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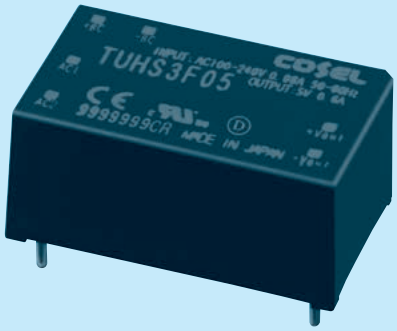
COSEL AC-DC Power Supplies PCB Mount Type

TUHS3

Ordering information

TUH	S	3	F	05	
①	②	③	④	⑤	

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage



Class II

✻Avoid short circuit between +BC and -BC. It may cause the failure of inside components.
✻To use TUHS, external components are required. Refer to the instruction manual for details.

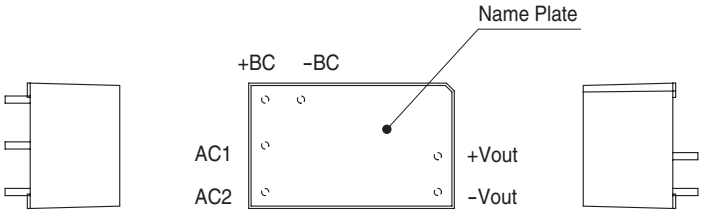
MODEL	TUHS3F05	TUHS3F12	TUHS3F15	TUHS3F24
MAX OUTPUT WATTAGE[W]	3.00	3.00	3.00	3.12
DC OUTPUT	5V 0.6A	12V 0.25A	15V 0.2A	24V 0.13A

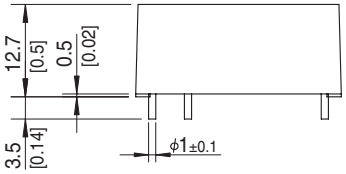
SPECIFICATIONS

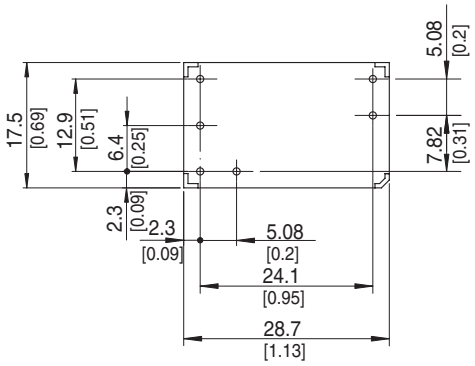
	MODEL		TUHS3F05	TUHS3F12	TUHS3F15	TUHS3F24
INPUT	VOLTAGE[V]		AC85 - 264 1φ DC120 - 370			
	CURRENT[A]	ACIN 100V	0.08typ (Io=100%)			
		ACIN 200V	0.05typ (Io=100%)			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EFFICIENCY[%]	ACIN 100V	79typ	81typ	81typ	81typ
		ACIN 200V	78typ	79typ	79typ	79typ
	INRUSH CURRENT		Limited by external components			
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		0.6	0.25	0.2	0.13
	LINE REGULATION[mV]		20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	100max	120max	150max
	RIPPLE[mVp-p]	30 to 100% Load ✻1	120max	160max	160max	200max
		0 to 30% Load AC85V - 240V ✻1	400max	480max	480max	580max
	RIPPLE NOISE[mVp-p]	30 to 100% Load ✻1	160max	200max	200max	240max
		0 to 30% Load AC85V - 240V ✻1	480max	560max	560max	660max
	TEMPERATURE REGULATION[mV]	0 to +85℃	100max	180max	240max	360max
		-40 to +85℃	150max	270max	360max	480max
	DRIFT[mV]	✻2	20max	48max	60max	96max
	OUTPUT VOLTAGE SETTING[V]		4.90 - 5.30	11.40 - 12.60	14.25 - 15.75	23.00 - 25.00
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recover automatically			
	OVERVOLTAGE PROTECTION[V]		5.50 - 8.00	13.20 - 19.20	16.50 - 24.00	26.40 - 38.40
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-40 to +85℃, 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 AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1			
	CONDUCTED NOISE		Complies with FCC-B,VCCI-B,CISPR-B,EN55022-B ✻3			
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) (Not built-in to active filter)			
OTHERS	CASE SIZE/WEIGHT		28.7×12.7×17.5mm[1.13×0.50×0.69 inches] (W×H×D) / 15g max			
	COOLING METHOD		Convection / Forced air			

