COTEK 150W DIN Rail Power Supply DV-150 series

Features:

- Universal AC input / Full range
- Installed on DIN rail TS-35 / 7.5 or 15
- Built-in active PFC function, PF > 0.95
- 150% peak load capability
- Protection: SCP, OLP, OVP, OTP
- Two selectable peak load modes
- Built-in DC OK Relay contact
- Built-in Remote ON / OFF function

MODEL			DV-150-24	DV-150-48
Output	DC Voltage Range		24V	48V
	Rated Current		6.25A	3.125A
	Current Range		0 ~ 6.25A	0 ~ 3.125A
	Rated Power		150W	150W
	Peak Current		9.45A	4.8A
	Peak Power	Note.6	225W (3sec.) Two selectable peak load mode	
	Ripple & Noise (Max.)	Note.2	240mVp-p	480mVp-p
	Voltage Adj. Range		-2 ~ +8%	-2 ~ +8%
	Voltage Tolerance	Note.3	±1.0%	±1.0%
	Line Regulation		±0.5%	±0.5%
	Load Regulation		±1.0%	±1.0%
	Setup, Rise Time		700ms, 30ms / 230VAC / 115VAC at full load	
	Hold Time (Typ.)		16ms / 230VAC, 16ms / 115VAC at full load	
Input	Voltage Range		90 ~ 264VAC, 127 ~ 373VDC	
	Frequency Range		47 ~ 63Hz	
	Power Factor (Typ.)		0.9 / 230VAC, 0.98 / 115VAC at full load	
	Efficiency at 230VAC		87%	87%
	AC Current (Typ.)		2.6A / 115VAC, 1.3A / 230VAC	
	Inrush Current (Typ.)		33A / 115VAC, 65A / 230VAC	
	Leakage Current		< 1mA / 240VAC	
Protection	Over Load		Hiccup mode: when the rated output power is within 105 ~ 150% (Refer to curve B)	
			Constant current limit> 150% rated power, O/P current: 150% rated for 2secs Model1: 100% rated power Model2: shut down	
			Auto-recovery: If O/P drop to 25% of the rated output voltage, PSU will shut down and auto-recover 5times (If fault condition remains after 5times recovery, PSU will shut down. User must re-power on to recover)	
	Over Voltage		29 ~ 33V	56 ~ 65V
			Protection type: Latch-off mode	
	Over Temperature		95 ±5°C (TSW: detect on heatsink of power diode)	
			Protection type: Shut down o/p voltage, recovers automatically after temperature goes down	
	DC OK Relay Contact Ratings (Max.)		60VDC / 0.3A, 30VDC / 1A, 30VAC / 0.5A resistive load	
Environment	Working Temp.	Note.7	-10 ~ +70°C (Refer to de-rating curve)	
	Working Humidity		20 ~ 95% RH non-condensing	
	Storage Temp. & Humidity		-40 ~ +85°C, 10 ~ 95% RH	
	Temp. Coefficient		±0.03% / °C (0 ~ 50°C)	
	Vibration		Component: 10 ~ 500Hz, 2G 10min. / 1cycle, 60min. each along X, Y, Z axes; Mounting: Certified IEC 60068-2-6	
Safety & EMC	Safety Standards		Certified UL 508 / EN 60950-1	
	Withstand Voltage	Note.8	I/P-O/P: 4242VDC, I/P-FG: 2121VDC, O/P-FG: 707VDC, O/P-DC OK: 707VDC	
	Isolation Resistance		I/P-O/P, I/P-FG, O/P-FG: >100M Ohms / 500VDC / 25°C / 70% RH	
	EMI Conduction & Radiation		Certified EN55022 class B; EN6100-6-3	
	Power Harmonic & Voltage Fluctuation and Flicker		Certified EN61000-3-2, -3-3	
Note.4	EMS Immunity		Certified IEC 61000-4-2, 3, 4, 5, 6, 8, 11; EN 55024; EN 61000-6-1; EN 61204-3; Meet SEMI F47	
Others	MTBF		62.725K HRS Certified MIL-HDBK-217F	----
	Cooling		Air convection	
	Dimension (WxHxD)		56x125x100 mm / 2.20x4.92x3.94 inch	
	Packing		0.9kg; 12pcs / 11.8kg / 1.32CUFT	

Note

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes setup time tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
5. Installation clearance: 40mm from top, 20mm from bottom, 5mm from the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
6. 3 seconds or 20% duty cycle Max. The average output power should not exceed the rate power.
7. De-rating may apply in low input voltage. Please check the derating curve for more details.
8. This test is done without enclosure: I/P-O/P 4242VDC. If with enclosure: I/P-O/P 2121VDC.

