

# HS10

MAX. Power 10W Isolated On-Board Type AC-DC Converter

## HS10 Series Isolated On-Board Type AC-DC Converter



### Features

- Power Saving Mode Operation
- High Efficiency
- Isolated Input - Output
- 100kHz fixed frequency and Current mode Control
- Low output Ripple & Noise
- Built-in over current protection circuit
- Short Circuit Protection
- Universal Input Voltage(Free Voltage)
- Safety : CE approved
- RoHS compatible design
- 2-years warranty

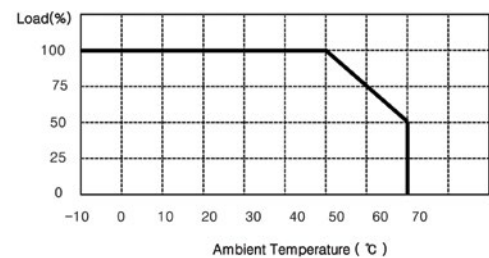
### Environment

- Operating Temperature : -10°C ~ 70°C
- Operating Humidity : 20% ~ 90% RH (Non condensing)
- Storage Temperature : -20°C ~ 75°C
- Cooling : Free-Air Convection
- MTBF :  $4.1 \times 10^5$  hrs

### Applications

- Data and telecommunication
- Datacommunication electronic equipments
- FA control

### Derating Curve



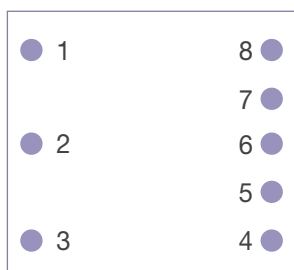
### General Specifications

Input	Power Saving	less than 0.3W (@Input : 230Vac, Output : No Load)
	Voltage Range	AC90V ~ 264V OR DC120V ~ 370V
	Frequency	44 ~ 440Hz(50Hz, 60Hz Typ.)
	Current	HS10 : 0.21Amax.(110Vac), 0.11Amax.(220Vac) HS15 : 0.31Amax.(110Vac), 0.16Amax.(220Vac)
	Efficiency	78% ~ 82%
	Inrush Current	30Amax.(110Vac), 60Amax.(220Vac)@Cold start
	Leakage Current	0.2mAmax.(110Vac), 0.35mAmax.(220Vac)
Output	Output Voltage	5V, 12V, 15V, 24V, $\pm 12V$ , $\pm 15V$
	Line Regulation	$\pm 1.0\%$
	Load Regulation	$\pm 1.0\%$
	Output Voltage Accuracy	$\pm 2.0\%$
	Ripple & Noise	1%(Peak to Peak) Max.
Protection Circuit	Over Current Protection	Works at over 105% of rating and recovers automatically
	Short circuit Protection	1minute, recovers automatically
Electrically Isolated	Input - Output	AC3kV, 1minute / DC500V, 100M $\Omega$ min
	Input - FRG	AC2kV, 1minute / DC500V, 100M $\Omega$ min
	Output - FRG	AC0.5kV, 1minute / DC500V, 70M $\Omega$ min

### HS10 Series Ordering Information (Single & Dual Output)

MODEL	HS10 - 05	HS10 - 12	HS10 - 15	HS10 - 24	HSD10 - 1212	HSD10 - 1515	
Input Voltage (V)	AC90V ~ 264V, 44Hz ~ 440Hz or DC120V ~ 370V						
Power Saving	less than 0.3W (@Input : 230Vac, Output : No Load)						
Output	Vout (V)	5	12	15	24	±12	±15
	Iout (A)	2	0.9	0.7	0.45	0.45	0.35
Maximum Power (W)	10	10.8	10.5	10.8	10.8	10.5	
Ripple & Noise (mVp-p)	100	120	150	200	120 / 120	150 / 150	
Efficiency Typ. (220Vac) [%]	78	82	82	82	80	81	

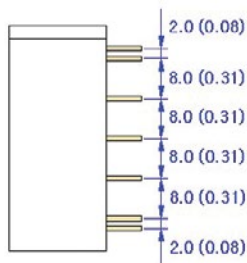
### Pin assignments



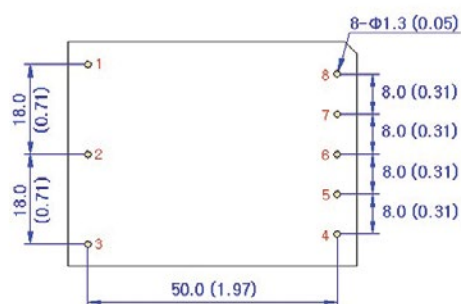
| Top View |

Pin No.	Single	Dual
1	FRG	FRG
2	AC input N	AC input N
3	AC input L	AC input L
4	No Pin	No Pin
5	+Vout	+Vout
6	No Pin	Com
7	-Vout	-Vout
8	No Pin	No Pin

### Outline Dimensions : <Unit : mm (inch)>



| Mounting Hole (Top View) |



#### NOTE

1. Unit : mm (inch)
2. Weight : 90g(Max.)
3. Material : PBT