135%       | 117% - 127%        |                    |
|                               | REMOTE SENSING                  | Provided                                                                            |                   |                    |                    |
|                               | REMOTE ON/OFF                   | Provided (Negative logic L : ON, H : OFF)                                           |                   |                    |                    |

| MODEL                 | CQS48015-50 | CQS48018-50 | CQS48025-45 | CQS48033-45 | CQS48050-28 | CQS48120-14 | CQS48150-8 |
|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| MAX OUTPUT WATTAGE[W] | 75.0        | 90.0        | 112.5       | 148.5       | 140.0       | 168.0       | 120.0      |
| DC OUTPUT             | 1.5V 50A    | 1.8V 50A    | 2.5V 45A    | 3.3V 45A    | 5V 28A      | 12V 14A     | 15V 8A     |

## SPECIFICATIONS

|                               | MODEL                           | CQS48015-50                                                                         | CQS48018-50       | CQS48025-45       | CQS48033-45       | CQS48050-28       | CQS48120-14        | CQS48150-8         |
|-------------------------------|---------------------------------|-------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|
| INPUT                         | VOLTAGE[V]                      | DC36 - 76                                                                           |                   |                   |                   |                   |                    | DC40 - 60          |
|                               | CURRENT[A]                      | 1.80typ                                                                             | 2.13typ           | 2.58typ           | 3.36typ           | 3.17typ           | 3.80typ            | 2.72typ            |
|                               | EFFICIENCY[%]                   | 87typ                                                                               | 88typ             | 91typ             | 92typ             | 92typ             | 92typ              | 92typ              |
|                               | START-UP VOLTAGE[V]             | DC32 - 36                                                                           |                   |                   |                   |                   |                    | DC36 - 40          |
|                               | HYSTERESIS VOLTAGE[V]           | DC2 min                                                                             |                   |                   |                   |                   |                    |                    |
| OUTPUT                        | VOLTAGE[V]                      | 1.5                                                                                 | 1.8               | 2.5               | 3.3               | 5                 | 12                 | 15                 |
|                               | CURRENT[A]                      | 50                                                                                  | 50                | 45                | 45                | 28                | 14                 | 8                  |
|                               | LINE REGULATION[mV]             | $\pm 5\text{max}$                                                                   | $\pm 5\text{max}$ | $\pm 5\text{max}$ | $\pm 5\text{max}$ | $\pm 5\text{max}$ | $\pm 12\text{max}$ | $\pm 15\text{max}$ |
|                               | LOAD REGULATION[mV]             | $\pm 5\text{max}$                                                                   | $\pm 5\text{max}$ | $\pm 5\text{max}$ | $\pm 5\text{max}$ | $\pm 5\text{max}$ | $\pm 12\text{max}$ | $\pm 15\text{max}$ |
|                               | RIPPLE                          | [mVrms]                                                                             | 20max             | 20max             | 20max             | 25max             | 40max              | 40max              |
|                               |                                 | [mVp-p]                                                                             | 60max             | 60max             | 60max             | 80max             | 120max             | 120max             |
|                               | RIPPLE NOISE[mVp-p]             | 100max                                                                              | 100max            | 100max            | 100max            | 120max            | 150max             | 150max             |
|                               | TEMPERATURE REGULATION[mV]      | 66max                                                                               | 66max             | 66max             | 66max             | 100max            | 240max             | 300max             |
|                               | DRIFT[mV]                       | 16max                                                                               | 16max             | 16max             | 16max             | 20max             | 40max              | 50max              |
|                               | START-UP TIME[ms]               | 200max (DCIN 48V, $I_o=100\%$ )                                                     |                   |                   |                   |                   |                    |                    |
| PROTECTION CIRCUIT AND OTHERS | OUTPUT VOLTAGE ADJUSTMENT RANGE | Fixed (TRM pin open), adjustable by external resistor<br>-20% / +10%                |                   |                   |                   |                   |                    |                    |
|                               | OUTPUT VOLTAGE SETTING          | $\pm 1.6\%$                                                                         |                   |                   |                   |                   |                    |                    |
|                               | OVERCURRENT PROTECTION          | Works over 105% of rating, low voltage protection (shut down) function is built-in. |                   |                   |                   |                   |                    |                    |
|                               | OVERVOLTAGE PROTECTION          | 117% - 127%                                                                         |                   | 125% - 135%       | 117% - 127%       |                   |                    |                    |
|                               | REMOTE SENSING                  | Provided                                                                            |                   |                   |                   |                   |                    |                    |
|                               | REMOTE ON/OFF                   | Provided (Negative logic L : ON, H : OFF)                                           |                   |                   |                   |                   |                    |                    |

