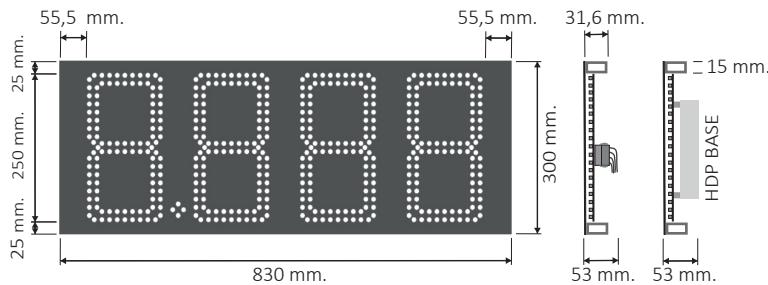
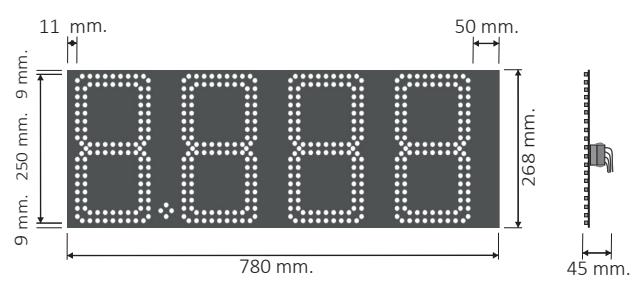


SPECIFICATIONS

WITH FRONT PANEL



WHITOUT FRONT PANEL



Model	Code	Details
HDP25-A-WSMD-4	D 100 002337	With Front Panel , White LED
HDP25-A-RSMD-4	D 100 002333	With Front Panel , Red LED
HDP25-A-ASMD-4	D 100 002362	With Front Panel , Amber LED
HDP25-A-GSMD-4	D 100 002349	With Front Panel , Green LED
HDP25-B-WSMD-4	D 100 002414	Without Front Panel , White LED
HDP25-B-RSMD-4	D 100 002415	Without Front Panel , Red LED
HDP25-B-ASMD-4	D 100 002416	Without Front Panel , Amber LED
HDP25-B-GSMD-4	D 100 002417	Without Front Panel , Green LED

Description

LED display with 4 digits 250mm height. SMD LEDs suitable for continuous operation 24h / day and exposure to UV sunlight. Printed Circuit Boards coated with a special silicone resin whose formula keeps it elastic over time avoiding cracks and infiltrations of humidity, the front panel is thermo-insulated and resistant to sunlight, for LED and components protection.

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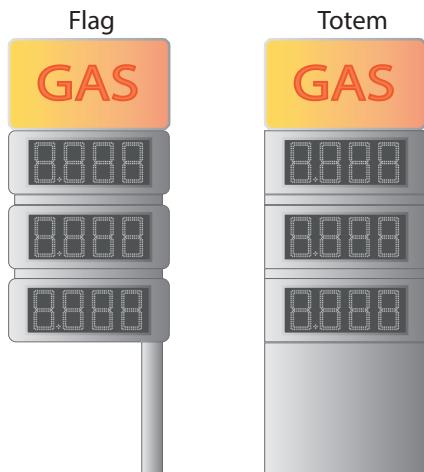
Operating Voltage	DC 15 V
Max Power Consumption	25 W
IP Level	IP52
Operating Temperature Range	40 C° ~ +70 C°
Storage Temperature Range	+5 C°~ +40 C°
Storage Environment Humidity	RH < 60%
Over-temperature protection	+75 C°
Viewing Angle	120°
No. LED	452
Life Time (temperature Tc = 75 °C)	100.000h (L70)
Warranty (See terms and conditions)	 3 years

LED Characteristics

Color	Luminosity
White 6500K	3200 MCD
Amber	2270 MCD
Red	1000 MCD
Green	1200 MCD



DEFINITION OF A LED DISPLAY SYSTEM



A LED display system is a set of components (LED displays, controll unit, cables, power) to be integrated into a flag structure or a totem in the petrol stations for the products prices displaying.