Mechanical Drawings:

Unit : mm / inch

Terminal Pin No. Assignment (TB1)

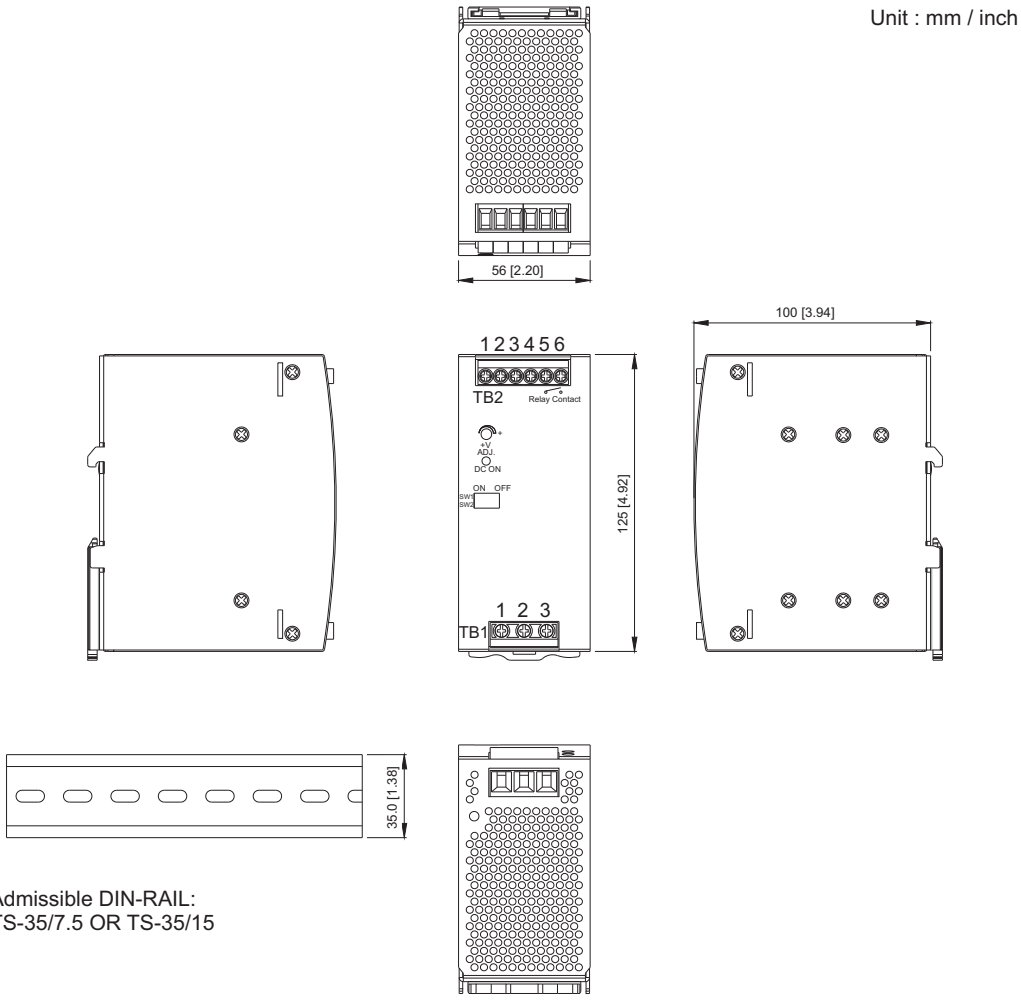
Pin NO.	Assignment
1	FG ⏚
2	AC/L
3	AC/N

Terminal Pin No. Assignment (TB2)

