



Isolated



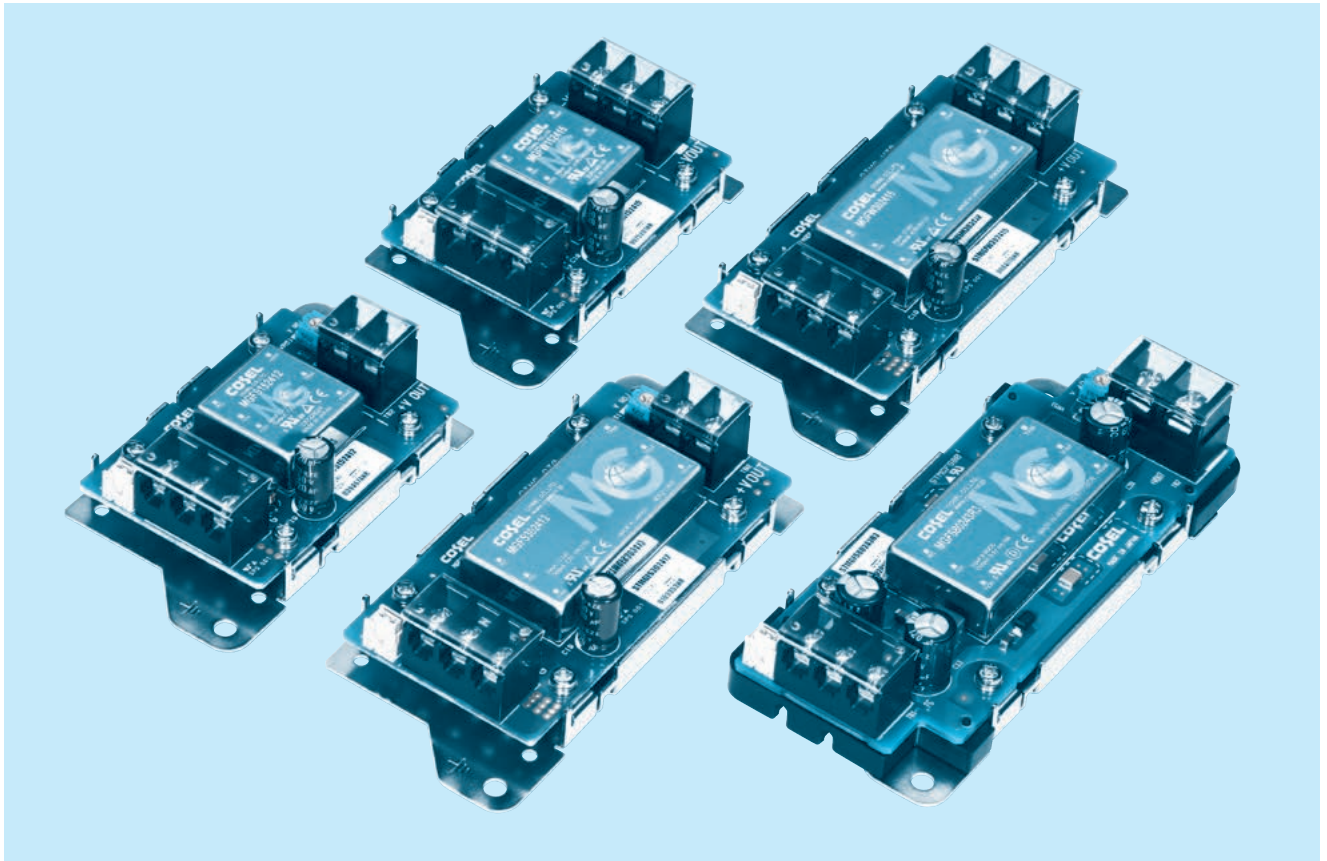
OCP



OVP

Remote  
ON/OFFWide 4 :1  
input

# STMG-series



## ■ Feature

- Isolated unit type DC-DC converter
- Wide input voltage DC9-36V/DC18-76V
- Various lineups
- Available connector interface (option)
- Available case cover (option)
- Available DIN rail attachment (option)
- Built in Overcurrent protection (recovery automatically)
- Built in Overvoltage protection (STMG30/STMG80)
- Built in Remote ON/OFF
- Built in Output voltage adjustment (for single output,  $\pm 10\%$ )

## ■ Safety agency approvals

- UL60950-1 C-UL EN62368-1 Complies (STMG15/STMG30)
- UL62368-1 C-UL EN62368-1 Complies (STMG80)

## ■ CE marking

- Low voltage Directive
- RoHS Directive

## ■ UKCA marking

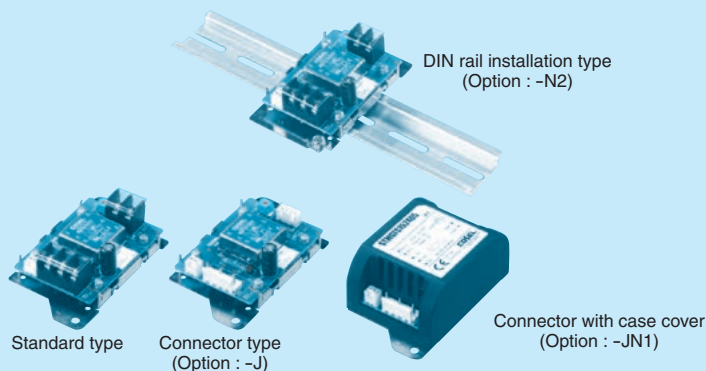
- Electrical Equipment Safety Regulations
- RoHS Regulations

## ■ 5-year warranty (refer to Instruction Manual)

# STMGFS15

STMGF S 15 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Single output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
  - G : Capacitor between Input and Output is removed.
  - R : with Remote ON/OFF (Positive logic control)
  - J : Input/Output Connector
  - JN1 : Connector with case cover
  - N2 : With DIN rail installation type
  - JN3 : Connector with cover(plastic) and DIN rail installation type
  - V : Output voltage setting potentiometer externally

\* Please remove short piece on CN4 to enable remote ON/OFF function.

MODEL	STMGFS15243R3	STMGFS152405	STMGFS152412	STMGFS152415
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	4	3	1.3

## SPECIFICATIONS

	MODEL	STMGFS15243R3	STMGFS152405	STMGFS152412	STMGFS152415	
INPUT	VOLTAGE[V]	DC9 - 36				
	CURRENT[A] *2	0.63typ	0.71typ	0.73typ	0.70typ	
	EFFICIENCY[%] *2	87typ	88typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	4	3	1.3	1	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	60max	60max	100max	120max	
	RIPPLE[mVp-p] *3	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	0 to +60°C	120max	120max	150max	150max
		-20 to +60°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	50max	150max	180max
		-20 to +60°C	80max	80max	240max	290max
DRIFT[mV] *4	20max	20max	48max	60max		
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE	2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50		
OUTPUT VOLTAGE SETTING[V]*5	3.29 - 3.41	4.97 - 5.14	11.85 - 12.25	14.83 - 15.33		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

MODEL	STMGFS15483R3	STMGFS154805	STMGFS154812	STMGFS154815
MAX OUTPUT WATTAGE[W]	13.2	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	4	3	1.3

## SPECIFICATIONS

	MODEL	STMGFS15483R3	STMGFS154805	STMGFS154812	STMGFS154815	
INPUT	VOLTAGE[V]	DC18 - 76				
	CURRENT[A] *2	0.32typ	0.36typ	0.37typ	0.35typ	
	EFFICIENCY[%] *2	87typ	88typ	88typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	4	3	1.3	1	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	60max	60max	100max	120max	
	RIPPLE[mVp-p] *3	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	0 to +60°C	120max	120max	150max	150max
		-20 to +60°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	50max	150max	180max
		-20 to +60°C	80max	80max	240max	290max
DRIFT[mV] *4	20max	20max	48max	60max		
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE	2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50		
OUTPUT VOLTAGE SETTING[V]*5	3.29 - 3.41	4.97 - 5.14	11.85 - 12.25	14.83 - 15.33		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

