



Auto Start Genset Protection and Controllers with Metering, with load, Current and Power Measurement

EAOM - 6
EAOM - 7
EAOM - 71

Features

- Automatic engine start / stop
- Automatic shutdown on fault condition
- LED status and fault indication
- Alternator voltage and frequency measurement and monitoring
- Battery voltage measurement and monitoring
- Simple push-button controlled operation
- Over / under speed warning and shutdown
- Remote start / stop input
- Three user inputs configurable
- Provides charge alternator excitation current
- Two configurable relay outputs
- Speed sensing from alternator frequency or magnetic pickup
- Preheating
- Fully programmable
- RS-232 communication port
- Standard modem communication

Fail Monitoring

- Engine temperature
- Oil pressure
- Over / Under speed
- Voltage fail
- Charging alternator
- Emergency stop
- Low battery voltage
- Weak battery alarm

Monitors

- Alternator voltage and frequency
- Battery charging
- Engine RPM
- Battery voltage
- Load current (3 phase in EAOM-7, single phase in EAOM-71)
- Temperature, pressure and fuel level from resistive senders (EAOM-71 only)
- Engine running time
- Engine Power

Controls

- Engine fuel supply or engine stopping
- Starter motor
- Over / Under speed
- Preheating
- Alarm horn

The EAOM-6, EAOM-7 and EAOM-71 units provide automatic starting of integrated generator sets, providing control, protection and metering in an industry standard DIN 96mmx96mm housing. The EAOM-7 offers the additional benefit of load current and power measurement facilities. Model EAOM-71 offers temperature, oil pressure and fuel level metering from analogue resistive senders. Microprocessor technology allows exact measurement, set point adjustment and timing functions with the parameters to be simply programmed and monitored from the front panel or via RS-232 communications using a PC based software. EAOM-6 / 7 / 71 units can communicate with this software over modem.

Specifications

Housing & Mounting	96mmx96mmx115mm(excl. 13mm clips)
Protection	NEMA4X (IP54 at front panel, IP20 at rear side)
Operating / Storage Temperature	-25°C to +70°C / -40°C to +85°C
EMC	EN-61000-6-4, EMC generic emission standard for industrial equipment EN-61000-6-2, EMC generic immunity standard for industrial equipment
Electrical Safety	EN-61010-1, safety requirements for electrical equipment for measurement,
Supply Voltage (===)	12.0V=== (8.0V=== to 16.0V===) or 24.0V=== (16.0V=== to 32.0V===) switch selectable
Supply Voltage Measurement	8.0-40.0V===
Generator Voltage Measurement	35 to 300VL-N ~. Accuracy : 1%, Resolution : 1V~
Generator Current Input (EAOM-7 and EAOM-71 only)	0 to 6 A ~ from current transformer
Measurement Accuracy	Volts: 1% Frequency: 0.25% Ampere: 1% (EAOM-7 and EAOM-71 only)
Analogue Resistive Sender Input Range (EAOM-71 only)	10 to 650 Ω
Cranking Dropouts	Battery voltage can be 0V=== for max. 100msn during cranking (battery voltage should be at least nominal voltage before cranking)
Generator Speed Measurement:	From generator voltage or magnetic pickup
Alternator Frequency Range	10 - 110 Hz (@35-300VL-N~)
Magnetic Pickup Freq. Range	35 Hz - 10 kHz (@3-35 Volts peak)
Communication Interface	RS-232 serial communication
Contact Sensing	Emergency stop (NC) Oil pressure switch (NC) Temperature switch (NO) Remote start / stop input (NO) Configurable input 1 (NO) Configurable input 2 (NO)
Outputs	Start Relay Output. 12 A (@ 12 / 24V===) Fuel Relay Output. 12 A (@ 12 / 24V===) Alarm Relay Output. 5 A (@12 / 24V===) Preheat Relay Output (Configurable by relay output 1 or 2) Configurable Relay Output 1. 5A (@12/24V===) Configurable Relay Output 2. 5 A (@12 / 24V===)
Display	4 digits, 7 segments LED display showing: Generator L1 – L2 Voltage Generator L1 – N Voltage Generator L2 – L3 Voltage Generator L2 – N Voltage Generator L3 – L1 Voltage Generator L3 – N Voltage Generator Frequency Hz Load Current IL1 A (EAOM-7 & EAOM-71) Load Current IL2 A (EAOM-7 Only) Load Current IL3 A (EAOM-7 Only) Generator KVA (EAOM-7 & EAOM-71) Temperature (EAOM-71 Only) Oil Pressure (EAOM-71 Only) Fuel Level (EAOM-71 Only) Engine Speed RPM Battery Voltage === Engine Running Hours
Failure Indicators	Engine Start High Engine Temperature Low Oil Pressure Over/Under Speed Generator Voltage Fail Charge Generator Fail User Configurable Input1 User Configurable Input2
Status Indicators	Power On Engine Start Engine Stop Engine Running
Information Alarms	Emergency stop Low battery voltage Weak battery alarm Routine maintenance due Over current failure (EAOM-7 and EAOM-71) High temperature (EAOM-71) Low oil pressure (EAOM-71)

