

HPDM-30 Datasheet



The HPDM-30 is a high power density integrated motor drive with a continuous power rating of 33 kW and a mass of only 4.1 kg. Based on H3X's patent-pending core technology, this unit has a continuous specific power > 8 kW/kg, and is capable of four quadrant operation (can be used as a motor or generator).

	VALUE	UNITS
PERFORMANCE		
Speed Range	0 – 20,000	RPM
Continuous Power	33	kW
Continuous Torque	15.8	Nm
Continuous Specific Power	8.0	kW/kg
Continuous Power Density	15.9	kW/L
Peak Power (30 sec)	41	kW
Peak Torque (30 sec)	19.6	Nm
Peak Specific Power	10.0	kW/kg
Peak Power Density	19.8	kW/L
PHYSICAL		
Mass	4.1	kg
Diameter	130	mm
Length	156	mm
Volume	2.07	L
INTERFACE		
Communication Interface	CAN	
Control Modes	Torque, speed, DC bus voltage (generator mode)	
LV Power Input	14 - 34	VDC
LV Connector	Inline D38999	
HVDC Bus Voltage	<= 450	VDC
HVDC Connector	Custom Terminals	
Cable Exit Direction	Axial	
ENVIRONMENTAL / MECHANICAL		
Operating Temperature	-40 - 60	deg C
Max Operation Altitude	45,000	ft
Ingress Protection	IP65 (negotiable)	
Mounting	Front / Rear face	
Shaft Interface	Spline	
Shaft Output Options	Single or Dual	
COOLING		
Coolant Medium	Liquid	
Coolant Type	50/50 WEG	
Coolant Temperature	-40 - 60	deg C
Coolant Flow Rate @ 60 deg C	30	LPM
Pressure Drop @ 30 LPM	115	kPa
SENSOR DATA REPORTED ON CAN BUS		
Temperatures: Case, PCBs, Winding, FET Junctions		
Other: Torque, Speed, Power, HVDC, LV rails, Accelerometer (TBD)		

These specifications, the power/torque curves, and the efficiency map are approximate, based on simulation results and dynamometer data. Contact H3X to determine suitability for your application.