## GENERAL SPECIFICATIONS

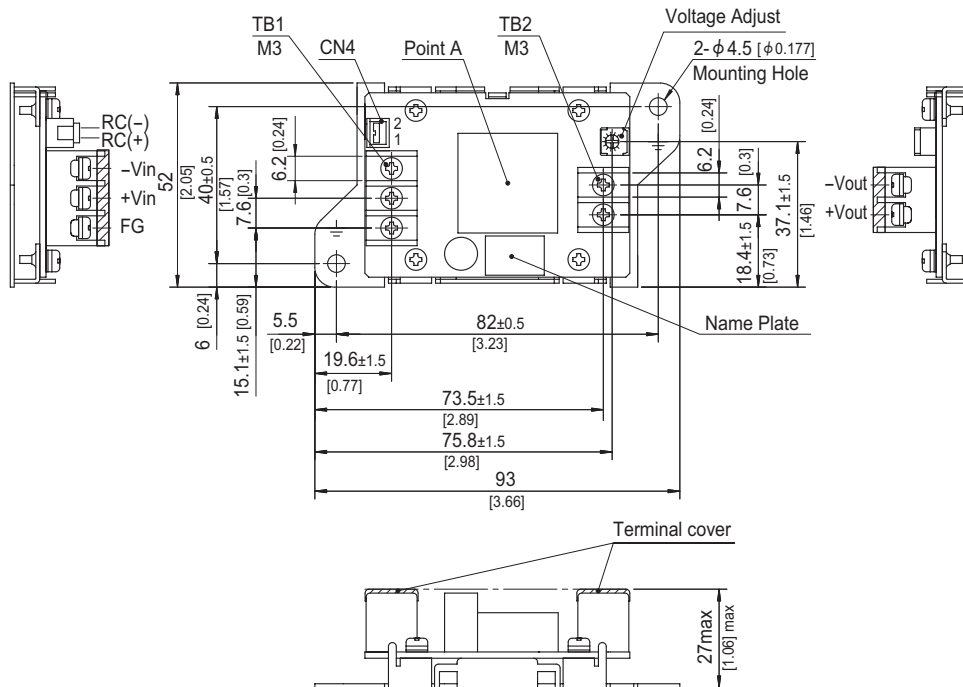
ISOLATION	INPUT · RC-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT · RC-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-20 to +70°C, 20 to 95%RH (Non condensing) (Refer to "Derating"), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN62368-1 Complies
OTHERS	CASE SIZE/WEIGHT	52x27x93mm [2.05x1.06x3.66 inches] (W×H×D) / 110g max (When the option is set, refer to the page STMG-4)
	COOLING METHOD	Convection/Forced air

- \*1 STMGFW15xx05/STMGFW15xx12/STMGFW15xx15 is available as single output, +10V/+24V/+30V
- \*2 Rated input 12V, 24V or 48V DC Io=100%
- \*3 Measured by 100MHz oscilloscope or Ripple-Noise meter (Equivalent to KIKUSUI-GIKEN : RM103).
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

### External view

#### Standard type

\* External view of option G, R are the same as standard model.  
External view of other type options, please refer to the page STMG-4.



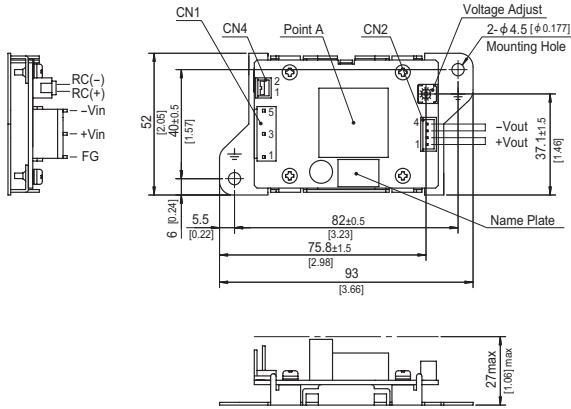
	I/O Connector		Mating Connector	Terminal
Remote ON/OFF	CN4	B2B-XH	XHP-2	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6

(Mfr.:J.S.T.)

- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : 110g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Terminal block screw tightening torque M3 : 0.8N · m max
- \* CN4 has been installed short piece as factory setting (Except option R).  
When remote ON/OFF is used, please remove the installed short piece.

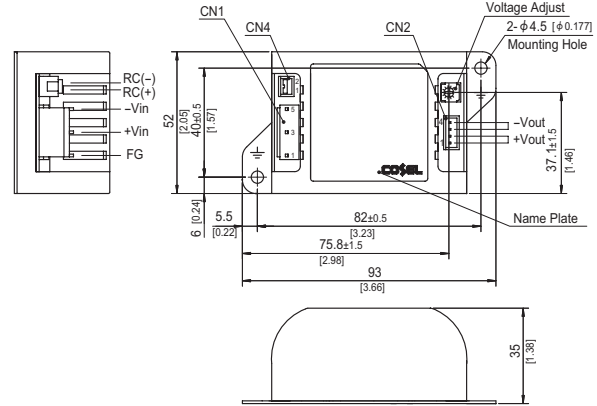
## External view (Option type)

### Connector type (-J)

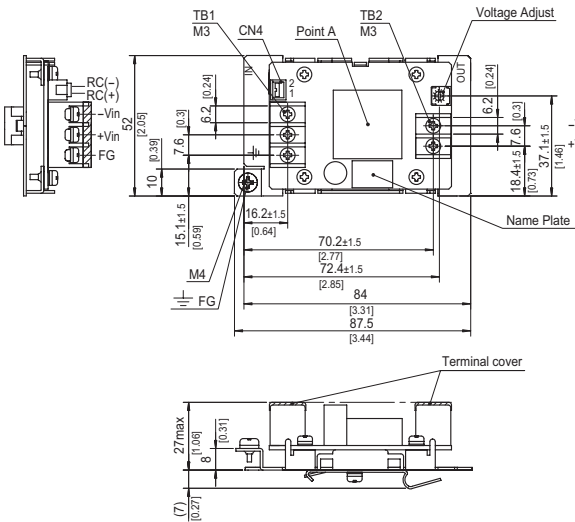


### Case cover and connector type (-JN1)

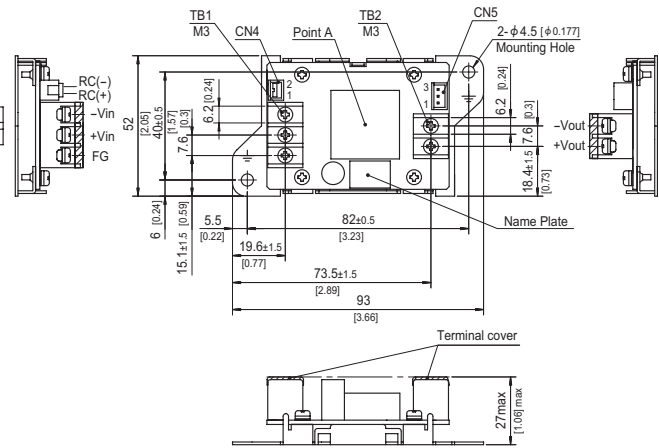
\* The specifications of terminal block and Case cover type can not be set.



### DIN rail installation type (-N2)



### External voltage variable volume type (-V)



	I/O Connector		Mating Connector	Terminal
Connector Type Input	CN1	B3P5-VH	VHR-5N	Chain : SVH-21T-P1.1 Loose : BVH-21T-P1.1
Connector Type Output	CN2	B4P-XH	XHP-4	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6
Remote ON/OFF	CN4	B2B-XH	XHP-2	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6
External voltage variable volume type	CN5	B3B-XH	XHP-3	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6

(Mfr.:J.S.T.)