Pin NO.	Assignment
1	DC+
2	DC-
3	INH+
4	INH-
5,6	Relay Contact

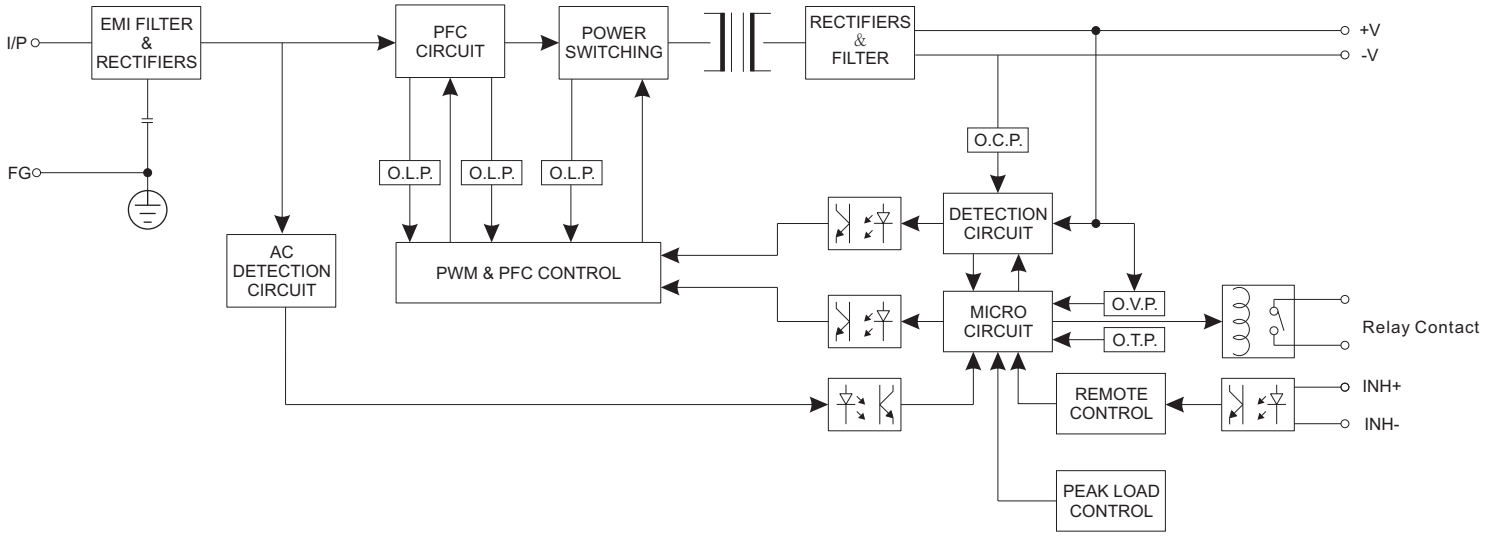
Switch No. Assignment

SW NO.	Assignment
SW1	PEAK LOAD SETTING
SW2	REMOTE ON/OFF SETTING



Admissible DIN-RAIL:
TS-35/7.5 OR TS-35/15

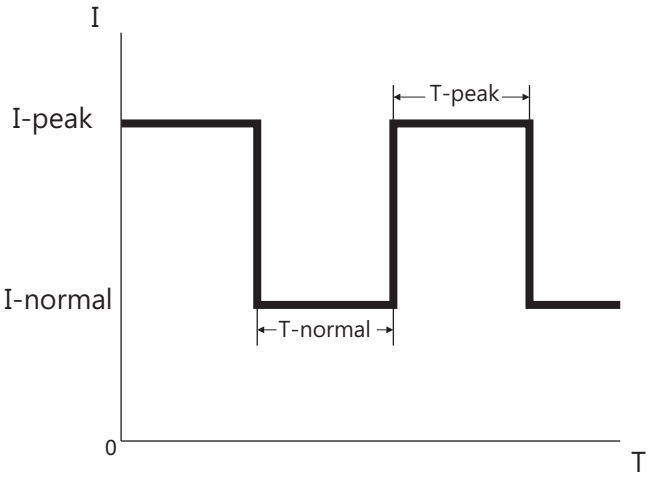
Block Diagram:



DC OK Relay Contact:

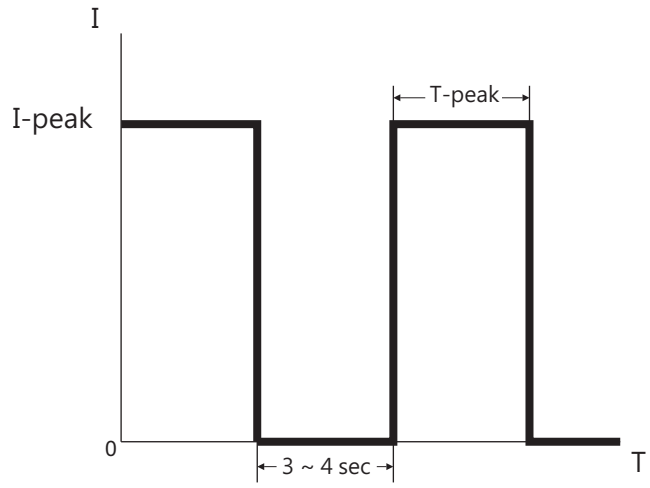
Contact Close	When the output voltage reaches the adjusted output voltage.
Contact Open	When the output voltage drop below 45% rated output voltage.
Contact Ratings(max.)	30V/1A resistive load

Peak Load SW1 ON (Mode1) Default setting:

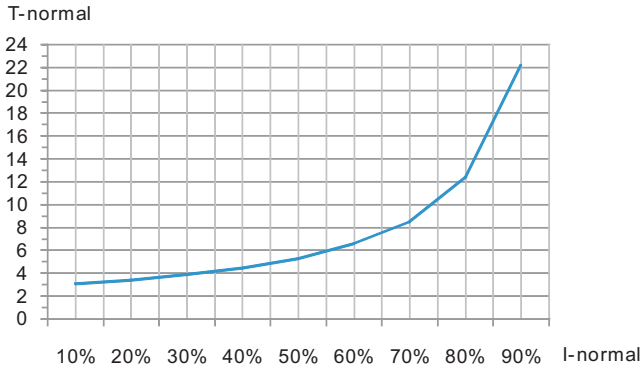


T-peak presents while the unit is working within 110%~150% Rating output power. See curve " B " for the variation in T-peak between output current and holdup time.
If T-peak is more than the time setting in curve "B", the output current will drop to the constant current limit (I-normal) that is 105% rating power, meanwhile, I- normal and T-normal will be presenting. See curve "A" for the timing back to I-Peak of T-normal and this Mode can use for easy 2-stage battery charger.

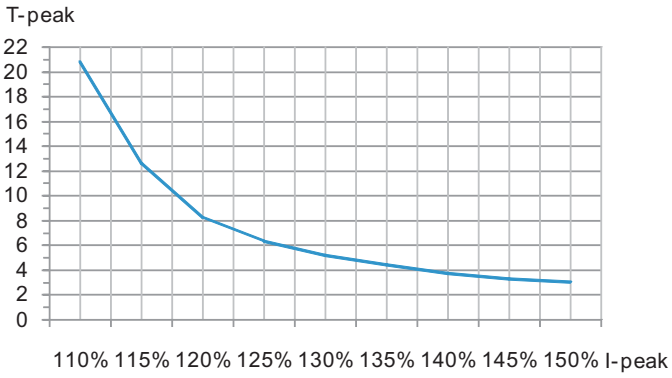
Peak Load SW1 OFF (Mode2):



T-peak presents while the unit is working within 110%~150% Rating output power.
See curve " B " for the variation in T-peak between output current and holdup time.
If T-peak is more than the time setting in curve "B", the output voltage will be shut down for 3~4 sec, then auto-recovery.



CURVE A

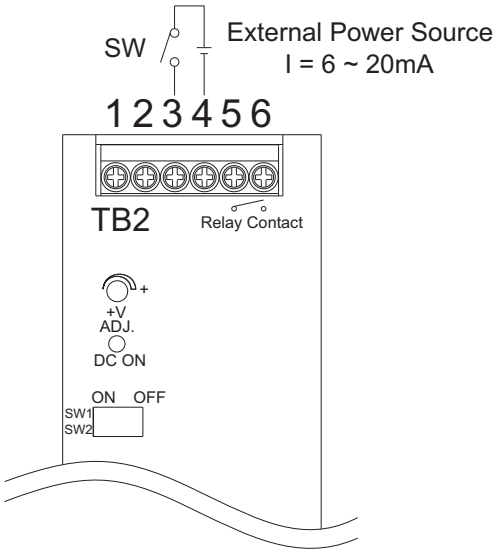


CURVE B

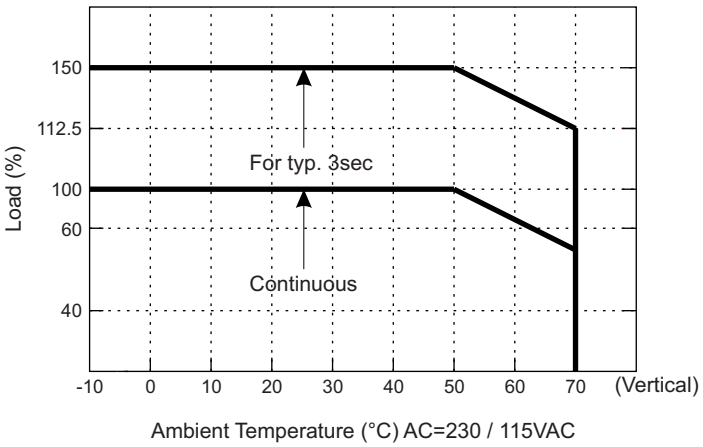
Remote ON / OFF:

The PSU can be turned ON/OFF by using the "Remote Control" function.

SW2	INH+(3 PIN)/ INH-(4 PIN)	Output Status	
OFF	SW ON (>2.5V)	ENABLE	
OFF	SW OFF (<0.8V)	DISABLE	
ON	SW ON (>2.5V)	DISABLE	
ON	SW OFF (<0.8V)	ENABLE	(Default Setting)



De-rating Curve:



Output derating VS input voltage: