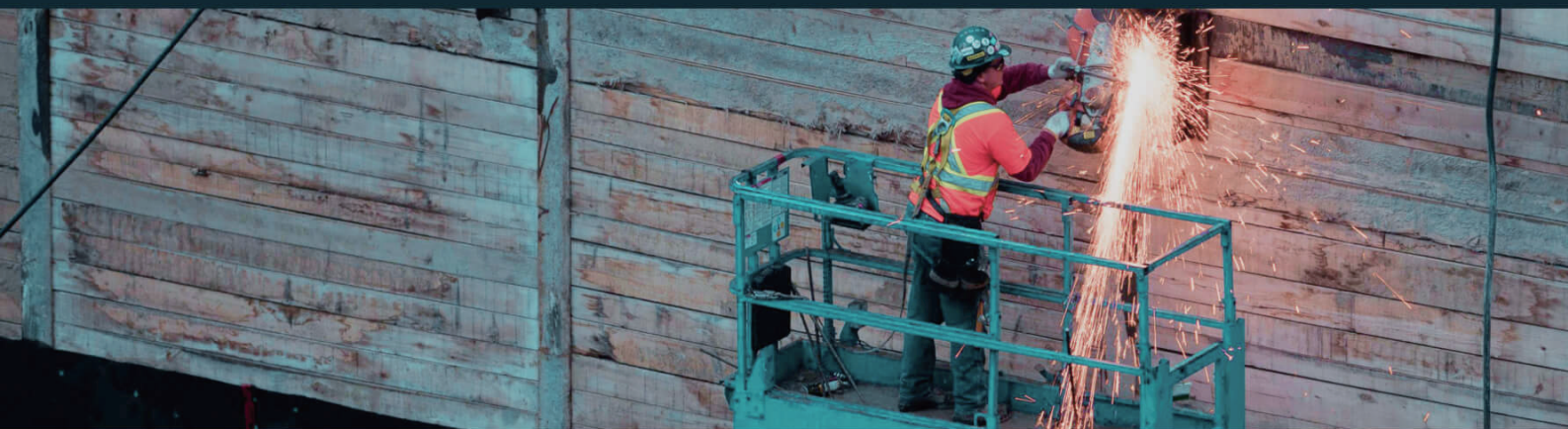


— About NVR

Founded in 2009 in Silicon Valley, NVR is a leading provider of intelligent electronic control systems and IoT solutions. Committed to our mission "NVR is your electrification partner" we strive to deliver cutting-edge solutions that meet the evolving needs of our customers.



DH1300-8035-T Integrated Motor+Inverter

The DH1300-8035-T is an integrated traction drive system that combines a permanent magnet synchronous motor (PMSM) and motor controller for construction vehicle applications. By deeply integrating the motor and controller with advanced permanent magnet synchronous motor technology, the product delivers outstanding power output and energy efficiency within a compact structure. Supporting an 80V high-voltage platform and delivering up to 200 N·m peak torque, the DH1300-8035-T meets the demanding power requirements of equipment such as rough terrain scissor lifts, boom lifts, forklifts, and heavy-duty AGVs, especially under challenging conditions including heavy-load startup and slope climbing. The intelligent control system enables precise torque regulation and energy recovery through CAN bus communication. Combined with IP67 protection rating and multiple safety protection mechanisms, the product ensures reliable operation in a wide temperature range from -40°C to +55°C. With advantages including high power density, low noise, and long service life, the DH1300-8035-T helps improve vehicle traction efficiency, reliability, and overall system performance.



— Features

- Highly integrated pmsm and motor drive design enables a compact and highly reliable electric drive system
- Supports a maximum current of 350 A for 2 minutes and 120 A for 1 hour, ensuring stable operation under high-load conditions.
- Rated power of 5 kW and peak power of 15 kW, meeting heavy-load and short-duration overload requirements.
- Maximum output torque of 200 N·m.
- Battery voltage range: 40–100 V, ensuring stable and safe battery operation during charging and usage.
- Base frequency range: 0–340 Hz, suitable for a wide range of operating environments and application requirements.
- The heatsink can withstand ambient temperatures up to 90 °C, ensuring reliable operation under demanding thermal conditions.
- Maximum motor efficiency up to 90%, optimizing energy utilization and extending equipment service life.
- Maximum motor speed up to 5100 rpm.
- Supports 1 CAN communication interface, enabling efficient coordination and stable data exchange between system components.
- Operating temperature range: –40 °C - +55 °C, ensuring reliable performance in extreme climate conditions.