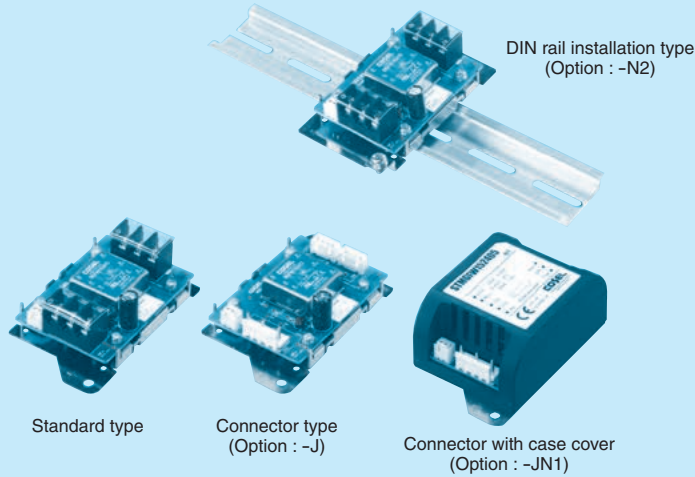
- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : Standard & Connector type 110g max  
Case cover & DIN rail installation type 120g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Case : PBT
- \* Terminal block screw tightening torque M3 : 0.8N · m max
- \* CN4 has been installed jumper as factory setting (Except option R).  
When remote ON/OFF is used , please remove the installed jumper.
- \* Connector Type : Keep drawing current per pin below 2.5A for CN2.



# STMGF15

STMGF W 15 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
  - G: Capacitor between Input and Output is removed.
  - R: with Remote ON/OFF (Positive logic control)
  - J: Input/Output Connector
  - JN1: Connector with case cover
  - N2: With DIN rail installation type
  - JN3: Connector with cover(plastic) and DIN rail installation type

\*When the option is set specifications may vary.

\*Please remove short piece on CN4 to enable remote ON/OFF function.

MODEL	STMGF152405	STMGF152412	STMGF152415	STMGF154805	STMGF154812	STMGF154815
MAX OUTPUT WATTAGE[W]	15	15.6	15	15	15.6	15
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65

## SPECIFICATIONS

	MODEL	STMGF152405	STMGF152412	STMGF152415	STMGF154805	STMGF154812	STMGF154815	
INPUT	VOLTAGE[V]	DC9 - 36			DC18 - 76			
	CURRENT[A] *2	0.74typ	0.74typ	0.70typ	0.37typ	0.37typ	0.36typ	
	EFFICIENCY[%] *2	84typ	88typ	89typ	84typ	87typ	88typ	
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	
	CURRENT[A]	1.5	0.65	0.5	1.5	0.65	0.5	
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max	
	LOAD REGULATION[mV]	*3	500max *5	600max	750max	500max *5	600max	750max
		*4	250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p] *6	0 to +60°C	100max	100max	100max	100max	100max	100max
		-20 to +60°C	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *6	0 to +60°C	150max	150max	150max	150max	150max	150max
		-20 to +60°C	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	150max	180max	50max	150max	180max
		-20 to +60°C	80max	240max	290max	80max	240max	290max
DRIFT[mV] *7	50max	50max	60max	50max	50max	60max		
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)							
OUTPUT VOLTAGE SETTING[V]*8	4.93 - 5.24	11.76 - 12.50	14.60 - 15.51	4.93 - 5.24	11.76 - 12.50	14.60 - 15.51		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically						
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)						
ISOLATION	INPUT · RC-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	INPUT · RC-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	OUTPUT-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTIUDE	-20 to +70°C, 20 to 95%RH (Non condensing) (Refer to "Derating"), 3,000m (10,000feet) max						
	STORAGE TEMP.,HUMID.AND ALTIUDE	-20 to +75°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max						
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis						
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN62368-1 Complies						
OTHERS	CASE SIZE/WEIGHT	52×27×93mm [2.05×1.06×3.66 inches] (W×H×D) / 110g max (When the option is set, refer to the page STMG-7)						
	COOLING METHOD	Convection/Forced air						

\*1 Single output +10V, +24V, +30V with no use of COM.

\*2 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%

\*3 Symmetrical loading from 5% to 100%.

\*4 Symmetrical loading from 20% to 100%.

\*5 Refer to the instruction manual 7.

\*6 Measured by 100MHz oscilloscope or Ripple-Noise meter (Equivalent to KIKUSUI-GIKEN : RM103).

\*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

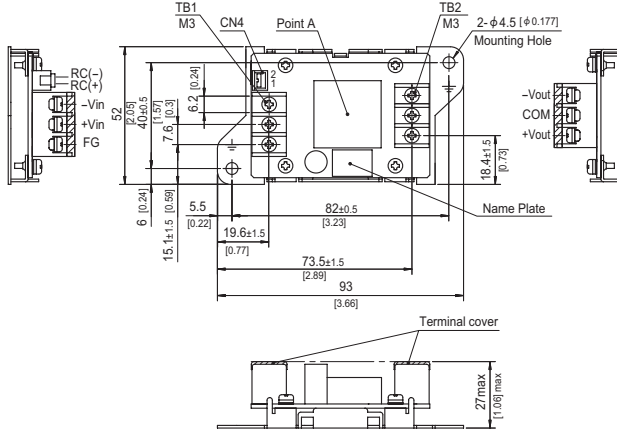
\*8 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.

\* Parallel operation with other model is not possible.

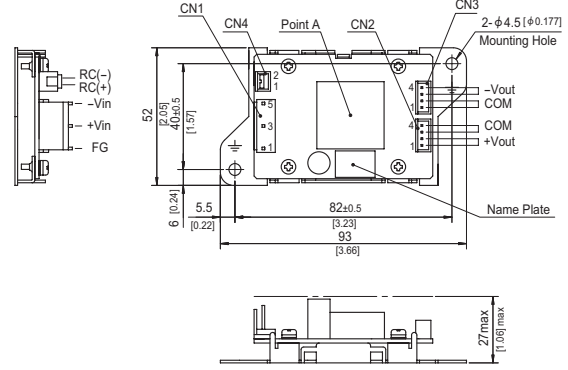
External view

Standard type

\* External view of option G, R are the same as standard model.

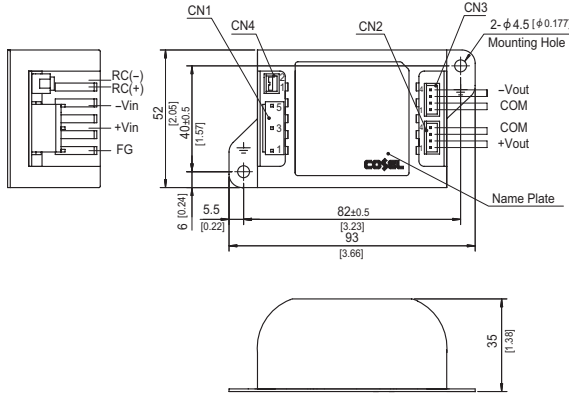


Connector type (-J)

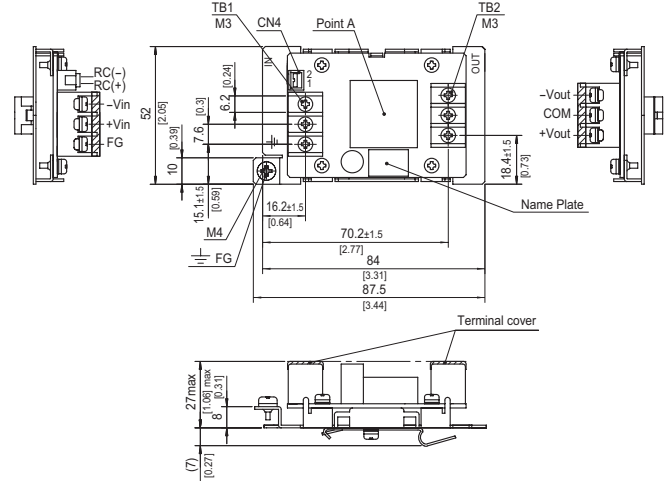


Case cover and connector type (-JN1)

\* The specifications of terminal block and Case cover type can not be set.



