



TEST DATA OF DCS1400B65

Regulated DC Power Supply
April 11, 2025

Approved by : _____ Junichi Hatagishi

Design Manager

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Design Engineer

COSEL CO.,LTD.



CONTENTS

1.Input Current (by Load Current)	1
2.Efficiency (by Load Current)	2
3.Line Regulation	3
4.Load Regulation	4
5.Ripple-Noise	4
6.Dynamic Load Response	5
7.Rise and Fall Time	6
8.Overcurrent Protection	7
9.Ambient Temperature Drift	8
10.Minimum Input Voltage for Regulated Output Voltage	8
11.Overvoltage Protection	8
12.Figure of Testing Circuitry	9

(Final Page 9)

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Model	DCS1400B65																																																					
Item	Input Current (by Load Current)	Temperature 25°C	Testing Circuitry Figure A																																																			
Object	+65V21.6A																																																					
1.Graph	<p>Input Current [A]</p> <p>Load Current [A]</p> <p>Legend:</p> <ul style="list-style-type: none"> Input Volt. 200V Input Volt. 280V Input Volt. 435V 	2.Values																																																				
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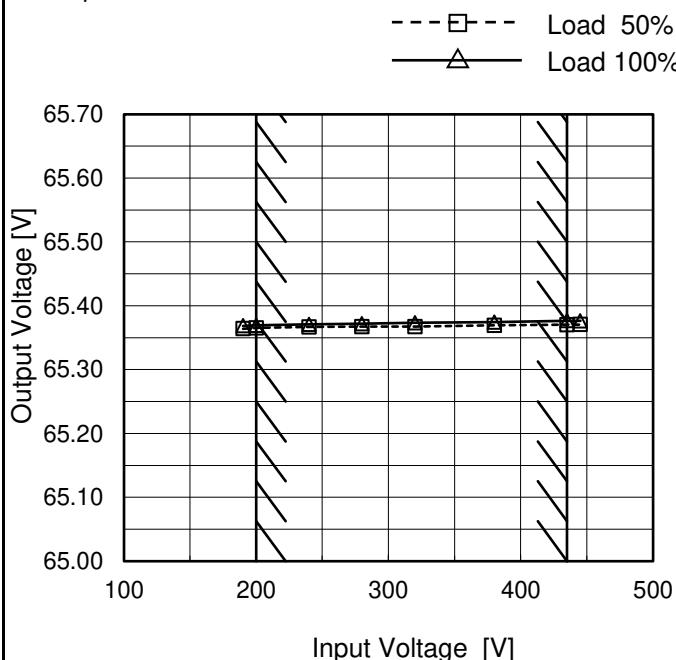
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1.Graph	<p>Graph showing Efficiency (%) vs Load Current (A) for three input voltages: 200V, 280V, and 435V. The efficiency is high (around 94-97%) across the load range from 0 to 30A. A slanted line indicates the rated load current range.</p> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Input Volt. 200V</th> <th>Input Volt. 280V</th> <th>Input Volt. 435V</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>94.6</td><td>93.8</td><td>90.5</td></tr> <tr><td>3.0</td><td>96.6</td><td>95.7</td><td>93.9</td></tr> <tr><td>6.0</td><td>96.9</td><td>96.3</td><td>94.9</td></tr> <tr><td>9.0</td><td>96.8</td><td>96.4</td><td>95.2</td></tr> <tr><td>12.0</td><td>96.7</td><td>96.2</td><td>95.3</td></tr> <tr><td>15.0</td><td>96.3</td><td>96.0</td><td>95.2</td></tr> <tr><td>18.0</td><td>95.9</td><td>95.7</td><td>94.9</td></tr> <tr><td>21.0</td><td>95.8</td><td>95.6</td><td>94.9</td></tr> <tr><td>21.6</td><td>95.5</td><td>95.3</td><td>94.6</td></tr> <tr><td>24.0</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>			Load Current [A]	Input Volt. 200V	Input Volt. 280V	Input Volt. 435V	0.0	94.6	93.8	90.5	3.0	96.6	95.7	93.9	6.0	96.9	96.3	94.9	9.0	96.8	96.4	95.2	12.0	96.7	96.2	95.3	15.0	96.3	96.0	95.2	18.0	95.9	95.7	94.9	21.0	95.8	95.6	94.9	21.6	95.5	95.3	94.6	24.0	-	-	-							
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Model	DCS1400B65
Item	Line Regulation
Object	+65V21.6A

