

# PME10S



Main Features		
Frequency	Hz	50
Voltage	V	400
Power factor	cos ф	0.8
Phase		3

Power Rating		
Emergency Standby Power ESP	kVA	9.99
Emergency Standby Power ESP	kW	7.99
Prime power PRP	kVA	9.02
Prime power PRP	kW	7.22

#### Ratings definition (ISO-8528)

#### **ESP** - Emergency Standby Power:

It is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP.

#### PRP - Prime Power:

It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output over 24 h of operation shall not exceed 70 % of the prime power.

Engine specifications		
Engine Brand		Perkins
Model		403D-11G
[50Hz] Exhaust emission level		Unregulated
Engine cooling system		Water
Nr. of cylinder and disposition		3 in line
Displacement	cm³	1131
Aspiration		Natural
Speed governor		Mechanical
Prime gross power PRP	kW	8.6
Maximum gross power LTP ESP	kW	9.5
Oil capacity	I	4.9
Coolant capacity	I	5.2
Fuel		Diesel
Specific fuel consumption 75% PRP	g/kWh	258
Specific fuel consumption PRP	g/kWh	252
Starting system		Electric
Starting engine capability	kW	1.1
Electric circuit	V	12



# **Engine Equipment**

## **Standards**

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1  $\,$ 

# **Fuel system**

Rotary type pump

# Lube oil system

Wet steel sump with filler and dipstick

## **Filter**

- Fuel filter
- Air filter
- Oil filter

# **Cooling system**

- Mounted radiator
- $\bullet$  Thermostatically-controlled system with belt driven coolant pump and pusher fan

Alternator Mecc	c Alte
Model ECP3-	·1L4C
Voltage	400
Frequency Hz	50
Power factor cos φ	0.8
Poles	4
Type Brus	hless
Voltage tolerance %	1
Efficiency @ 75% load %	86.4
Class	Н
IP protection	23



#### **Mechanical structure**

Robust mechanical structure which permits easy access to the connections and components during routine maintenance check-ups.

## Voltage regulator

Voltage regulation with DSR. The digital DSR controls the range of voltage, avoiding any possible trouble that can be made by unskilled personnel. The voltage accuracy is  $\pm 1\%$  in static condition with any power factor and with speed variation between 5% and +30% with reference to the rated speed.



# Windings / Excitation system

Generator stator is wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th ...) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches. MAUX (Standard): The MAUX MeccAlte Auxiliary Winding is a separate winding within the main stators that feeds the regulator. This winding enables to take an overload of 300% forced current (short circuit maintenance) for 20 seconds. This is ideal for motor starting requirements.

### Insulation / Impregnation

Insulation is of class H standard. Impregnation is made with premium tropicalised epoxy resins by dipping and dripping. High voltage parts are impregnated by vacuum, so the insulation level is always very good. In the high-power models, the stator windings undergo a second insulation process. Grey protection is applied on the main and exciter stator to give enhanced protection.

#### **Reference standards**

Alternator manufactured according to , and complies with , the most common specification such as CEI 2-3, IEC 34-1, EN 60034-1, VDE 0530, BS 4999-5000, CAN/CSA-C22.2 No14-95-No100-95.

## **Genset equipment**

## BASE FRAME MADE OF WELDED STEEL PROFILE, COMPLETE WITH:

- · Anti-vibration mountings properly sized
- Welded support legs

#### PLASTIC FUEL TANK WITH THE FOLLOWING COMPONENT:

- Filler neck
- Air breather (ventilation pipe)
- · Minimum fuel level sensor

#### **OIL DRAININ PIPE WITH CAP:**

• Oil draining facilities

#### **ENGINE COMPLETE WITH:**

- Battery
- Liquids (no fuel)

#### CANOPY:

- Soundproof canopy made up of modular panels, realized with zinced steel as treatment against corrosion and aggressive conditions, properly fixed and sealed allowing a full weatherproof enclosure.
- Easy access to the genset for maintenance purposes thanks to: Wide lateral access doors fixed by stainless steel hinges and provided with plastic lockable handles and internal perforated galvanized steel-sheet; Detachable panels, with screws holes protected by rubber tap.
- Control panel protection door provided with suitable window and lockable handle.
- Lateral air inlet opening properly protected and soundproofed. Exhaust air outlet from the roof, trough wet section protected by proper grid.
- Single detachable lifting eye placed on the roof.

#### **SOUNDPROOF**:

- · Noise attenuation thanks to soundproofing material
- Efficient residential silencer placed inside the canopy











Dimensional data		
Length	(L) mm	180
Width	(W) mm	85
Height	(H) mm	126
Dry weight	kg	74
Fuel tank capacity	<u> </u>	6
Fuel tank material		Plast
Autonomy		
Fuel consumption @ 75% PRP	l/h	1.9
Fuel consumption @ 100% PRP	l/h	2.5
Running time 75% PRP	h	34.1
Running time 100% PRP	h	26.3
Noise level		
Guaranteed noise level (LWA)	dB(A)	9
Noise pressure level @ 7 m	dB(A)	6
Installation data		
Total air flow	m³/min	44.2
Exhaust gas flow	m³/min	1.6
Exhaust gas temperature	°C	42
Electrical Data		
Battery capacity	Ah	7
Max current	А	14.4
Circuit breaker	Α	1

ACP

**Control panel availability**AUTOMATIC CONTROL PANEL

## **MCP - Manual control panel**

Mounted on the genset and complete of: analogue instrumentation, control, protection of the generating set, protected through door with lockable handle.

## **INSTRUMENTATION (ANALOGUE)**

- Voltmeter (1 phase)
- Ammeter (1 phase)
- Hours-counter

#### **COMMANDS**

- Start/stop selector switch with key (Glow plugs preheating function also included).
- Emergency stop button installed on canopy side.

## **PROTECTION WITH ALARM**

- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature
- Earth Fault.

## **PROTECTIONS WITH SHUTDOWN**

- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature.Circuit breaker protection: III poles
- Emergency stop button

## **OTHERS**

• Panel protected through door with lockable handle.

## **OUT PUT PANEL MCP**

Power cables connection to Circuit Breaker.		
Socket kit		Standard
Thermal protections		
3P+N+T CEE 400V 32A	n	1
3P+N+T CEE 400V 16A	n	1
2P+T CEE 230V 16A	n	2
230V 16A SCHUKO	n	1

## MPF - Manual control panel full option

Mounted on the genset and complete of: analogue instrumentation, control, protection of the generating set, protected through door with lockable handle

## **INSTRUMENTATION (ANALOGUE)**

- Voltmeter with selector switch (3 phases)
- Frequency meter
- Ammeter with selector switch (3 phases)
- Hours-counter
- Fuel level indicator
- Oil pressure indicator
- Engine temperature indicator

#### **COMMANDS**

- Start/stop selector switch with key
- Emergency stop button

#### **PROTECTION WITH ALARM**

- Low fuel level
- · Battery charger failure
- low oil pressure
- high engine temperature
- Earth Fault

## PROTECTIONS WITH SHUTDOWN

- Low fuel level
- Battery charger failure
- low oil pressure
- high engine temperature
- Circuit breaker protection: III poles
- Emergency stop button

#### **OTHERS PROTECTIONS**

• Panel protected through door with lockable handle

## **OUT PUT PANEL MPF**

ETB- External Terminal Board		ETB
Socket kit		Standard
Individual CB and Earth Fault protection		√
3P+N+T 400V 63A IP67	n	1
3P+N+T CEE 400V 16A IP67	n	1
230V/16A 2P+T CEE IP67	n	1
230V 16A SCHUKO IP68	n	1

## **ACP - Automatic control panel**

Mounted on the genset, complete with digital control unit for monitoring, control and protection of the generating set, protected through door with lockable handle.

#### **DIGITAL INSTRUMENTATION**

- Generating set voltage (3 phases).
- Mains voltage.
- Generating set frequency.
- Generating set current (3 phases).
- Battery voltage.
- Power (kVA kW kVAr).
- Power factor Cos φ.
- · Hours-counter.
- Engine speed r.p.m.
- Fuel level (%).
- Engine temperature (depending on model)

#### **COMMANDS AND OTHERS**

- Four operation modes: OFF Manual starting Automatic starting -Automatic test.
- Pushbutton for forcing Mains contactor or Genset contactor.
- Push-buttons: start/stop, fault reset, up/down/page/enter selection.
- Remote starting availability.
- DC system disconnection switch.
- Acoustic alarm.
- Automatic battery charger.
- RS232 Communication port.
- Settable PASSWORD for protection level.

#### **PROTECTIONS WITH ALARM**

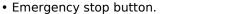
- Engine protections: low fuel level, low oil pressure, high engine temperature.
- Genset protections: under/over voltage, overload, under/over frequency, starting failure, under/over battery voltage

#### **PROTECTIONS WITH SHUTDOWN**

- Engine protections: low fuel level, low oil pressure, high engine temperature,
- Genset protection: under/over voltage, overload, under/over battery voltage, battery charger failure.
- · Circuit breaker protection: III poles.
- Earth Fault included in the control unit.

#### **OTHERS PROTECTIONS**

- Panel protected through door with lockable handle.







## **OUT PUT PANEL ACP**

3P+N+T CEE 400V 32A	n	1
Predisposed for remote control optional:		RCG
Socket kit		Optional









# **Supplements:**

To be ordered with equipment (when necessary)

## **CONTROL PANEL SUPPLEMENT**

RCG - Various supplements for remote controls - available for models:	ACP
TLP - Various supplements for remote signals - available for models:	ACP
ADI - Adjustable Differential Intensity - available only for models:	ACP
TIF - IV Poles Circuit Breaker instead of III - available for models:	ACP MCP
ETB - External Terminal Board - available for models:	MCP ACP



## Socket kit

Component version		SKB1
Individual CB and Earth Fault protection		
3P+N+T CEE 400V 32A IP67	n	1
230V/16A 2P+T CEE IP67	n	1
230V 16A SCHUKO IP68	n	1
3P+N+T CEE 400V 16A IP67	n	1



# **GENSET EQUIPMENT**

KPR - Premium Kit (Leak Proof Tray - Leakage detection sensor - Manual oil drain pump)	
AFP - Automatic Fuel Pump	ACP

## **Extended Fuel Tank**



## **ENGINE SUPPLEMENTS**

PHS - Coolant Pre-Heating System	ACP
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# Accessories

Items available as accessory equipment

Site trailer

Road Trailer



# LTS - Load Transfer Switch [Accessories for ACP Automatic Control Panel]

The Load Transfer Switch (LTS) panel operates the power supply changeover between the generator and the Mains in backup applications, guarantying the feeding to the load within a short period of time. It consists of a standalone cabinet which can be installed separate from the generating set. The logic control of the power supply changeover is operated by means of the Automatic Control panel mounted on the generating set, so therefore none logic device is required on the LTS panel.



The information is aligned with the Data file at the time of download. Printed on 10/05/2024 (ID 4782)