DIN rail installation type (-N2)



	I/O Connector		Mating Connector	Terminal
Connector Type Input	CN1	B3P5-VH	VHR-5N	Chain : SVH-21T-P1.1 Loose : BVH-21T-P1.1
Connector Type Output	CN2, CN3	B4B-XH	XHP-4	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6
Remote ON/OFF	CN4	B2B-XH	XHP-2	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6

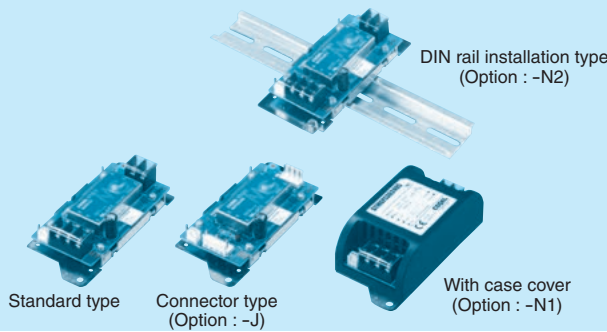
(Mfr.:J.S.T.)

- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : Standard & Connector type 110g max  
Case cover & DIN rail installation type 120g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Case : PBT
- \* Terminal block screw tightening torque M3 : 0.8N · m max
- \* CN4 has been installed jumper as factory setting (Except option R).  
When remote ON/OFF is used , please remove the installed jumper.
- \* Connector Type : Keep drawing current per pin below 2.5A for CN2,CN3.

# STMGFS30

STMGF S 30 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
  - ② Single output
  - ③ Output wattage
  - ④ Input voltage
  - ⑤ Output voltage
  - ⑥ Optional
    - G : Capacitor between Input and Output is removed.
    - R : with Remote ON/OFF (Positive logic control)
    - J : Input/Output Connector
    - N1 : With case cover
    - N2 : With DIN rail installation type
    - N3 : With cover(plastic) and DIN rail installation type
    - V : Output voltage setting potentiometer externally
- \*When the option is set specifications may vary.

\*Please remove short piece on CN4 to enable remote ON/OFF function.

MODEL	STMGFS30243R3	STMGFS302405	STMGFS302412	STMGFS302415
MAX OUTPUT WATTAGE[W]	24.75	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	7.5	6	2.5

## SPECIFICATIONS

	MODEL	STMGFS30243R3	STMGFS302405	STMGFS302412	STMGFS302415	
INPUT	VOLTAGE[V]	DC9 - 36				
	CURRENT[A] *2	1.16typ	1.39typ	1.40typ	1.40typ	
	EFFICIENCY[%] *2	89typ	90typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	7.5	6	2.5	2	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	60max	60max	100max	120max	
	RIPPLE[mVp-p] *3	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	0 to +60°C	120max	120max	150max	150max
		-20 to +60°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	50max	150max	180max
		-20 to +60°C	80max	80max	240max	290max
	DRIFT[mV] *4	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE	2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50		
OUTPUT VOLTAGE SETTING[V]*5	3.29 - 3.41	4.97 - 5.14	11.85 - 12.25	14.83 - 15.33		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

MODEL	STMGFS30483R3	STMGFS304805	STMGFS304812	STMGFS304815
MAX OUTPUT WATTAGE[W]	24.75	30	30	30
DC OUTPUT	VOLTAGE[V] *1	3.3	5	12
	CURRENT[A]	7.5	6	2.5

## SPECIFICATIONS

	MODEL	STMGFS30483R3	STMGFS304805	STMGFS304812	STMGFS304815	
INPUT	VOLTAGE[V]	DC18 - 76				
	CURRENT[A] *2	0.58typ	0.70typ	0.70typ	0.70typ	
	EFFICIENCY[%] *2	89typ	90typ	89typ	89typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	7.5	6	2.5	2	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	60max	60max	100max	120max	
	RIPPLE[mVp-p] *3	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	100max	100max	120max	120max
	RIPPLE NOISE[mVp-p] *3	0 to +60°C	120max	120max	150max	150max
		-20 to +60°C	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	50max	150max	180max
		-20 to +60°C	80max	80max	240max	290max
	DRIFT[mV] *4	20max	20max	48max	60max	
START-UP TIME[ms]	30max (Minimum input, I <sub>o</sub> =100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE	2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50		
OUTPUT VOLTAGE SETTING[V]*5	3.29 - 3.41	4.97 - 5.14	11.85 - 12.25	14.83 - 15.33		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				



## GENERAL SPECIFICATIONS

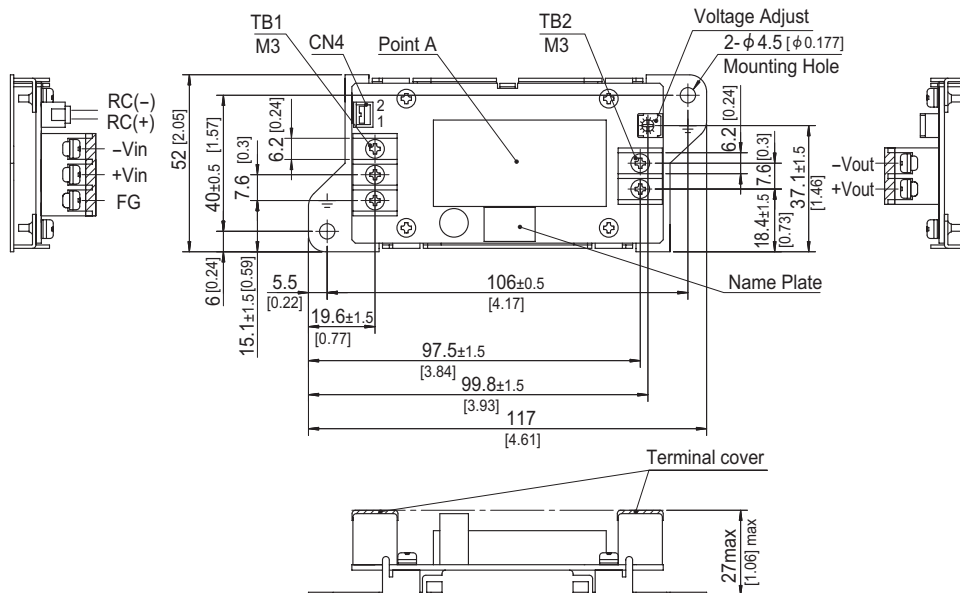
ISOLATION	INPUT · RC-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT · RC-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-20 to +70°C, 20 to 95%RH (Non condensing) (Refer to "Derating"), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN62368-1 Complies
OTHERS	CASE SIZE/WEIGHT	52x27x117mm [2.05x1.06x4.61 inches] (W×H×D) / 140g max (When the option is set, refer to the page STMG-10)
	COOLING METHOD	Convection/Forced air

- \*1 STMGFW30xx05/STMGFW30xx12/STMGFW30xx15 is available as single output, +10V/+24V/+30V
- \*2 Rated input 12V, 24V or 48V DC lo=100%
- \*3 Measured by 100MHz oscilloscope or Ripple-Noise meter (Equivalent to KIKUSUI-GIKEN : RM103).
- \*4 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*5 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

### External view

#### Standard type

\* External view of option G, R are the same as standard model.  
External view of other type options, please refer to the page STMG-10.



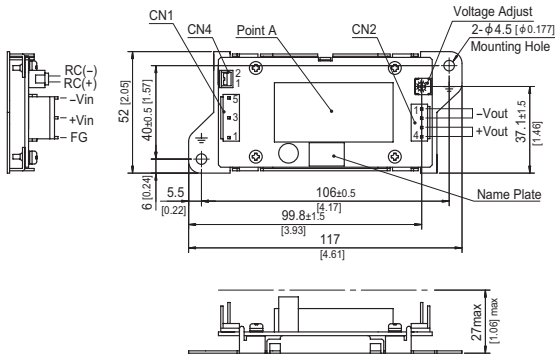
	I/O Connector		Mating Connector	Terminal
	Remote ON/OFF	CN4	B2B-XH	XHP-2

(Mfr.: J.S.T.)

