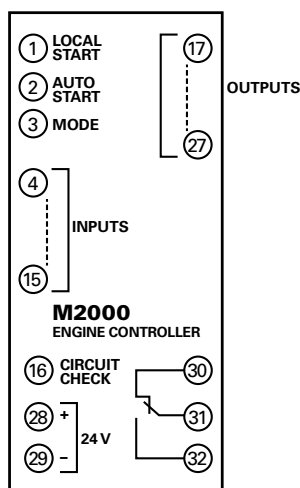


M2000 SERIES

Engine Control



Wiring Diagram



Accessories



M0500 Tacho Detector

Reads engine speed from frequency of the generator output voltage. The reading is converted to a square wave signal and this signal is provided on a dedicated output.



K3452 RS232 Cable

For configuration from PC.

Ordering Information

ORDERING NUMBER	CONTROL POWER
M2000.0130	12 V–24 Vdc, IP54 at front.
ACCESSORIES	REQUIREMENT
M0500	Optional
K3452	Optional

Description



The M2000 Engine Control controls start and stop of the engine, monitors and protects the engine during start and operation, and simultaneously indicates the engine and alarm status on the front of the unit. It has 9 shutdown/alarm inputs. It is controlling the cranking, fuel valve and stop solenoid of the engine. It is possible to configure the unit to perform up to 6 start attempts, with user configurable crank and rest periods. When the engine fires, cranking will be disconnected by activating the crank disconnect input from a tacho relay or from a direct measurement from a magnetic pick up. When stopping the engine, a generator circuit breaker trip is available for genset applications. A stop delay can be configured for cooling down the engine before stop. M2000 includes cable check of all sensor inputs. Basic configuration can be set by dip-switches on the rear of the unit.

Extended configuration is possible using a PC. Easy installation is ensured by means of clamping fittings, and plug-in connection terminals. The M2000 includes an RS485 interface enabling MODBUS RTU communication. The M2000 has been designed and tested for use in harsh environments.

Features & Benefits

FEATURES	BENEFITS
8 Alarm/shutdown inputs	Monitoring of e.g. oil pressure, coolant temperature and engine speed
Cable monitoring on sensor inputs	Fail safe system
Speed detection from magnetic pick-up	No tacho relay required
Type-approved by marine classification societies	Applicable in marine control and alarm systems
RS485 Modbus RTU	Communication with HMI and SCADA systems

Specifications

Voltage Supply	12-24 Vdc±30% (8-32 Vdc)
Consumption	Max. 180 mA
Inputs	7 normally open contacts; 1 tacho voltage; 1 pick-up
Tacho Input	Square or sine wave between 0 Vdc and supply voltage
Pick-up Input	Square or sine wave, range 2.5 Vac to 33 Vac
Tolerance, Freq. Meas.	±2%
Frequency Range	50 Hz to 10 kHz
Outputs	11 open collector outputs, max. 150 mA per channel
Siren Relay Contact	230 Vac/2 A; 30 Vdc/2 A, 30 W
Tolerance, Delays	± 2%
LED Flash Frequency	Slow flashing light: 1.25 Hz ±10%
Quick Flashing Light	5 Hz ±10%
Programming	16 dip-switches or via RS232 interface
Communication	RS485 interface
Protocol	MODBUS-RTU
Baud Rate	1200, 2400, 4800, 9600
Parity	None
Data Bits	8
Stop Bits	1
Operating Temp.	–20°C to +70°C
Humidity	95% RH at 20°C
Vibration Test	4 g RMS according to IEC 60068-2-64
Approvals	Certified by major marine classification societies
Burn-in	50 hours before final test
Weight	0.4 kg
Dimensions	H 144 mm (5.7"); W 144 mm (5.7"); D 35 mm (1.4")
Panel Cut-out	H 138 mm (5.4"); W 138 mm (5.4")
Protection Degree-Front	IP54 or IP32 (see Type Description)