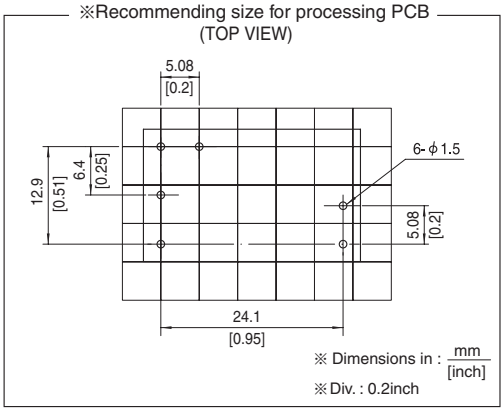
✻1 Refer to instruction manual for measuring method of electric characteristics.
✻2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated value.
✻3 Do not ground secondly circuit, in case of a standard adapted.
✻ Measured with 18μF capasitor as Cbc.

External view









※ Tolerance : ±0.5 [±0.02]
※ Weight : 15g max
※ Case material : PBT
※ Pin material : Copper
※ Plating treatment of pin : Lead free plating
※ Dimensions in mm, [ ]=inches

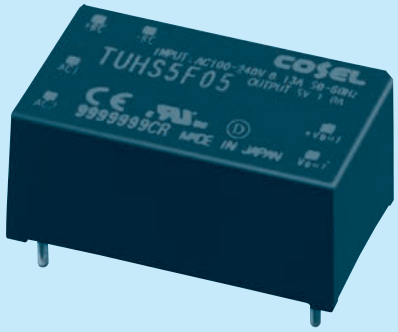
COSEL AC-DC Power Supplies PCB Mount Type

TUHS5

Ordering information

TUH	S	5	F	05	
①	②	③	④	⑤	

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage



Class II

✻Avoid short circuit between +BC and -BC. It may cause the failure of inside components.
✻To use TUHS, external components are required. Refer to the instruction manual for details.

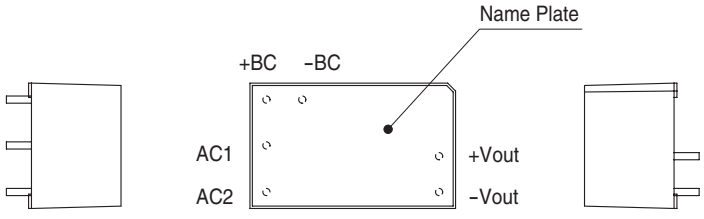
MODEL	TUHS5F05	TUHS5F12	TUHS5F15	TUHS5F24
MAX OUTPUT WATTAGE[W]	5.00	5.40	5.10	5.28
DC OUTPUT	5V 1A	12V 0.45A	15V 0.34A	24V 0.22A

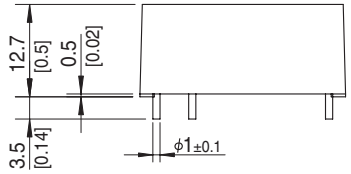
SPECIFICATIONS

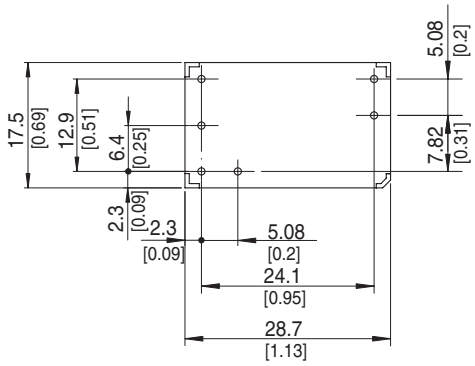
	MODEL		TUHS5F05	TUHS5F12	TUHS5F15	TUHS5F24
INPUT	VOLTAGE[V]		AC85 - 264 1φ DC120 - 370			
	CURRENT[A]	ACIN 100V	0.13typ (Io=100%)			
		ACIN 200V	0.08yp (Io=100%)			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EFFICIENCY[%]	ACIN 100V	78typ	82typ	82typ	83typ
		ACIN 200V	79typ	82typ	82typ	83typ
	INRUSH CURRENT		Limited by external components			
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		1	0.45	0.34	0.22
	LINE REGULATION[mV]		20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	100max	120max	150max
	RIPPLE[mVp-p]	30 to 100% Load ✻1	120max	160max	160max	200max
		0 to 30% Load AC85V - 240V ✻1	400max	480max	480max	580max
	RIPPLE NOISE[mVp-p]	30 to 100% Load ✻1	160max	200max	200max	240max
		0 to 30% Load AC85V - 240V ✻1	480max	560max	560max	660max
	TEMPERATURE REGULATION[mV]	0 to +80℃	100max	180max	240max	360max
		-40 to +80℃	150max	270max	360max	480max
	DRIFT[mV]	✻2	20max	48max	60max	96max
	OUTPUT VOLTAGE SETTING[V]		4.90 - 5.30	11.40 - 12.60	14.25 - 15.75	23.00 - 25.00
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recover automatically			
	OVERVOLTAGE PROTECTION[V]		5.50 - 8.00	13.20 - 19.20	16.50 - 24.00	26.40 - 38.40
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-40 to +85℃, 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 AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1			
	CONDUCTED NOISE		Complies with FCC-B,VCCI-B,CISPR-B,EN55022-B ✻3			
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) (Not built-in to active filter)			
OTHERS	CASE SIZE/WEIGHT		28.7×12.7×17.5mm[1.13×0.50×0.69 inches] (W×H×D) / 15g max			
	COOLING METHOD		Convection / Forced air			