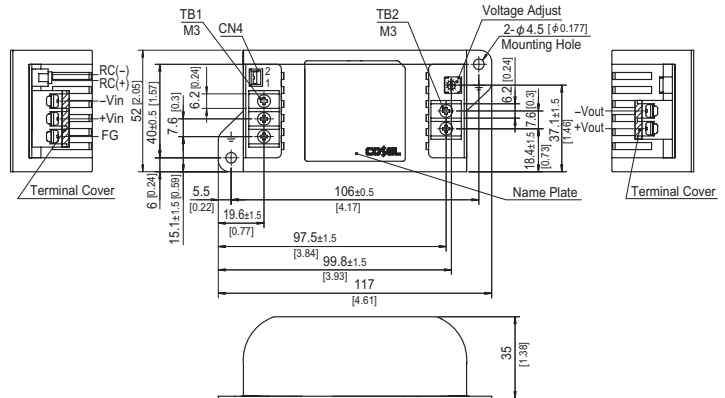
- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : 140g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Terminal block screw tightening torque M3 : 0.8N · m max
- \* CN4 has been installed jumper as factory setting (Except option R).  
When remote ON/OFF is used , please remove the installed jumper.

## External view (Option type)

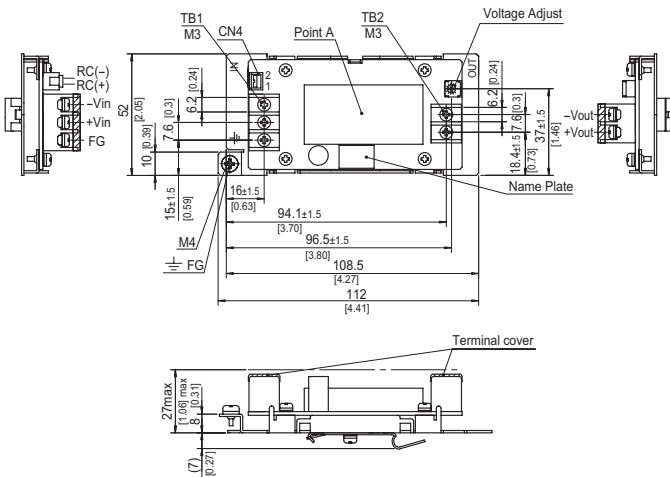
### Connector type (-J)



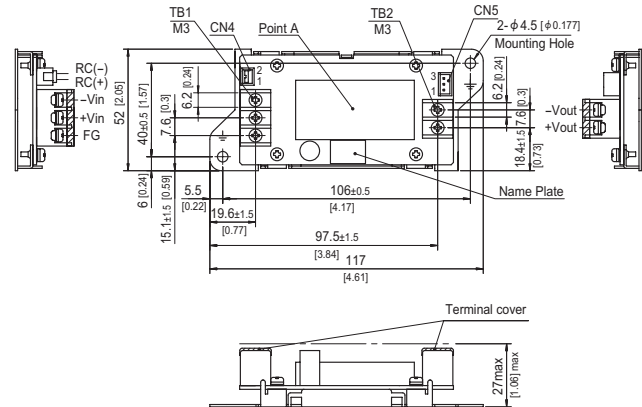
### Case cover type (-N1)



### DIN rail installation type (-N2)



### External voltage variable volume type (-V)



	I/O Connector		Mating Connector	Terminal
Connector Type Input	CN1	B3P5-VH	VHR-5N	Chain : SVH-21T-P1.1 Loose : BVH-21T-P1.1
Connector Type Output	CN2	B4P-VH	VHR-4N	Chain : SVH-21T-P1.1 Loose : BVH-21T-P1.1
Remote ON/OFF	CN4	B2B-XH	XHP-2	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6
External voltage variable volume type	CN5	B3B-XH	XHP-3	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6

(Mfr.:J.S.T.)

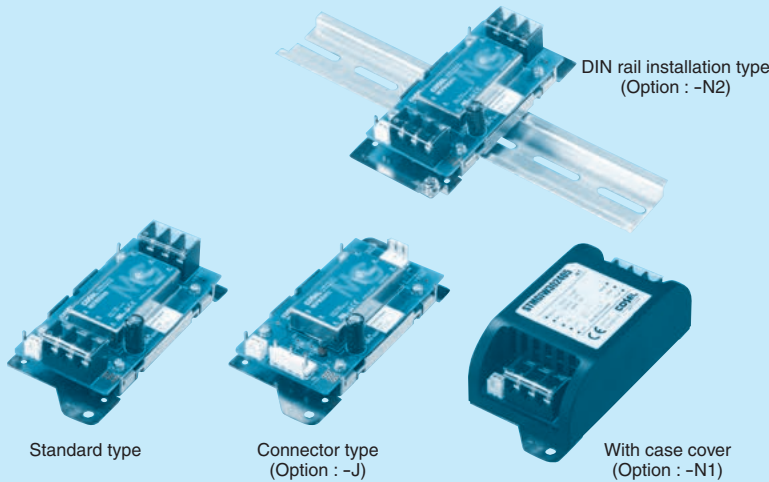
- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : Standard & Connector type 140g max  
Case cover & DIN rail installation type 160g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Case : PBT
- \* Terminal block screw tightening torque M3 : 0.8N · m max
- \* CN4 has been installed jumper as factory setting (Except option R).  
When remote ON/OFF is used, please remove the installed jumper.
- \* Connector Type : Keep drawing current per pin below 5A for CN2.



# STMGF30

STMGF W 30 24 05 -□

① ② ③ ④ ⑤ ⑥



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Optional
  - G: Capacitor between Input and Output is removed.
  - R: with Remote ON/OFF (Positive logic control)
  - J: Input/Output Connector
  - N1: With case cover
  - N2: With DIN rail installation type
  - N3: With cover(plastic) and DIN rail installation type

\*When the option is set specifications may vary.

\*Please remove short piece on CN4 to enable remote ON/OFF function.

MODEL	STMGF302405	STMGF302412	STMGF302415	STMGF304805	STMGF304812	STMGF304815
MAX OUTPUT WATTAGE[W]	20	30	30	20	30	30
DC OUTPUT	VOLTAGE[V] *1	±5 or +10	±12 or +24	±15 or +30	±5 or +10	±12 or +24
	CURRENT[A]	2	1.25	1	2	1.25

## SPECIFICATIONS

	MODEL	STMGF302405	STMGF302412	STMGF302415	STMGF304805	STMGF304812	STMGF304815	
INPUT	VOLTAGE[V]	DC9 - 36			DC18 - 76			
	CURRENT[A] *2	0.98typ	1.42typ	1.44typ	0.49typ	0.71typ	0.72typ	
	EFFICIENCY[%] *2	85typ	88typ	87typ	85typ	88typ	87typ	
OUTPUT	VOLTAGE[V]	±5(+10)	±12(+24)	±15(+30)	±5(+10)	±12(+24)	±15(+30)	
	CURRENT[A]	2	1.25	1	2	1.25	1	
	LINE REGULATION[mV]	40max	60max	75max	40max	60max	75max	
	LOAD REGULATION[mV]	*3	500max *5	600max	750max	500max *5	600max	750max
		*4	250max	480max	600max	250max	480max	600max
	RIPPLE[mVp-p] *6	0 to +60°C	100max	100max	100max	100max	100max	100max
		-20 to +60°C	120max	120max	120max	120max	120max	120max
	RIPPLE NOISE[mVp-p] *6	0 to +60°C	150max	150max	150max	150max	150max	150max
		-20 to +60°C	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	150max	180max	50max	150max	180max
		-20 to +60°C	80max	240max	290max	80max	240max	290max
DRIFT[mV] *7	50max	50max	60max	50max	50max	60max		
START-UP TIME[ms]	30max (Minimum input, Io=100%)							
OUTPUT VOLTAGE SETTING[V]*8	4.93 - 5.24	11.76 - 12.50	14.60 - 15.51	4.93 - 5.24	11.76 - 12.50	14.60 - 15.51		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically						
	OVERVOLTAGE PROTECTION[V]	Works over 120 to 160% of rating (Total of +V and -V)						
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)						
ISOLATION	INPUT · RC-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	INPUT · RC-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
	OUTPUT-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)						
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-20 to +70°C, 20 to 95%RH (Non condensing) (Refer to "Derating"), 3,000m (10,000feet) max						
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max						
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis						
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN62368-1 Complies						
OTHERS	CASE SIZE/WEIGHT	52 X 27 X 117mm [2.05 X 1.06 X 4.61 inches] (W X H X D) / 140g max (When the option is set, refer to the page STMG-13)						
	COOLING METHOD	Convection/Forced air						

\*1 Single output +10V, +24V, +30V with no use of COM.