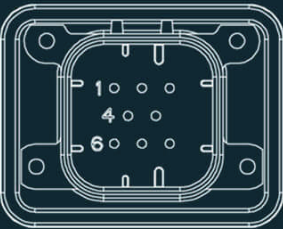
— Specifications

Category	Description
Rated Input Voltage	DC: 80V
Maximum input voltage	DC: 80V × 1.30
2-Minute Operating Current	350 A
1-Hour Operating Current	120A
Operating Frequency	0 - 340Hz
PWM Frequency	8 kHz
Heatsink Insulation Voltage	500 V AC
Derating Temperature	Derate when heatsink temperature exceeds 90 °C
Rated Motor Voltage	56 V AC
Maximum Motor Efficiency	90%
High-Efficiency Operating Range	80% efficiency over 80% of operating range
Insulation Class	F
Maximum motor derating Temperature	130 °C
Maximum motor protection Temperature	140 °C

Category	Description
Rated speed	4100 rpm
Maximum speed	5100 rpm
Duty cycle	52-60 min
Rated torque	11.5 N·m
Rated power	5 kW
Rated current	120 A (60 MIN)
Peak torque	200 N·m (2 min at 750 rpm)
Peak power	15kW 2min
CAN communication channels	1 × CAN
CAN communication baud rate	≤1 Mbps, default 250 Kbps
CAN termination resistor	Matched 120 Ω termination
Operating humidity	20 - 85 % RH
Operating Temperature	-40 °C - +55 °C
Ambient pressure	86-106 kPa
Altitude	≤1000 m; derate above 1000 m (1% per 100 m)
Weight	58 ± 5 kg ± 0.01 kg
Overall dimensions	411.3 × 230 × 230 mm
Mounting dimensions	Φ250 mm, 4 × Φ22 mm

— Connector & PIN Definition

Connector Model (Motor Side): AMP 776276-1
Wiring Harness Side Connector (AMP): 776286-1



Pin	Definition	Description	Specification
1	KSI	Key Switch Signal Input	0/80V high level active, maximum current 4A
2	DRIVER4	Main contactor low-side drive power supply	Open-drain output, 200Hz, 3A
3	COIL RETURN	Main contactor high-side drive power supply	Rated 80V voltage output
4	CAN 120A	CAN-120A: termination resistor connection point	Connect CAN-120A and CAN-120B to a 120 Ω termination resistor
5	CAN_H	CAN_H	Isolate CAN
6	CAN 120B	CAN-120B: termination resistor connection point	Connect CAN-120A and CAN-120B to a 120 Ω termination resistor
7	CAN L	CAN L	Isolate CAN
8	Reserved	Reserved	-

— Involute Internal Spline Parameters

Type	Descriptions	
Reference diameter	dB	40
Number of teeth	Z	18
Module	m	2
Pressure angle	a	30°
Addendum modification	x.m	0.9
Tip diameter	da1	39.6 -0.16
Root diameter	df1	35.6 -0.03
Number of teeth to span	k	4
Base tangent length	Wk	21.621 -0.032
Fit type	Side fit	
Cumulative pitch tolerance	Fp	0.045
Profile tolerance	Fa	0.023

Type	Descriptions	
Helix tolerance	FB	0.012
Radial runout tolerance of the gear	Ft	0.04
Tooth surface roughness	Ra	3.2
Tip chamfer (2 places)	C0.2	
Minimum root fillet radius	R0.32 min	

— Dimensions

B- cable: 50 mm² × 550 mm,
orange conduit

B+ cable: 50 mm² × 550 mm,
orange conduit

Terminal: SC50-10, black
insulating cap

Terminal: SC50-10, red
insulating cap