## GENERAL SPECIFICATIONS

|                    |                                             |                                                                                                                 |
|--------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>ISOLATION</b>   | <b>INPUT-OUTPUT</b>                         | DC1,500V or AC1,000V 1minute, Cutoff current = 10mA, DC500V 50M $\Omega$ min (20 $\pm$ 15 $^{\circ}$ C)         |
| <b>ENVIRONMENT</b> | <b>OPERATING TEMP., HUMID. AND ALTITUDE</b> | -40 to +85 $^{\circ}$ C, 20 - 95%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max         |
|                    | <b>STORAGE TEMP., HUMID. AND ALTITUDE</b>   | -40 to +100 $^{\circ}$ C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max                                  |
|                    | <b>VIBRATION</b>                            | 10 - 55Hz, 49.0m/s $^2$ (5G), 3minutes period, 60minutes each along X, Y and Z axis                             |
|                    | <b>IMPACT</b>                               | 196.1m/s $^2$ (20G), 11ms, once each along X, Y and Z axis                                                      |
| <b>SAFETY</b>      | <b>AGENCY APPROVALS</b>                     | UL60950-1, C-UL (CSA60950-1), EN60950-1                                                                         |
| <b>OTHERS</b>      | <b>CASE SIZE/WEIGHT</b>                     | 57.9 $\times$ 8.5 $\times$ 36.8mm [2.28 $\times$ 0.33 $\times$ 1.45 inches] (W $\times$ H $\times$ D) / 40g max |
|                    | <b>COOLING METHOD</b>                       | Convection / Forced air                                                                                         |

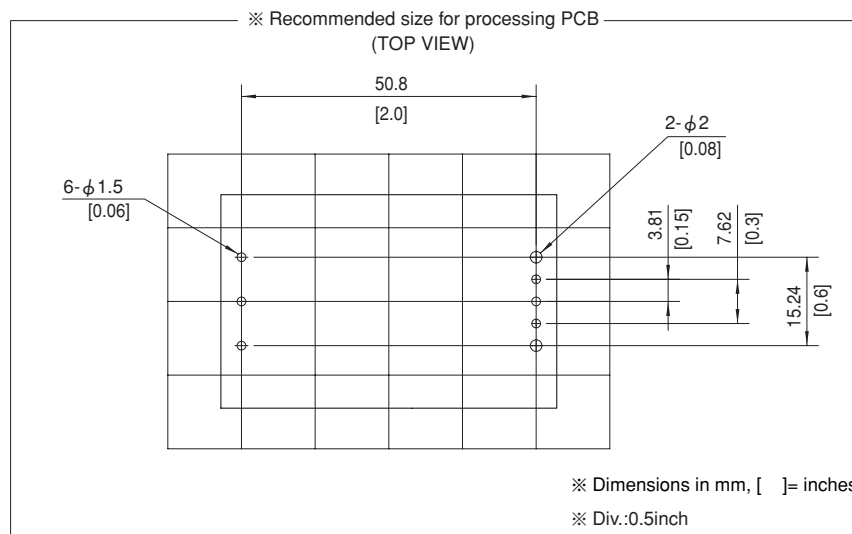
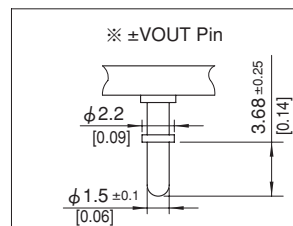
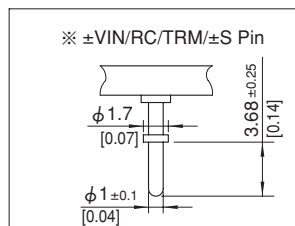
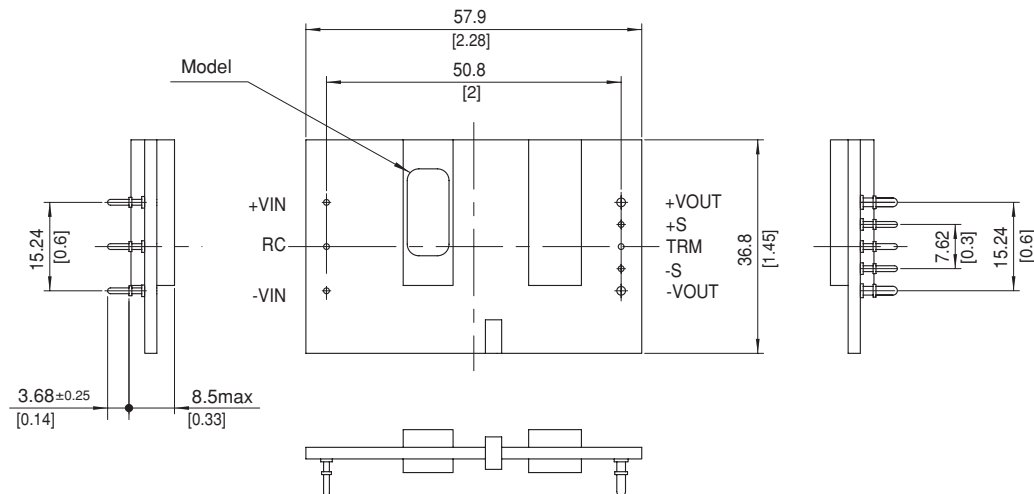
\*1 At rated input(DC24V,DC48V) and rated load and 25 $^{\circ}$ C, 2m/s.

\*2 Ripple and ripple noise is measured by using measuring board with ceramic capacitor 22 $\mu$ F. Refer to the Instruction Manual.

\*3 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25 $^{\circ}$ C, with the input voltage held constant at the rated input/output.

\*4 Refer to the instruction manual for input voltage derating.

## External view



※ Dimensions in mm, [ ] = inches

※ Div.:0.5inch

※ Tolerance: $\pm 0.5$  [0.02]

※ Weight:40g max

※ Dimensions in mm, [ ] = inches

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