\*2 Rated input 12V, 24V or 48V DC Io=100%

\*3 Symmetrical loading from 5% to 100%.

\*4 Symmetrical loading from 20% to 100%.

\*5 Refer to the instruction manual 7.

\*6 Measured by 100MHz oscilloscope or Ripple-Noise meter (Equivalent to KIKUSUI-GIKEN : RM103).

\*7 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.

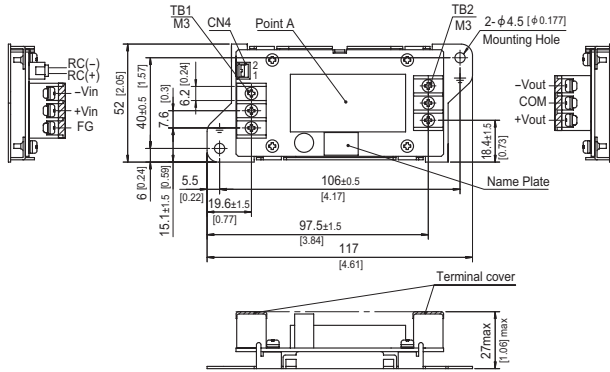
\*8 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.

\* Parallel operation with other model is not possible.

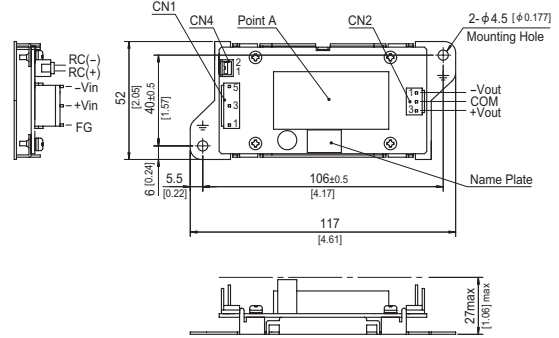
External view

Standard type

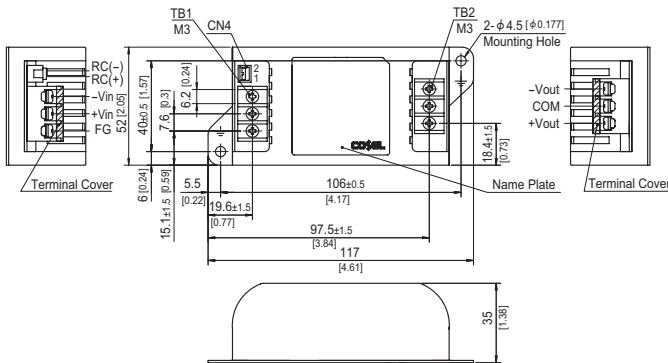
\* External view of option G, R are the same as standard model.



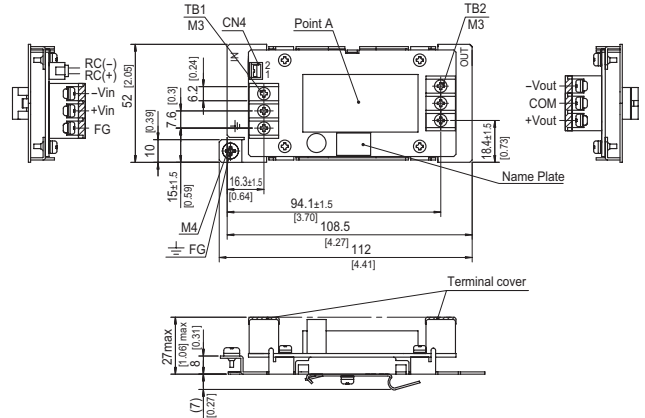
Connector type (-J)



Case cover type (-N1)



DIN rail installation type (-N2)



	I/O Connector		Mating Connector	Terminal
Connector Type Input	CN1	B3P5-VH	VHR-5N	Chain : SVH-21T-P1.1 Loose : BVH-21T-P1.1
Connector Type Output	CN2	B3P-VH	VHR-3N	Chain : SVH-21T-P1.1 Loose : BVH-21T-P1.1
Remote ON/OFF	CN4	B2B-XH	XHP-2	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6

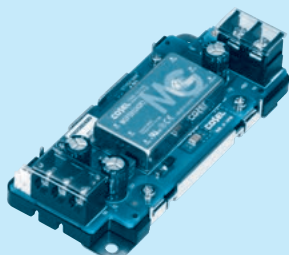
(Mfr.:J.S.T.)

- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : Standard & Connector type 140g max  
Case cover & DIN rail installation type 160g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Case : PBT
- \* Terminal block screw tightening torque M3 : 0.8N · m max
- \* CN4 has been installed jumper as factory setting (Except option R).  
When remote ON/OFF is used, please remove the installed jumper.
- \* Connector Type : Keep drawing current per pin below 5A for CN2.

# STMGFS80

STMGF S 30 24 05 -□

① ② ③ ④ ⑤ ⑥



Standard type

- ① Series name
  - ② Single output
  - ③ Output wattage
  - ④ Input voltage
  - ⑤ Output voltage
  - ⑥ Optional
- R : with Remote ON/OFF  
(Positive logic control)

\*Please remove short piece on CN3 to enable remote ON/OFF function.

\*When the option is set specifications may vary.

MODEL	STMGFS80243R3	STMGFS802405	STMGFS802412	STMGFS802415
MAX OUTPUT WATTAGE[W]	59.4	80	80.4	81
DC OUTPUT	VOLTAGE[V]	3.3	5	12
	CURRENT[A]	18	16	6.7

## SPECIFICATIONS

	MODEL	STMGFS80243R3	STMGFS802405	STMGFS802412	STMGFS802415	
INPUT	VOLTAGE[V]	DC9 - 36				
	CURRENT[A]	*1 2.75typ	3.70typ	3.64typ	3.67typ	
	EFFICIENCY[%]	*1 90typ	90typ	92typ	92typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	18	16	6.7	5.4	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	60max	60max	100max	120max	
	RIPPLE[mVp-p]	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	100max	100max	120max	120max
		Io=0 to 10%	200max	200max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	150max	150max	150max	150max
		Io=0 to 10%	250max	250max	270max	270max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	50max	150max	180max
-20 to +60°C		80max	80max	240max	290max	
DRIFT[mV]	*3 20max	20max	48max	60max		
START-UP TIME[ms]	30max (Minimum input, Rated load)					
OUTPUT VOLTAGE ADJUSTMENT RANGE	2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50		
OUTPUT VOLTAGE SETTING[V]*4	3.29 - 3.41	4.97 - 5.14	11.85 - 12.25	14.83 - 15.33		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION	Works over 115 to 140% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

