GATES THERMALPRO ELECTRIC WATER PUMPS
RADIAL FLUX 30-120W PLATFORM

ThermalPro Radial Flux water pumps are manufactured for durable, worry-free operation for the life of your application. Constructed using only premium materials, we rigorously function and leak test our water pumps and components, like seals and bearings, to ensure optimum performance under intense driving conditions.

SYSTEM OVERVIEW	
Model	30 – 120W platform
Motor type	Three-phase brushless Radial Flux
Motor mass	>790g
Voltage range	12V to 24V
Flow rate (l/min)	<45
Max. operating speed	<6000 rpm
Control strategy	PWM, LIN, CAN
Coolant temperature	-40°C to 120°C (-40°F to 248°F)
Ambient temperature	-40°C to 135°C (-40°F to 275°F)
IP rating	IP67

GATES RADIAL FLUX EWP DESIGN:

CHASSIS OR DIRECT MOUNTING
Flexibility to available package

RADIAL COILS
Silent, reliable, low cost design

CONTROL BOARD
PWM communication

MODULAR AND SCALABLE
Creating a "family" architecture to different application requirement

MOTOR DESIGN	
Motor details	Up to 9 tooth 12 poles
Motor housing material	ADC or glass reinforced plastic
Volute housing and impeller	ADC or glass reinforced plastic
Winding type	Non-overlap concentrated
Winding material	Copper or aluminum
Stator & rotor core material	SMC (Soft Magnetic Composite)
Permanent magnet	Ferrous / Rare earth
Temperature protection	Over temperature
Voltage protection	Overvoltage, undervoltage, short circuit
Load protection	No-load, overload, locked impeller, anti-reverse connection
Coolant specification	50:50 ethylene glycol to water ratio

STANDARDS	
Functional safety	ISO-26262*
Safety of intended functionality	ISO 21448
Cyber security	ISO 21434*
EMC	ISO 11451 / ISO 11452 / ISO 10605 / CISPR25
Temperature shock test	DIN EN 60068-2-14
Dust test	ISO 20653
Thermal cycle	IEC 60068-2-14
Vibration test	ISO 16750-3 / DIN EN 60068-2-6 / DIN 60068-2-64

*Subject to customer requirement specification.

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