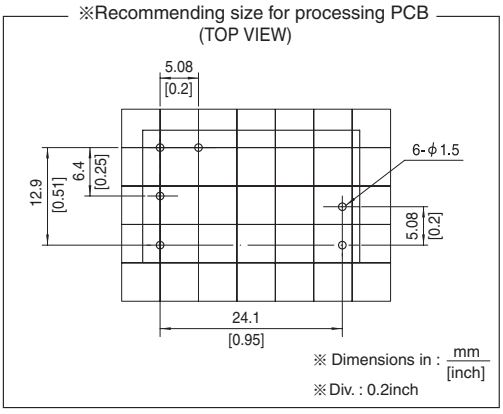
✻1 Refer to instruction manual for measuring method of electric characteristics.
✻2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated value.
✻3 Do not ground secondly circuit, in case of a standard adapted.
✻ Measured with 22μF capasitor as Cbc.

External view









※ Tolerance : ±0.5 [±0.02]
※ Weight : 15g max
※ Case material : PBT
※ Pin material : Copper
※ Plating treatment of pin : Lead free plating
※ Dimensions in mm, [ ]=inches

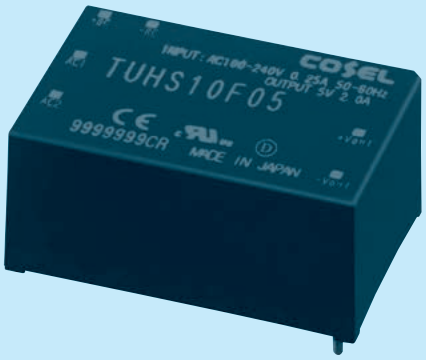
COSEL AC-DC Power Supplies PCB Mount Type

TUHS10

Ordering information

TUH	S	10	F	05	
①	②	③	④	⑤	

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage



Class II

✻Avoid short circuit between +BC and -BC. It may cause the failure of inside components.
✻To use TUHS, external components are required. Refer to the instruction manual for details.