MODEL	STMGFS80483R3	STMGFS804805	STMGFS804812	STMGFS804815
MAX OUTPUT WATTAGE[W]	59.4	80	80.4	81
DC OUTPUT	VOLTAGE[V]	3.3	5	12
	CURRENT[A]	18	16	6.7

## SPECIFICATIONS

	MODEL	STMGFS80483R3	STMGFS804805	STMGFS804812	STMGFS804815	
INPUT	VOLTAGE[V]	DC18 - 76				
	CURRENT[A]	*1 1.38typ	1.85typ	1.82typ	1.83typ	
	EFFICIENCY[%]	*1 90typ	90typ	92typ	92typ	
OUTPUT	VOLTAGE[V]	3.3	5	12	15	
	CURRENT[A]	18	16	6.7	5.4	
	LINE REGULATION[mV]	13.2max	20max	48max	60max	
	LOAD REGULATION[mV]	60max	60max	100max	120max	
	RIPPLE[mVp-p]	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	100max	100max	120max	120max
		Io=0 to 10%	200max	200max	240max	240max
	RIPPLE NOISE[mVp-p]	0 to +60°C	75max	75max	100max	100max
		-20 to +60°C	150max	150max	150max	150max
		Io=0 to 10%	250max	250max	270max	270max
	TEMPERATURE REGULATION[mV]	0 to +60°C	50max	50max	150max	180max
-20 to +60°C		80max	80max	240max	290max	
DRIFT[mV]	*3 20max	20max	48max	60max		
START-UP TIME[ms]	30max (Minimum input, Rated load)					
OUTPUT VOLTAGE ADJUSTMENT RANGE	2.97 - 3.63	4.50 - 5.50	10.80 - 13.20	13.50 - 16.50		
OUTPUT VOLTAGE SETTING[V]*4	3.29 - 3.41	4.97 - 5.14	11.85 - 12.25	14.83 - 15.33		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically				
	OVERVOLTAGE PROTECTION	Works over 115 to 140% of rating				
	REMOTE ON/OFF	Provided (Negative logic L:ON, H:OFF)				

## GENERAL SPECIFICATIONS

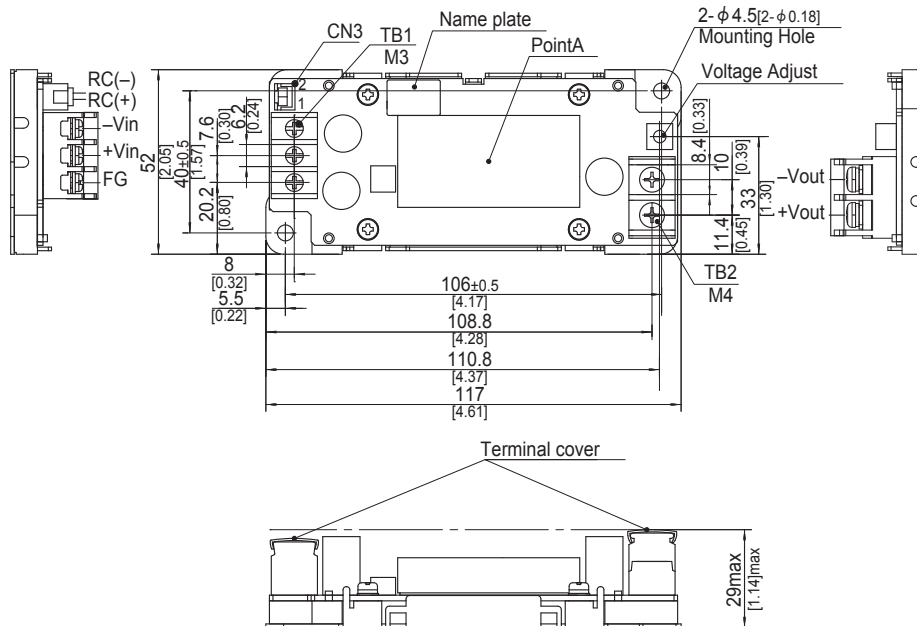
ISOLATION	INPUT · RC-OUTPUT	DC1,500V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	INPUT · RC-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
	OUTPUT-FG	DC1,000V 1minute, Cutoff current = 10mA, DC500V 1,000MΩ min (20±15°C)
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-20 to +70°C, 20 to 95%RH (Non condensing) (Refer to "Derating"), 3,000m (10,000feet) max
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 to 95%RH (Non condensing), 9,000m (30,000feet) max
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis
SAFETY	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each along X, Y and Z axis
	AGENCY APPROVALS	UL62368-1, C-UL(CSA62368-1), EN62368-1 Complies
OTHERS	CASE SIZE/WEIGHT	52×29×117mm [2.05×1.14×4.61 inches] (W×H×D) / 170g max
	COOLING METHOD	Convection/Forced air

- \*1 Rated input 12V, 24V or 48V DC I<sub>o</sub>=100%
- \*2 Measured by 100MHz oscilloscope or Ripple-Noise meter (Equivalent to KIKUSUI-GIKEN : RM103).
- \*3 Drift is the DC output accuracy for eight hours period after a half-hour warm-up at 25°C.
- \*4 Rated input voltage (DC24V, DC48V), rated output wattage, ambient temperature at 25°C.
- \* Parallel operation with other model is not possible.

### External view

#### Standard type

\* External view of option R is the same as standard model.



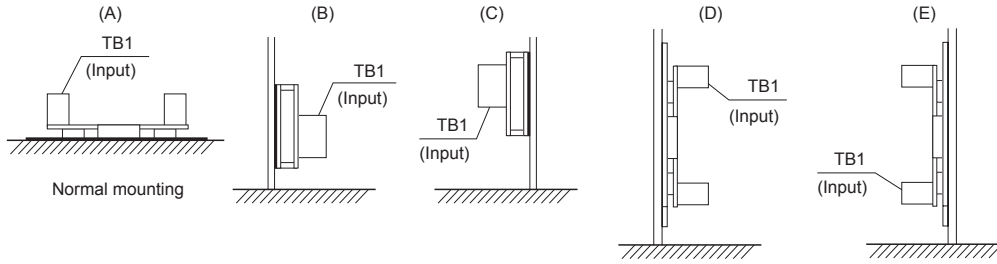
	I/O Connector		Mating Connector	Terminal
Remote ON/OFF	CN3	B2B-XH	XHP-2	Chain : SXH-001T-P0.6 Loose : BXH-001T-P0.6

(Mfr.: J.S.T.)

- \* Tolerance ±1
- \* Dimensions in mm, [ ]=inches
- \* Weight : 170g max
- \* PCB material / thickness : FR-4 / 1.6mm
- \* Mounting plate : Iron (surface finishing : nickel plating) t=1.0 [0.04]
- \* Terminal block screw tightening torque M3 : 0.8N · m max  
M4 : 1.6N · m max
- \* CN3 has been installed jumper as factory setting (Except option R).  
When remote ON/OFF is used , please remove the installed jumper.

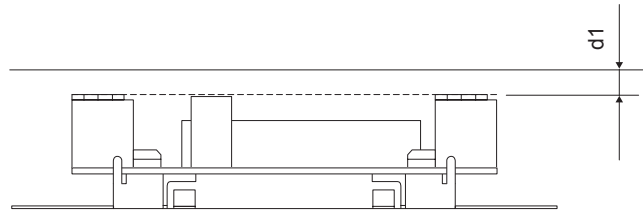
Assembling and Installation Method

Installation



- Derating curve varies depending on the mounting direction. Refer to “Derating”
- Please note that a power supply and chassis will become hot depending on mounting direction or operating condition.

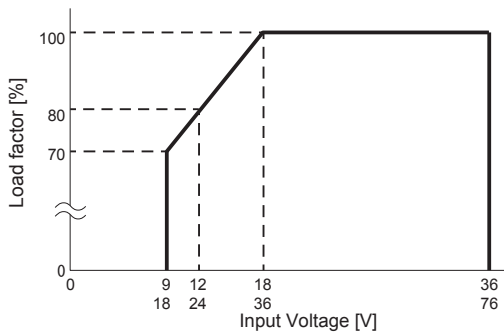
- In case of metal chassis, keep the distance between  $d1$  for to insulate between lead of component and metal chassis. If it is less than  $d1$ , insert the insulation sheet between power supply and metal chassis.