EAOM-6 Front View



EAOM-7 Front View



EAOM-71 Front View



EAOM-6 / 7 / 71 Parameters List

No	Definition of Parameter	Min	Max	Default	Unit
P00	Alternator Voltage Lower Limit	60	600	300	V~
P01	Alternator Voltage Upper Limit	60	600	440	V~
P02	Speed Lower Limit	30.0	75.0	47.0	Hz
P03	Speed Upper Limit	30.0	75.0	53.0	Hz
P04	Battery Voltage Lower Limit	7.2	24.0	8.0	V===
P05	Over Current Limit	1	9999	1000	A
P06	Periodic Maintenance Hour Set Value	0	9999	5000	Hour
P07	Periodic Maintenance Hour Reset	Press 'Silence Alarm' button to reset			
P08	Horn Duration (0 = Continuous)	0	999	60	Second
P09	Preheat Time	0	99	10	Second
P10	Single / Three Phase Selection	1/3		3	
P11	Nominal Alternator Frequency	50.0/60.0		50.0	Hz
P12	Nominal Speed	500	5000	3000	RPM
P13	Tooth Number	1	1000	100	
P14	Current Transformer Ratio	1	2000	500	
P15	Speed Sensing Input Selection	0=Alternator Signal 1 = Magnetic Pick-up		0	
P16	Stop Solenoid /Fuel Solenoid Selection	Stop / Fuel		Fuel	
P17	Stop Magnet Energising Time	0	99	20	Second
P18	Engine started signal	0=No, 1=Yes			
	P21.0 Charge Generator	0/1		1	
	P21.1 Speed	0/1		0	
	P21.2 Alternator Voltage	0/1		1	
	P21.3 Oil Pressure	0/1		0	
P19	Battery Voltage Weak Limit	6.0	14.4	7.0	V===
P20	Battery Voltage Weak Control Time	1	99	3	Second
P21	Alternator voltage limit for crank disconnection	40	360	300	V~
P22	Speed Limit For Crank Disconnection	20.0	45.0	40.0	Hz
P23	Number Of Starting Attempts	1	10	3	
P24	Starting Attempt Duration	5	99	5	Second
P25	Oil Pressure Bypass Time	0	99	30	Second
P26	Control On Delay	0	99	10	Second
P27	Alt. Voltage Fault Control Delay	0.0	10.0	5.0	Second
P28	Speed Fault Control Delay	0.0	10.0	5.0	Second
P29	Engine Cooling Time(0 = disable)	0	99	3	Minute
P30	Engine Running Time Reset	Enter technician Password to reset Time to "0" (zero)			
P31	Configurable Failure Input-1	0	2	0	
P32	Configurable Failure Input-2	0	2	0	
P33	Configurable Failure Input-3	0	2	0	
P34	Configurable Failure Inputs	0	8	0	
P35	Configurable Output-1	0	15	0	
P36	Configurable Output-2	0	15	0	
P37	Pressure Lower Limit	0.0	10.0	3.0	
P38	Pressure Configuration	0	2	0	
P39	Temperature Upper Limit	0	200	80	
P40	Temperature Configuration	0	2	0	
P41	Level Lower Limit	1	100	25	
P42	Level Configuration	0	2	0	
P43	Operator Password	0	9990	0	
P44	Technician Password	0	9990	0	