 Temperature 25°C
 Testing Circuitry Figure A

1.Graph

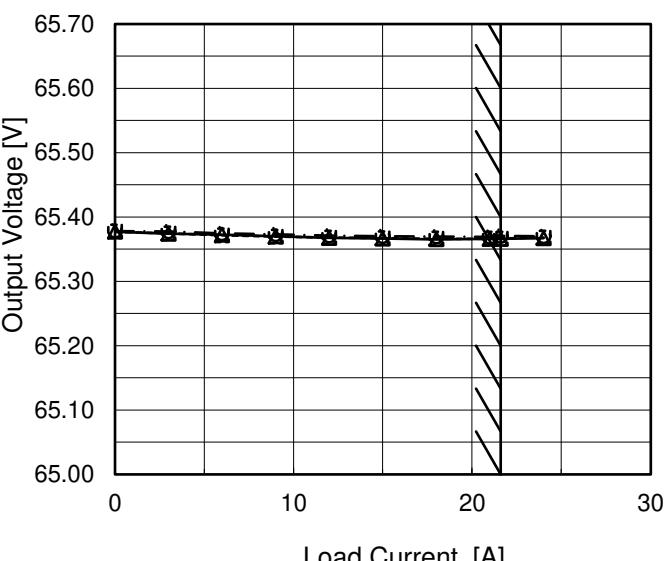
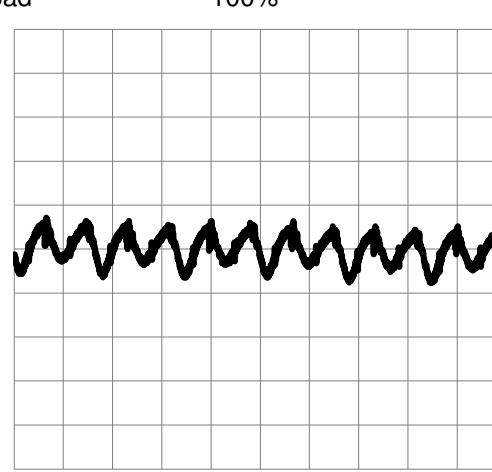


2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
190	65.364	65.369
200	65.366	65.369
240	65.367	65.371
280	65.368	65.372
320	65.368	65.373
380	65.369	65.375
435	65.371	65.377
445	65.371	65.376
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Note: Slanted line shows the range of the rated input voltage.

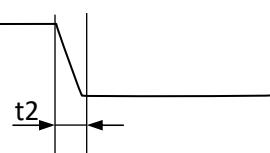
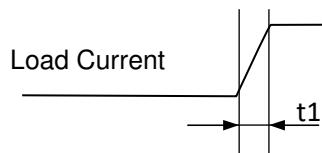
COSEL

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Note: Slanted line shows the range of the rated load current.																																																						
Item	Ripple-Noise	Temperature	25°C																																																			
Object	+65V21.6A	Testing Circuitry	Figure B																																																			
1.Graph																																																						
<p>Input Voltage 280V Load 100%</p> 																																																						

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Model	DCS1400B65	Temperature	25°C
Item	Dynamic Load Response	Testing Circuitry	Figure B
Object	+65V21.6A		

Input Volt. 280 V
 Cycle 1000 ms

Response. $t_1=t_2=50\mu\text{s}$. Typ

Load 0%(0A) \longleftrightarrow
 Load 100%(21.6A)

1[V/div]

4[ms/div]

4[ms/div]

Load 50%(10.8A) \longleftrightarrow
 Load 100%(21.6A)

1[V/div]