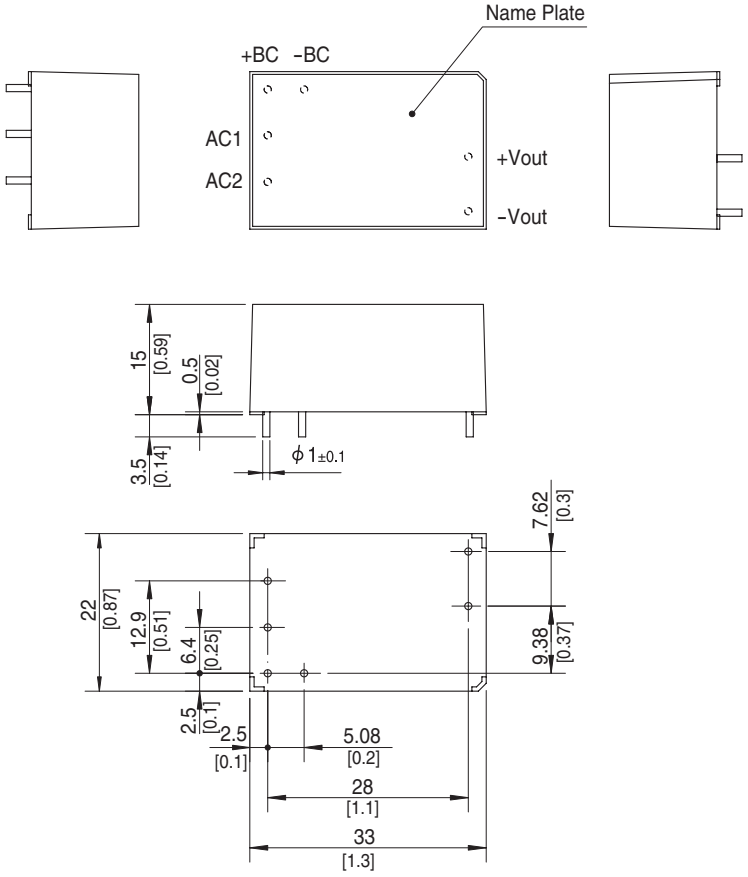
MODEL	TUHS10F05	TUHS10F12	TUHS10F15	TUHS10F24
MAX OUTPUT WATTAGE[W]	10.00	10.80	10.10	10.80
DC OUTPUT	5V 2A	12V 0.9A	15V 0.67A	24V 0.45A

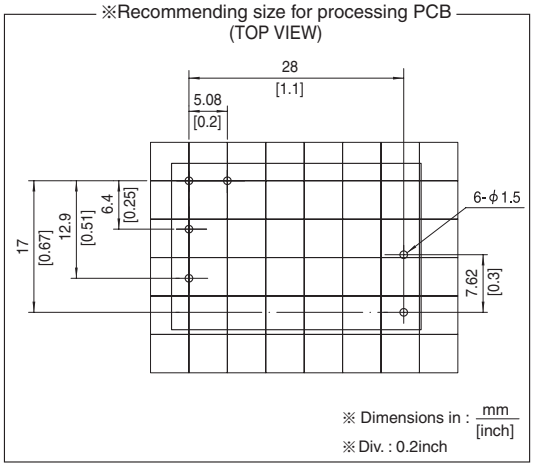
SPECIFICATIONS

	MODEL		TUHS10F05	TUHS10F12	TUHS10F15	TUHS10F24
INPUT	VOLTAGE[V]		AC85 - 264 1φ DC120 - 370			
	CURRENT[A]	ACIN 100V	0.25typ (Io=100%)			
		ACIN 200V	0.14typ (Io=100%)			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EFFICIENCY[%]	ACIN 100V	81typ	85typ	85typ	86typ
		ACIN 200V	82typ	85typ	85typ	87typ
	INRUSH CURRENT		Limited by external components			
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		2	0.9	0.67	0.45
	LINE REGULATION[mV]		20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	100max	120max	150max
	RIPPLE[mVp-p]	30 to 100% Load ✻1	120max	160max	160max	200max
		0 to 30% Load AC85V - 240V ✻1	400max	480max	480max	580max
	RIPPLE NOISE[mVp-p]	30 to 100% Load ✻1	160max	200max	200max	240max
		0 to 30% Load AC85V - 240V ✻1	480max	560max	560max	660max
	TEMPERATURE REGULATION[mV]	0 to +70℃	100max	180max	240max	360max
		-40 to +70℃	150max	270max	360max	480max
	DRIFT[mV]	✻2	20max	48max	60max	96max
	OUTPUT VOLTAGE SETTING[V]		4.90 - 5.30	11.40 - 12.60	14.25 - 15.75	23.00 - 25.00
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recover automatically			
	OVERVOLTAGE PROTECTION[V]		5.50 - 8.00	13.20 - 19.20	16.50 - 24.00	26.40 - 38.40
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-40 to +85℃, 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 AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1			
	CONDUCTED NOISE		Complies with FCC-B,VCCI-B,CISPR-B,EN55022-B ✻3			
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) (Not built-in to active filter)			
OTHERS	CASE SIZE/WEIGHT		33.0×15.0×22.0mm[1.3×0.59×0.86 inches] (W×H×D) / 25g max			
	COOLING METHOD		Convection / Forced air			

✻1 Refer to instruction manual for measuring method of electric characteristics.
✻2 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 value.
✻3 Do not ground secondly circuit, in case of a standard adapted.
✻ Measured with 47μF capasitor as Cbc.