$d1=4\text{mm min.}$

Derating

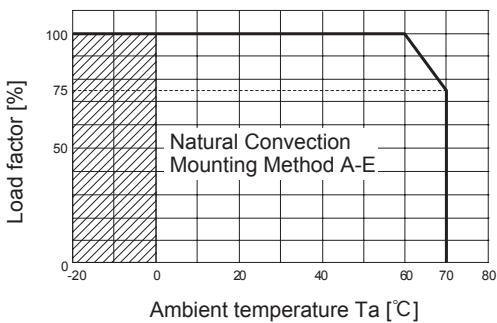
● STMGFS80 Derating curve for input voltage



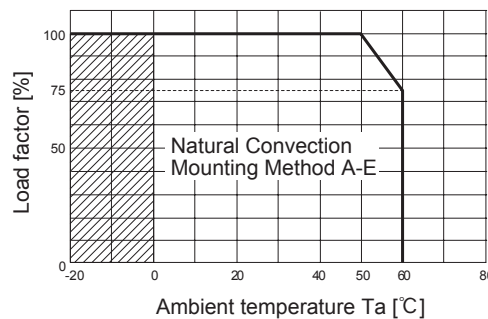
● STMGFS15/STMGF15 Ambient temperature derating curve

- Specifications for ripple and ripple noise changes in the shaded area.

- In the case of Convection Cooling



(1) Standard type (No Case cover type)



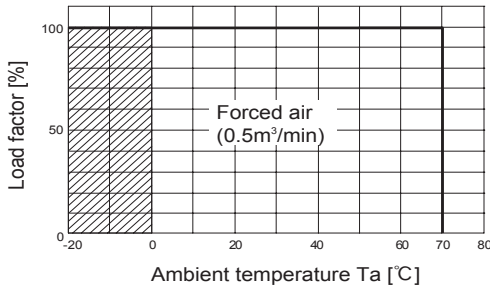
(2) Case cover type



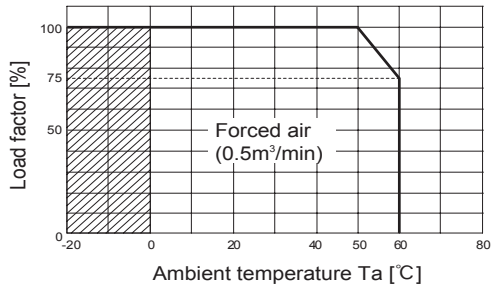
**Derating**

■ In the case of Forced Air Cooling

In case of forced air cooling, please have sufficient ventilation to keep the temperature of point A in Instruction Manual5 at 105°C or below. Please also make sure that the ambient temperature does not exceed the range shown in below.



(1) Standard type (No Case cover type)

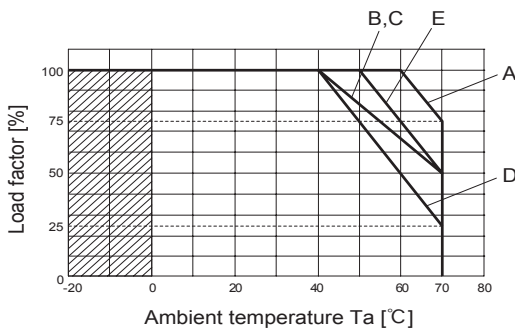


(2) Case cover type

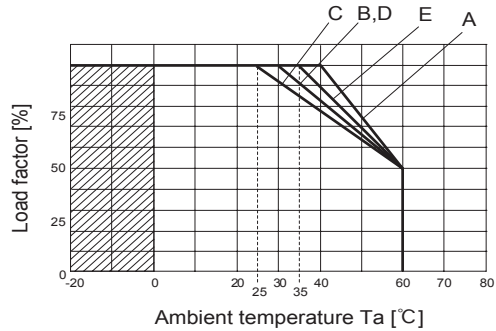
● **STMGFS30/STMGF30 Ambient temperature derating curve**

■ Specifications for ripple and ripple noise change in the shaded area.

■ In the case of Convection Cooling



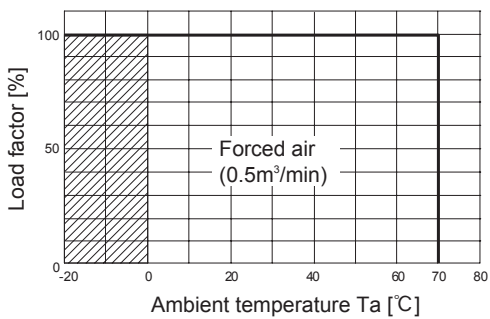
(1) Standard type (No Case cover type)



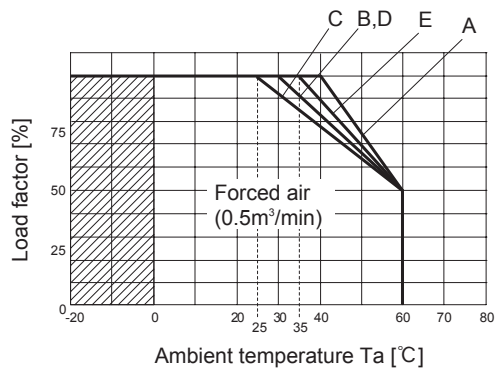
(2) Case cover type

■ In the case of Forced Air Cooling

In case of forced air cooling, please have sufficient ventilation to keep the temperature of point A in Instruction Manual5 at 105°C or below. Please also make sure that the ambient temperature does not exceed the range shown in below.



(1) Standard type (No Case cover type)



(2) Case cover type

## Derating

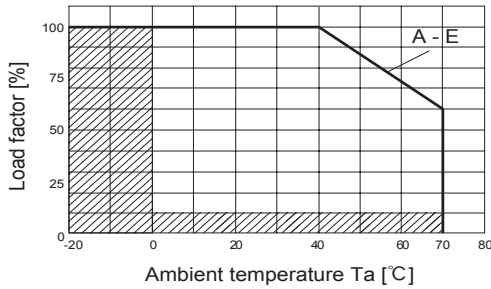
### ● STMGFS80 Ambient temperature derating curve (Reference value)

■ Specifications for ripple and ripple noise change in the shaded area.

■ In the case of Convection Cooling

When using the product, make sure that the temperature at point A is below the temperature shown in the instruction manual 5.

Please also make sure that the ambient temperature does not exceed 70°C.



Derating characteristics during natural air cooling (for reference)

## Instruction Manual

◆ It is necessary to read the "Instruction Manual" and "Before using our product" before you use our product.

Instruction Manual <https://www.cosel.co.jp/redirect/catalog/en/STMGFS/>  
 Instruction Manual <https://www.cosel.co.jp/redirect/catalog/en/STMGFW/>  
 Before using our product <https://en.cosel.co.jp/technical/caution/index.html>



## Basic Characteristics Data

Model	Circuit method	Switching frequency [kHz] (reference)	Input current [A]	Inrush current protection	PCB/Pattern * 4			Series/Parallel operation availability	
					Material	Single sided	Double sided	Series operation	Parallel operation
STMGF15	Flyback converter	445-495	* 1	-	glass fabric base,epoxy resin		Yes	Yes	* 2
STMGF30	Forward converter	380-460	* 1	-	glass fabric base,epoxy resin		Yes	Yes	* 2
STMGFS80	Flyback converter	100-1500 * 3	* 1	-	glass fabric base,epoxy resin		Yes	Yes	* 2

\* 1 Refer to Specification.

\* 2 Refer to Instruction Manual.

\* 3 The value changes depending on input and load.

\* 4 MG series with the power supply unit, please refer to the basic characteristics of the MG series data.