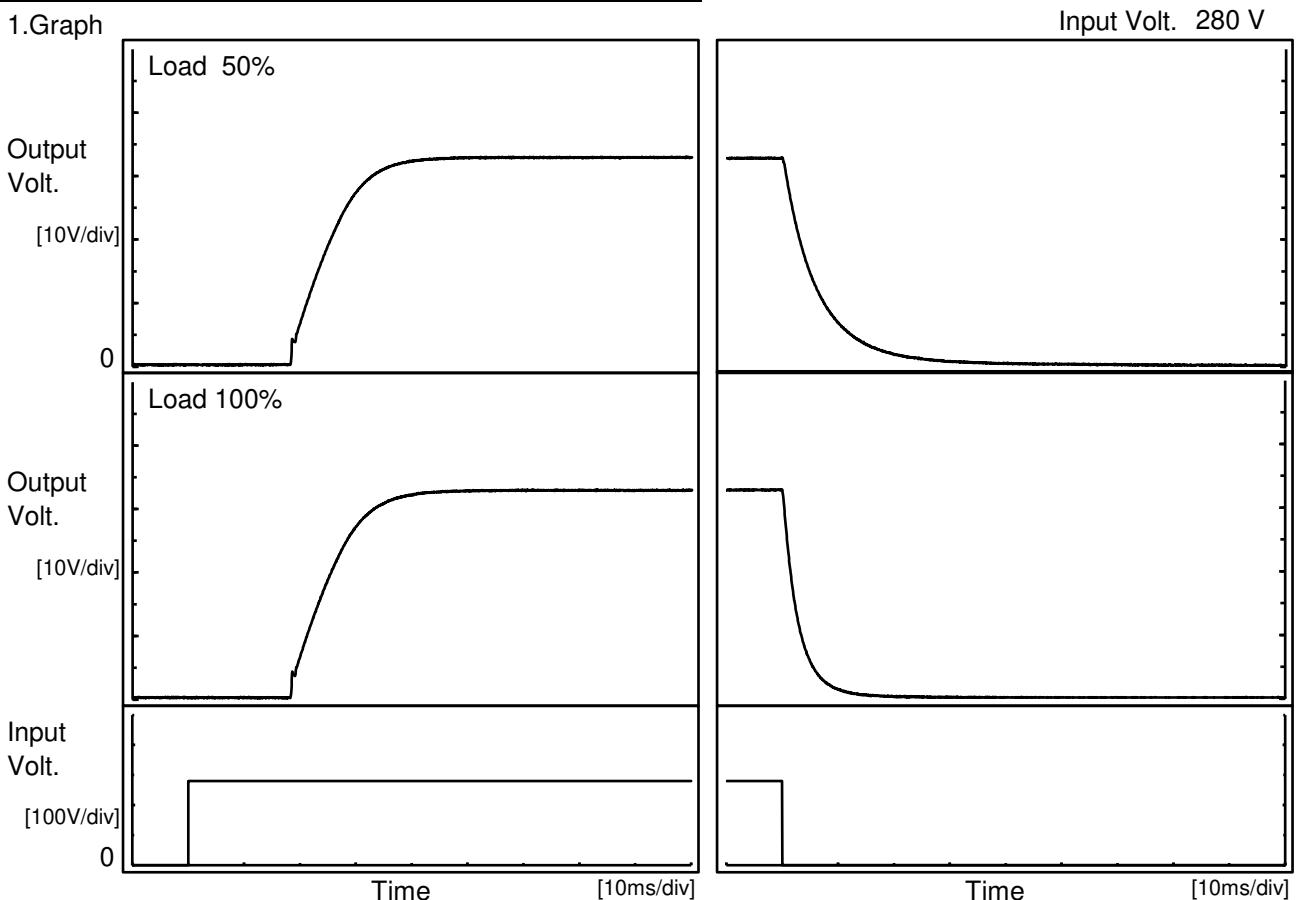
4[ms/div]

4[ms/div]