External view





※ Tolerance : ±0.5 [±0.02]
※ Weight : 25g max
※ Case material : PBT
※ Pin material : Copper
※ Plating treatment of pin : Lead free plating
※ Dimensions in mm, [ ]=inches

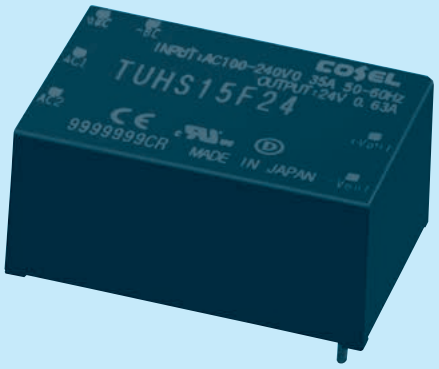
COSEL AC-DC Power Supplies PCB Mount Type

TUHS15

Ordering information

TUH	S	15	F	12	
①	②	③	④	⑤	

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage



Class II

✻Avoid short circuit between +BC and -BC. It may cause the failure of inside components.
✻To use TUHS, external components are required. Refer to the instruction manual for details.

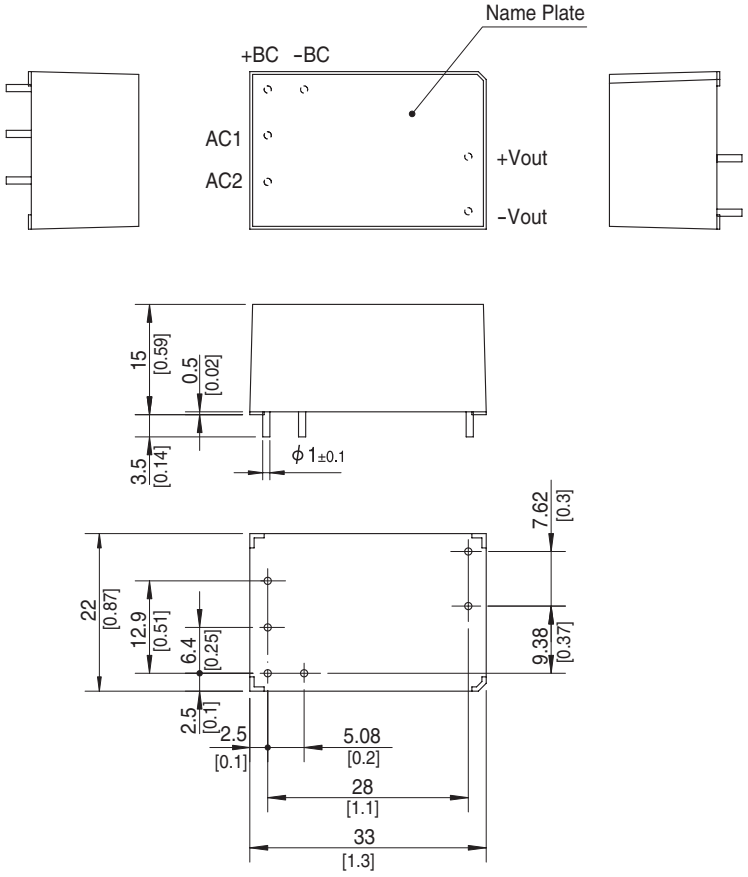
MODEL	TUHS15F12	TUHS15F15	TUHS15F24
MAX OUTPUT WATTAGE[W]	15.00	15.00	15.12
DC OUTPUT	12V 1.25A	15V 1A	24V 0.63A

