

Hydraulic-Powered Generator




Turolla introduces a Hydraulic-motor-Powered electrical Generator (HPG) for use in mobile equipment applications. This compact generator produces a small amount of electric power in areas of a machine that are difficult or too costly to reach with wires.

HPG eliminates dependency on wires across troublesome areas such as electric swivels, repetitive bend joints and lengthy wire routing. Additionally, junction box service points and special routing features can be removed.

HPG provides electric power to points on a machine where electrical isolation is required.

Whether building new or upgrading existing equipment, HPG minimizes variation to the HMI control and work function enabling truly wireless communication.

System status is communicated by LED lights for easy troubleshooting.

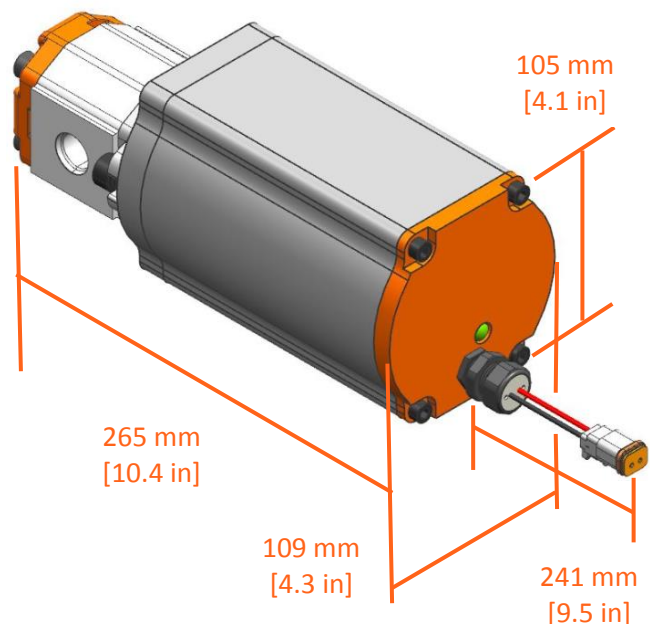
-  Operation within specification
-  low voltage, high voltage, high temperature
-  high current draw

Features & Benefits

Using a small amount of hydraulic power, HPG produces up to 150 watts at 14V or 300 watts at 28V, providing remote power for Plus+1 wireless CAN bridge communication, controllers, solenoid valves, LED lighting, vision systems, electric actuators and sensors used to improve safety, usability, reliability and autonomy of your machine.

A battery can be added for peak load conditions based on the duty cycle or if power is needed without hydraulic flow.

With Turolla's high performing Group 1 gear motors in displacements as low as 2.6 cc, HPG requires just 6.0 l/min and 36.8 bar [533 psi] to produce 150 watts. For higher load conditions a 28V option generates 300 watts with 8 l/min 43 bar [623 psi]. We offer a larger displacement options for higher flow and lower pressure conditions.



 <8 kg [14 lbs]

Feature			
Electrical			
Output voltage	14 vdc		28 vdc
Current limit	11 amps		
Surge and reserve capacity	Customer supplied battery if needed		
Lead acid battery compatible	Yes		
Reverse voltage protection	Yes		
Hydraulic			
Nominal flow 2.6 cc motor option (l/min) [gpm]	6.0 [1.6]		8.0 [2.1]
Delta pressure (inlet to outlet) at peak current (bar) [psi]	36.8 [533]		43.0 [624]
Nominal flow 12 cc motor option (l/min) [gpm]	26.0 [6.9]		38.0 [10.0]
Delta pressure (inlet to outlet) at peak current (bar) [psi]	8.0 [116]		9.3 [135]
Maximum inlet pressure (bar)	241 (2.6 cc)	230 (6 cc)	130 (12 cc)
Back (outlet) pressure	Inlet pressure with case drain		
Case drain pressure	5 bar average, 7 bar peak		
Control valve	Restrictive Type Flow Regulator		
Oil temperature range	-20°C [-4°F] to +90°C [+194°F]		
Installation (easy hook-up)			
Clean side for mounting	Yes		
Mounting	4 – M8 x 1.25 tapped holes and 4 - 5/16"-8 UNC tapped holes		
Working ports	SAE ORB, appropriately sized for flow / inch and metric options		
Case drain port	SAE ORB, inch and metric options		
Port location	Radial opposed		
Electrical connector	Deutsch DT-06 on leads, pin 1 (+), pin 2 (GND)		
Dry weight	~ 8 kg [14 lbs]		
Diagnostics			
Status / Fault Indicator LED	Under voltage, over voltage & high temperature = RED		
	Nominal voltage +/- 5% output = GREEN		
	Over current protection = AMBER		
Environment			
IP rating (dust/moisture)	IP67		
Continuous vibration	7.67 g RMS		
Maximum mechanical shock	bump = 40g, shock = 100g		
Audible noise	< 63 dBa at 1 meter	<68 dBa at 1 meter	
Salt spray resistant	Yes		
Hydraulic fluid / diesel fuel resistant	Yes		
Product life	10,000 hours at 80% of max power		
Electrical Environment			
Radiated EMI	Meets regulatory standards		
Conducted EMI	Meets regulatory standards		
Electric field strength	200V/m at 50/60 Hz		
Electrostatic discharge	12kV Human Body Model / 400V Machine Model		