ENGINE DRIVEN WELDER
DSP 300 YS

The images are for reference

WELDING PROCESS

- Shielded Metal Arc welding SMAW (STICK)
- Gas Tungsten Arc Welding GTAW (TIG)
- Gas Metal Arc Welding GMAW (MIG)
- Flux Cored Arc Welding FCAW (FLUX CORED)
- Air carbon Arc Gouging

DEFINITION

Valid declared powers up to the followings environmental conditions: temperature 25°C, altitude 100 meters above sea level

LTP power: stand-by power: Maximum available power for use with variable loads for a yearly number of hours limited at 500 h. No overload is admitted.

PRP power: continue power with variable loads. Maximum power for use with variable loads for a yearly illimited nubers of hours.

COP power: continuous power with constant load. Maximum power for use with constant loads for a yearly unlimited numbers of hours.

FEATURES

- DC arc welder
- High frequency digital control of welding current and voltage
- Specific welding programs for cellulose electrodes
- Digital welding ammeter and voltmeter
- Welding current pre-setting
- VRD function
- PL version (Polarity Reversal) (OPTION)
- AC current generator three-phase and single-phase available during welding
- Front panel with three-phase and single-phase output sockets
- Output sockets with protections for overcurrents and short circuits
- High sensitivity differential switch 30mA
- Digital engine control and management module
- Battery disconnect switch
- Emergency button
- Optical indicator of engine air filter clogging
- Engine water temperature, oil pressure and fuel level sensor
- Liquid-tight base
- Central lifting hook
- Wide access for easy maintenance
- External drain plugs for engine oil, coolant and liquids in the base
- External filling of the fuel tank
- External access for filling the radiator

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ENGINE 3000 RPM

4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED	
Model	YANMAR 3TNM74F
* Stand-By net power	14,1 kWm (19,2 hp)
* PRP net power	12,8 kWm (17,4 hp)
* COP net power	/
Cylinders / Displacement	3 / 993 cm³ (0,993 lt.)
Bore / Stroke	74 / 77 (mm)
Compression ratio	23,54: 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	/
Speed governor type	Mechanical
FUEL CONSUMPTION	
110 % (Stand-by power)	4,6 lt./h
100 % to PRP	4,2 lt./h
75 % to PRP	3,3 lt./h
50 % to PRP	2,6 lt./h
COOLING SYSTEM	
Total system cap. - only engine	6 l - 1 l
Fan air flow	/
LUBRICATION SYSTEM	
Total oil system capacity	3,4 l
Oil capacity in sump	1,6 l
Oil consumption at full load	/

EXHAUST SYSTEM	
Maximum exhaust gas flow	/
Max. exhaust gas temp.	450 °C
Maximum back pressure	9,8 kPa (0,098 bar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	12 Vdc
Starter motor power	1 kW
Battery charging alternator cap.	40 A
Cold start	- 10°C
With cold start aid	/
AIR FILTER	Dry
Combustion air flow	/
HEAT REJECTED AT FULL LOAD	
To exhaust system	/
To water and oil	/
Radiated to room	/
To charge cooler	/

* Output powers according to ISO 3046-1

WELDING AND GENERATION

DSP 500 YS

C.C. WELDING (CONSTANT CURRENT)

SMAW (STICK)/ GTAW (TIG) CC MODE	
Maximum welding current	350A / 28V (Stick) 300A / 32V (Stick - IEC rating) 350A / 24V (Tig - IEC rating)
Adjustment range	continue on 2 scales 20A / 20,8V - 350A / 28V (Stick) 20A / 10,8V - 350A / 24V (Tig)
Service	350A / 24V @35% (Tig - IEC rating) 300A / 32V @60% (Stick - IEC rating) 300A / 22V @60% (Tig -IEC rating) 250A / 30V @100% (Stick - IEC rating) 250A / 20V @100% (Tig - IEC rating)
Ignition voltage (open circuit voltage)	67 Vcc
Reduced open circuit voltage with VRD	< 13 Vcc
Arc penetration	Yes

C.V. WELDING (CONSTANT VOLTAGE)

GMAW (MIG)/ FCAW (FLUX CORED) CV MODE	
Maximum welding current	350A / 28 V 300A / 29V (IEC rating)
Adjustment range	continue 15V- 40V 40A / 16 V - 350A / 28V
Service	300A / 29V @60% (IEC rating) 250A / 26,5 V @100% (IEC rating)

SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	350	300	250	200	150	100	50	0
Pow. 3 ~ / 400V - Cos φ 0,8 (kVA)	0	0	1	3	5	7	9	10
Pow. 3 ~ / 400V - Cos φ 1 (kW)	0	1	3	5	7	8,5	10	11,5
Pow. 1 ~ / 230V - Cos φ 0,8 / 1 (kVA / kW)	0	0	1	2,5	5	5	5	5
Pow. 1 ~ / 110V - Cos φ 0,8 / 1 (kVA / kW)	0	0	0	1	2,5	2,5	2,5	2,5

GENERAL SPECIFICATIONS

ASYNCRONOUS ALTERNATOR, SELF-REGULATED, SELF-EXCITED, BRUSHLESS	
Tank capacity	38 l
Autonomy (welding 60%)	13 h
IP protection rating	IP 23s

Starter battery	12 Vdc -37Ah / 330A CCA(EN)
Sound pressure LpA	66 dB(A) @ 7 m
Max. ambient temperature	40 °C
Insulation class	H

AUXILIARY OUTPUTS

OUTPUT 1		
Type of source	Trifase	
Frequency	50 Hz	
Apparent Power (Active Power)	10 kVA (8 kW)	11,5 kW
Cos φ	0.8	1
Voltage	400 V	
Current	14,4A	16,6 A

OUTPUT 2	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	5 kVA (5 kW)
Cos φ	0.8 / 1
Voltage	230 V
Current	21,7A

OUTPUT 3	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	2,5 kVA (2,5 kW)
Cos φ	0.8 / 1
Voltage	110 V CTE
Current	22,7A

OUTPUT 4	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	5kVA / kW
Cos φ	1
Voltage	48 V
Current	104 A

CONTROL PANEL

DSP 300 YS

ENGINE

- InteliNano AMF5 controller
- Power switch
- Thermal switches for motor protection: 1x30A - 1x16A
- Emergency button
- Siren
- Auto-idle switch (OPTION)

FEATURES CONTROLLER INTELINANO AMF5	
Operating modes	• OFF- MAN
Display - Buttons - LEDs	• Backlit display 128x64 pixels • Buttons START - STOP - SIREN SILENCE AND ALARM RESET - PAGE - ENTER • LEDs: Generator Status GCB ON
Generator measurements	• Voltages: L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Frequency: Hz
Engine	• Water temperature • Oil pressure • Fuel level • Engine rpm • Hour meter • Battery voltage • Maintenance • Number of starts
Generator protections	• Overvoltage • Undervoltage • Overfrequency • Underfrequency • Voltage asymmetry • Phase rotation
Engine protections	• Overspeed • High water temperature pre-alarm • High water temperature • Low oil pressure pre-alarm • Low oil pressure • Low fuel level pre-alarm • Low fuel level alarm • High battery voltage • Low battery voltage • Battery charger alternator fault • Emergency stop • Failure to start • Failure to stop
Features	• Event history, 100 events stored • Programming from panel or PC • 2 selectable languages (other languages available) • Direct connection to engines with ECU (Stage V, Tier 4 Final) via Can Bus J1939 • Programmable inputs and outputs • IP 65 protection • Operating temperature: -20°C -+70°C • Internal PLC support
Communication	• USB port • RS232- RS485 module (optional) • Ethernet module (optional) • GPS/4G module (optional) • Communication protocols • Modbus RTU/ TCP • SNMP • Online control and monitoring on web pages (embedded web server)

WELDING

- WDC control panel
  - Rotary switch for welding process
  - STAND-BY
  - TIG CONTACT STARTING ((GTAW - Lift Start)
  - CC STICK ARC FORCE (SMAW)
  - CC STICK CELLULOSE 1 (SMAW)
  - CC STICK CELLULOSE 2 (SMAW)
  - CV-WIRE (GMAW / FCAW)
  - Welding current / voltage adjustment knob
  - Connector for remote control and WF4 wire feeder. Automatic “local / remote” switching when the connector is inserted.
  - Welding range switch
  - Polarity reverce switch
  - LED STAND-BY
  - LED ON (Welder ready for use)
  - Thermal protection or fault LED (if on it indicates over-current or fault)
  - Polarity reverse LED (signals command activation)
- Welding currente and voltage digital instruments PCB / LED V.R.D.
- Welding output sockets:
  1 x Saldatura (+) 400A
  1 x Saldatura (-) 400A

GENERATION (VERS. 400V / 230V / 110V)

- Differential switch (400V/230V)
- Circuit breaker for 230V socket
- Circuit breaker for 110V sockets
- Circuit breaker for 110V sockets 16A
- Output sockets : 1x 400V 32A 3P+N+T CEE IP67
  1x 230V 32A 2P+T CEE IP67
  1x 110V 32A 2P+T CEE IP67
  1x 110V 16A 2P+T CEE IP67
- Earth terminal (PE)

GENERATION (VERS. 400V / 230V / 48V)

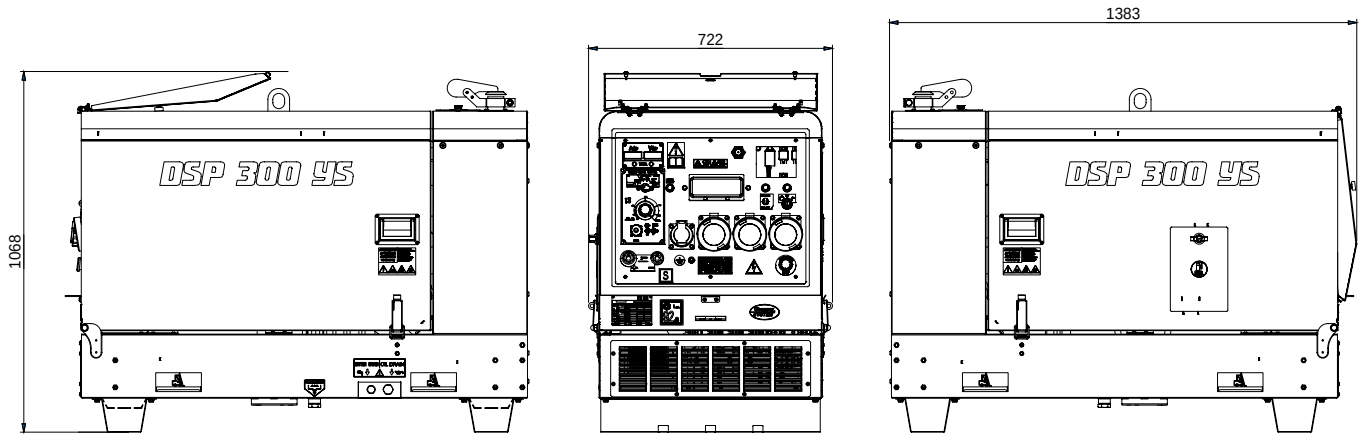
- Differential switch (400V/230V)
- Circuit breaker for 230V sockets
- Circuit breaker for 230V socket 16A
- Output sockets : 1x 400V 32A 3P+N+T CEE IP67
  1x 230V 32A 2P+T CEE IP67
  1x 230V 16A 2P+T CEE IP67
  N°2 output terminals 200A (for 48V)
- Earth terminal (PE)

WEIGHT - DIMENSIONS ACCESSORIES

DRY WEIGHT:
- 410 Kg

The welding machine pictured may include optional accessories.

DIMENSION PICTURE



VERSIONS IN ADDITION TO THE STANDARD FEATURES

	PL AI	AI
PL with Auto-Idle	√	
Auto-Idle		√

OPTIONS ON REQUEST

- Remote control RC2
- Remote control RC1 (Remote control for polarity reversal)
- Extension cable for remote control (30m)
- Wire feeder WF4
- Welding cables K500 (20+15 m, 50 mm^2)
- Welding kit (mask, glasses, etc.)
- Earthing
- Manual towing trolley
- Slow towing trolley CTL
- Fast towing trolley CTV4

AVAILABLE VERSIONS

400V / 230V / 110V	
C1XP9021	STANDARD
C1XP9021Z	AI
C1XP9022Z	PL AI
400V / 230V / 48V	
C1XP9061	STANDARD
C1XP9061Z	AI
C1XP9062Z	PL AI

GENERAL INFORMATION

COMPLIANCE GENERATING SETS WITH EC DIRECTIVES AND STANDARDS
2006/42 / EC (Machinery Directive)
2014/35 / UE (Low Voltage Directive)
2014/30 / UE (Electromagnetic Compatibility Directive)
2000/14 / EC (Acoustic Emission Directive for machines intended to operate outdoors)
IEC-EN 60974-1 Arc welding equipment - Welding power sources
IEC-EN 60974-10 Arc welding equipment - Electromagnetic compatibility (EMC) requirements

ISO 9001:2015 - Cert. 0192

WARRANTY
All devices are covered by the manufacturer's warranty.