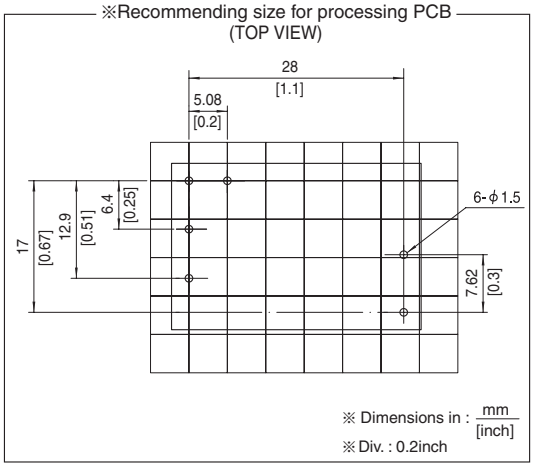
SPECIFICATIONS

	MODEL		TUHS15F12	TUHS15F15	TUHS15F24
INPUT	VOLTAGE[V]		AC85 - 264 1φ DC120 - 370		
	CURRENT[A]	ACIN 100V	0.35typ (Io=100%)		
		ACIN 200V	0.18typ (Io=100%)		
	FREQUENCY[Hz]		50/60 (47 - 63)		
	EFFICIENCY[%]	ACIN 100V	85typ	85typ	86typ
		ACIN 200V	85typ	85typ	87typ
	INRUSH CURRENT		Limited by external components		
OUTPUT	VOLTAGE[V]		12	15	24
	CURRENT[A]		1.25	1	0.63
	LINE REGULATION[mV]		48max	60max	96max
	LOAD REGULATION[mV]		100max	120max	150max
	RIPPLE[mVp-p]	30 to 100% Load ✻1	160max	160max	200max
		0 to 30% Load AC85V - 240V ✻1	480max	480max	580max
	RIPPLE NOISE[mVp-p]	30 to 100% Load ✻1	200max	200max	240max
		0 to 30% Load AC85V - 240V ✻1	560max	560max	660max
	TEMPERATURE REGULATION[mV]	0 to +50℃	180max	240max	360max
		-40 to +50℃	270max	360max	480max
	DRIFT[mV]	✻2	48max	60max	96max
	OUTPUT VOLTAGE SETTING[V]		11.40 - 12.60	14.25 - 15.75	23.00 - 25.00
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recover automatically		
	OVERVOLTAGE PROTECTION[V]		13.20 - 19.20	16.50 - 24.00	26.40 - 38.40
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-40 to +85℃, 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 AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1		
	CONDUCTED NOISE		Complies with FCC-B,VCCI-B,CISPR-B,EN55022-B ✻3		
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) (Not built-in to active filter)		
OTHERS	CASE SIZE/WEIGHT		33.0×15.0×22.0mm[1.3×0.59×0.86 inches] (W×H×D) / 25g max		
	COOLING METHOD		Convection / Forced air		

✻1 Refer to instruction manual for measuring method of electric characteristics.
✻2 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 value.
✻3 Do not ground secondly circuit, in case of a standard adapted.
✻ Measured with 68μF capasitor as Cbc.

External view





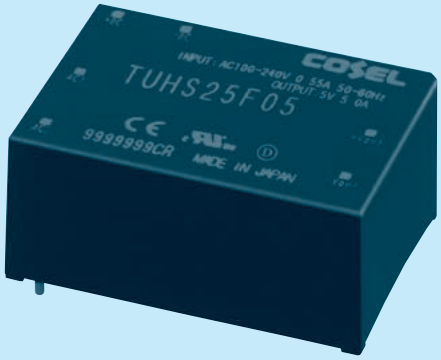
※ Tolerance : ±0.5 [±0.02]
※ Weight : 25g max
※ Case material : PBT
※ Pin material : Copper
※ Plating treatment of pin : Lead free plating
※ Dimensions in mm, [ ]=inches

COSEL AC-DC Power Supplies PCB Mount Type

TUHS25

Ordering information

TUH	S	25	F	05	
①	②	③	④	⑤	



Class II

①Series name
②Single output
③Output wattage
④Universal Input
⑤Output voltage

*Avoid short circuit between +BC and -BC. It may cause the failure of inside components.
*To use TUHS, external components are required. Refer to the instruction manual for details.

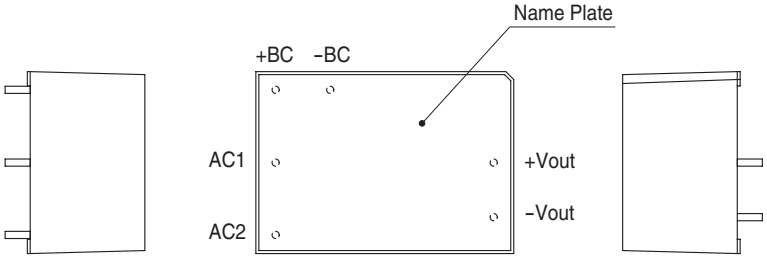
MODEL	TUHS25F05	TUHS25F12	TUHS25F15	TUHS25F24
MAX OUTPUT WATTAGE[W]	25.00	25.20	25.50	26.40
DC OUTPUT	5V 5A	12V 2.1A	15V 1.7A	24V 1.1A