COSEL

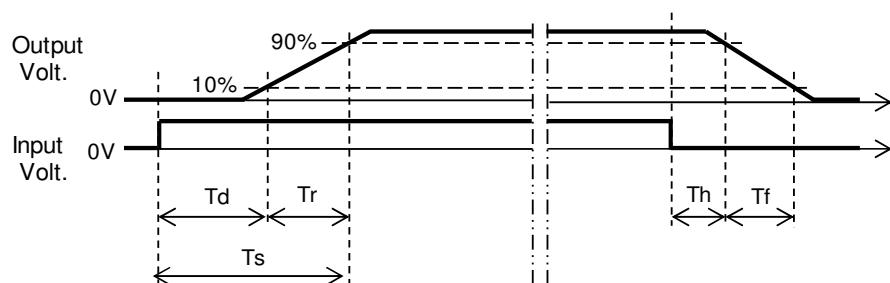
Model	DCS1400B65	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+65V21.6A		

1. Graph



2. Values

Load	Time	Td	Tr	Ts	Th	Tf	[ms]
50 %		18.6	13.6	32.2	0.8	14.3	
100 %		18.6	13.9	32.5	0.4	6.3	



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Model	DCS1400B65																																																									
Item	Overcurrent Protection	Temperature	25°C																																																							
Object	+65V21.6A	Testing Circuitry	Figure A																																																							
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<p>The graph plots Output Voltage [V] on the Y-axis (0 to 80) against Load Current [A] on the X-axis (0 to 30). Three curves are shown for Input Voltages: 200V (black), 280V (blue), and 435V (orange). A slanted line at approximately 18A to 22A indicates the rated load current range. Above this range, the output voltage drops sharply to 0V, indicating hiccup mode.</p>																																																										
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<p>Note: Slanted line shows the range of the rated load current.</p> <p>Hiccup mode activates when the output voltage is from 39.0 to 0V.</p>																																																										



Model	DCS1400B65	Testing Circuitry Figure A
Item	Ambient Temperature Drift	
Object	+65V21.6A	

1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 200V	Input Volt. 280V	Input Volt. 435V
-40	65.170	65.178	65.182
25	65.383	65.387	65.391
70	65.485	65.488	65.495

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+65V21.6A	

1.Values

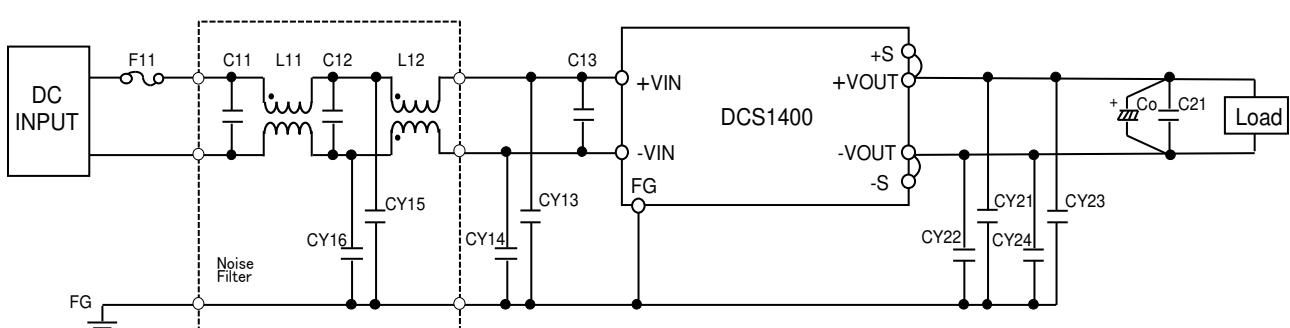
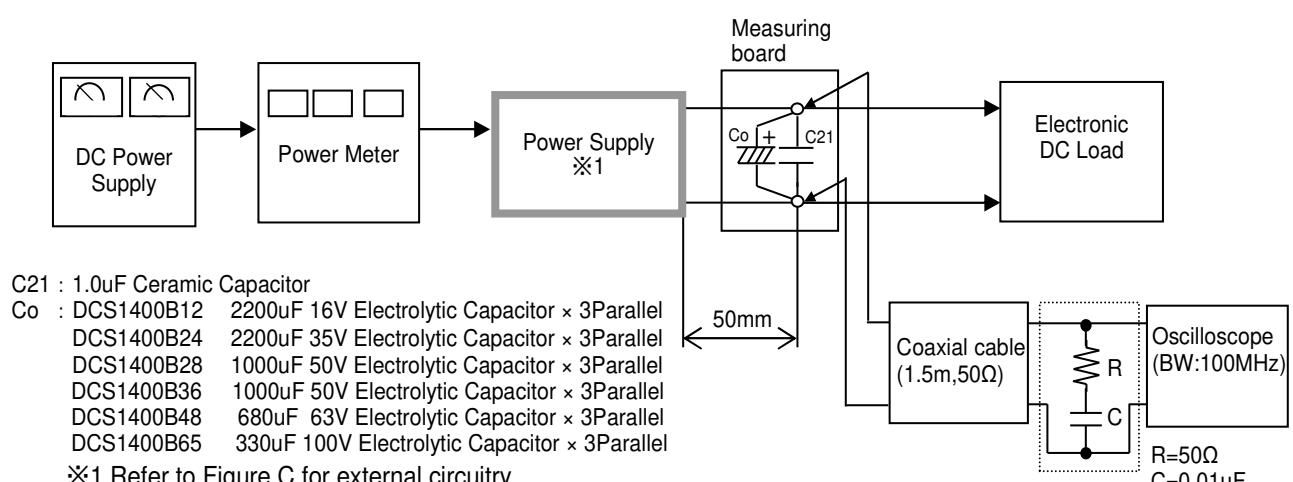
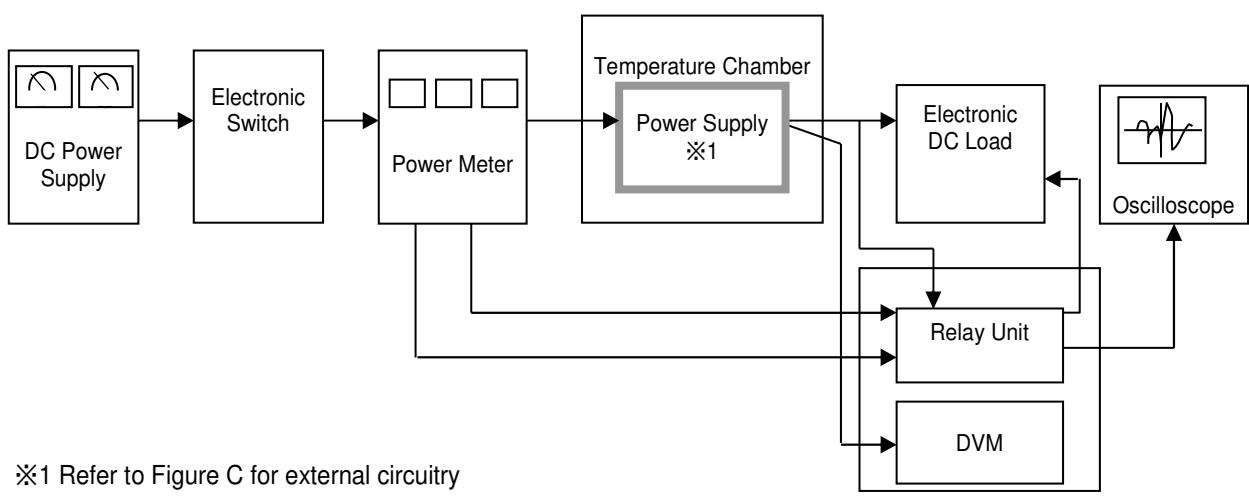
Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	168	169
25	170	170
70	170	171

Item	Overvoltage Protection	Testing Circuitry Figure A
Object	+65V21.6A	

1.Values

Load 0%

Ambient Temperature[°C]	Operating Point [V]	
	Input Volt. 200V	Input Volt. 435V
-40	82.73	82.67
25	83.13	83.13
70	83.37	83.37



※Other components are the same as in Figure B

F11	: 0505016
L11,L12	: SCF25XV-150-1R6A010JH
C11,C13	: 1.0μF 450V Film Capacitor
C12	: 2.2μF 450V Film Capacitor
CY13,CY14	: 2200pF 400V
CY15,CY16	: 1500pF 400V
CY21,CY22,CY23,CY24	: 0.01μF 300V (For DCS1400B65 only)

Figure C