

UPM3 FEATURE	UPM3 SPECIFICATION
CE MARK COMPLIANCE WITH FOLLOWING RELEVANT EC DIRECTIVES	EMC Directive (2004/108/EC) Standards used: EN 61000-6-2:2005, EN 61000-6-3:2007, EN 55014-1:2006/A1:2009, EN 55014-2:1997/A1:2001/A2:2008 Low voltage Directive (2006/125/EC) Standards used: EN 60335-1:2012/AC:2014, EN 60335-2-51:2003/A1:2008/A2:1012 Ecodesign Directive (2009/125/EC). Circulations with and without pump housing: Commission regulation No 641/2009 Standards used: EN 16297-1:2012, EN 16297-2:2012, EN 16297-3:2012
ECODESIGN ERP READY 2015	Fulfilling ecodesign requirements in 2015: EEL ≤ 0.20 ENI6297/3 or ENI6297/2
REACH COMPLIANCE	REACH Directive 1907/2006
WEEE COMPLIANCE	WEEE Directive 2012/19/EU Circulators are not seen as being in scope
ROHS COMPLIANCE	RoHS Directive 2011/65/EU
VDE APPROVAL	VDE certificate: No 40039416. It proves the conformity with the essential safety requirements of the EC Low Voltage Directive (2006/95/EC) including amendments
VDE CODE	GFNJB (hybrid variants) or GFNJC (UPM3)
ENCLOSURE CLASS	IP 44 (standard without drain holes), Option: IP X4D (with drain holes)
TF CLASS	TF 110 at 70°C ambient temperature
HIGH VOLTAGE PROTECTION	1000 VAC (EN60355-1)
DRINKING WATER APPROVALS (WRAS, KTW, DVGW W270 ETC.	All pump head components will be compliant Specific compliant housings will be available
DEBLOCKING SOFTWARE	Continuously restarting after 1,33 sec with max torque
DEBLOCKING DEVICE	Manual deblocking device, access from front side
DRY RUN ABILITY - FIRST START	1 min (3 x 20 sec), all pumps will be lubricated with glycerine
DRY RUN ABILITY - DURING OPERATION	Rotor can filled with water: fulfils EN60335-2-51
EXPECTED LIFETIME:	>100.000 h (with specified load profile)
EXPECTED LIFETIME:	>500.000 on/off cycles
MINIMUM SWITCHING TIME POWER ON/OFF	With NTC: 1min, with Relay: no specific requirements
FLOW ESTIMATION	Available depending on the housing, accuracy: see PWM specification
NRUSH CURRENT	With relay: <4 A, with NTC: <10 A

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EQUIPMENT CLASS	I (EN 60335-1)
INSULATIONS CLASS	F (EN 60335-1)
MAXIMUM LEAKAGE CURRENT	≤ 3.5 mA (EN 60335-1)
SPEED RANGE	563 to 5991 min-1 (depending on the variant)
MAXIMUM AMBIENT TEMPERATURE	+ 70°C
MAXIMUM MEDIA TEMPERATURE	+ 95°C on composite housings, + 110°C on cast iron housings
MAXIMUM SYSTEM PRESSURE:	1 MPa (10 bar) (depending on the housing material)
MINIMUM INLET PRESSURE	0.05 MPa (0.5 bar) at 95°C liquid temperature
MINIMUM MEDIA TEMPERATURE	+ 0°C (for IP44; above dew point of ambient air)
MINIMUM SUPPLY VOLTAGE	160 VAC (with reduced performance)
MOTOR PROTECTION:	The motor is protected by the electronics in the control box and requires no external motor protection
PEAK TEMPERATURE	T _m = 130°C (for peak ≤ 30 min)
NOMINAL SUPPLY VOLTAGE	EU: 1 x 230V + 10%/ -15%, 50 Hz
REACTION TIME (TILL MOTOR AT 90% RPM)	< 1,5 sec for cold start, warm start and speed change
REACTION TIME (TILL RETURN SIGNAL VALID)	< 3,3 sec for cold start, warm start and speed change
RELATIVE AIR HUMIDITY	Maximum 95%, non-condensing environment
STORAGE TEMPERATURE	- 40°C to + 75°C+A1

UPM3 Range Performance