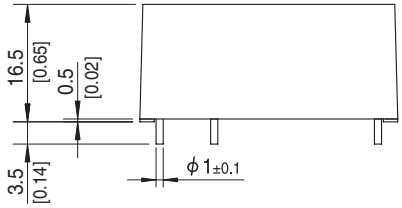
SPECIFICATIONS

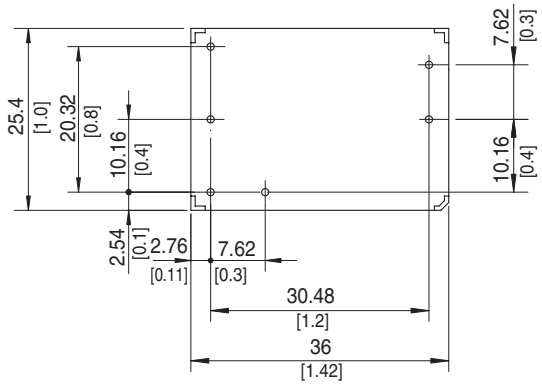
	MODEL		TUHS25F05	TUHS25F12	TUHS25F15	TUHS25F24
INPUT	VOLTAGE[V]		AC85 - 264 1φ DC120 - 370			
	CURRENT[A]	ACIN 100V	0.55typ (Io=100%)			
		ACIN 200V	0.35typ (Io=100%)			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EFFICIENCY[%]	ACIN 100V	87typ	88typ	88typ	89typ
		ACIN 200V	87typ	88typ	88typ	90typ
	INRUSH CURRENT		Limited by external components			
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		5	2.1	1.7	1.1
	LINE REGULATION[mV]		20max	48max	60max	96max
	LOAD REGULATION[mV]		40max	100max	120max	150max
	RIPPLE[mVp-p]	30 to 100% Load *1	120max	160max	160max	200max
		0 to 30% Load AC85V - 240V *1	400max	480max	480max	580max
	RIPPLE NOISE[mVp-p]	30 to 100% Load *1	160max	200max	200max	240max
		0 to 30% Load AC85V - 240V *1	480max	560max	560max	660max
	TEMPERATURE REGULATION[mV]	0 to +50℃	100max	180max	240max	360max
		-40 to +50℃	150max	270max	360max	480max
	DRIFT[mV]	*2	20max	48max	60max	96max
	OUTPUT VOLTAGE SETTING[V]		4.90 - 5.30	11.40 - 12.60	14.25 - 15.75	23.00 - 25.00
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recover automatically			
	OVERVOLTAGE PROTECTION[V]		5.50 - 8.00	13.20 - 19.20	16.50 - 24.00	26.40 - 38.40
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-40 to +85℃, 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 AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL (CSA60950-1), EN60950-1			
	CONDUCTED NOISE		Complies with FCC-B,VCCI-B,CISPR-B,EN55022-B *3			
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Class A) (Not built-in to active filter)			
OTHERS	CASE SIZE/WEIGHT		36.0×16.5×25.4mm[1.42×0.65×1.0 inches] (W×H×D) / 40g max			
	COOLING METHOD		Convection / Forced air			

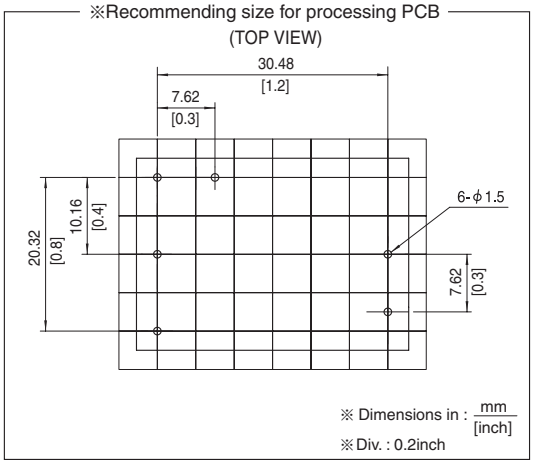
*1 Refer to instruction manual for measuring method of electric characteristics.
*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated value.
*3 Do not ground secondly circuit, in case of a standard adapted.
* Measured with 120μF capasitor as Cbc.

External view









※ Tolerance : ±0.5 [±0.02]
※ Weight : 40g max
※ Case material : PBT
※ Pin material : Copper
※ Plating treatment of pin : Lead free plating
※ Dimensions in mm, [ ]=inches