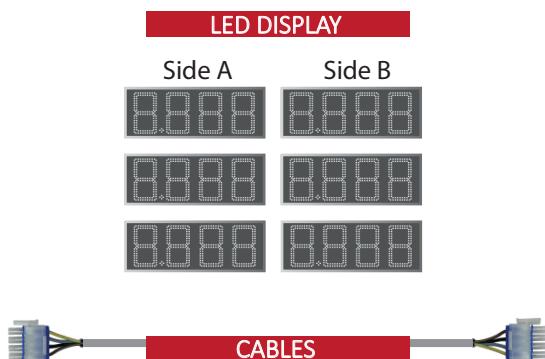
The Price System can be assembled as single-sided version or double-sided version.

The LED displays can be manually or automatically programmed.

How to compose a LED display system

LED DISPLAYS

Get the necessary quantity of LED displays to install on your structure.



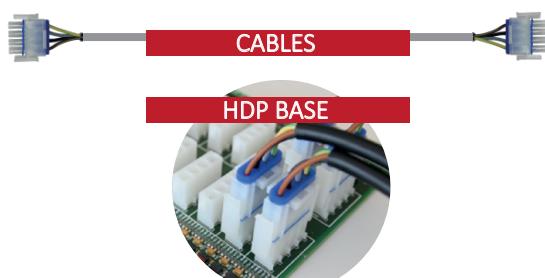
CABLES

Select the quantity of cables required with sufficient length to connect the various LED displays to the HDP BASE controller, see on "CABLES" sheet.

HDP BASE

The standard HDP BASE controller can support up to 6 LED displays per side, for a total of 12 LED displays.

If more LED displays are needed (8 + 8 max.), It must be installed the model HDP BASE-8P, see on "ACCESSORIES" sheet.



LED DRIVER

Select the correct LED driver from the table, see on "LED DRIVER" sheet.



RDC

The 18-key remote control to program the LED displays and many other functions.

ACCESSORIES

A wide range of accessories are available and described on "ACCESSORIES" sheet.

CABLES

Table of available cables to connect the various LED displays to the HDP BASE controller. The "Master display" is a display like the others, but it is considered as such because the HDP BASE controller is located behind it. All the LED displays are connected to HDP BASE, therefore the connection cable between the Master display and HDP BASE is shorter. The Master display should be installed in the lowest part of the totem.

 **WARNING !!**

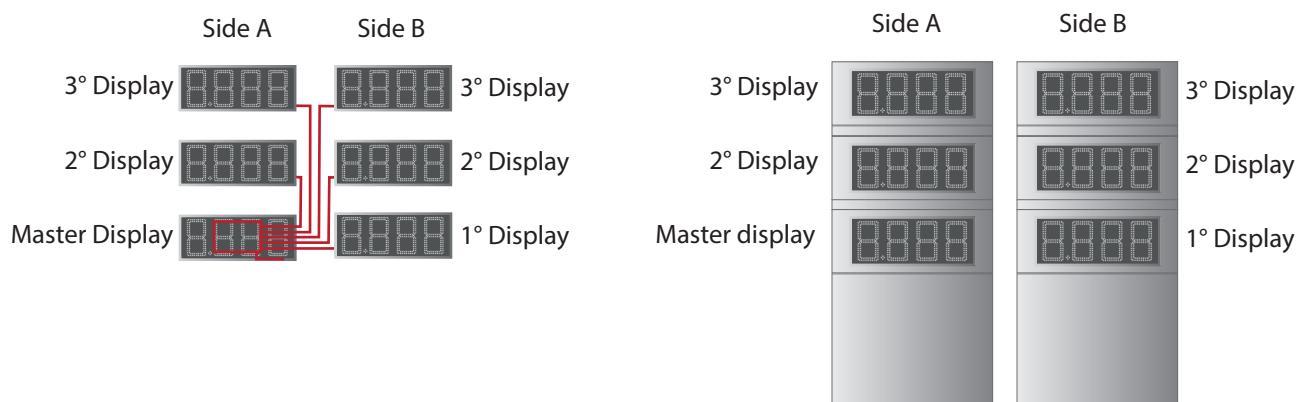
The cables must be the right length, do not let excess remain coiled up.

The cables must be fixed to structure by fastening strings, avoid leaving dangling cables because the weight would stress the connectors.



Cable lenght	Cable section	Code	Recommended
360 mm.	4 x 0,75mm	CAV 000254	Master display
1800 mm.	4 x 0,75mm	CAV 000255	
2600 mm.	4 x 0,75mm	CAV 000256	1°,2°,3° Display
4600 mm.	4 x 0,75mm	CAV 000257	4°,5° Display
5600 mm.	4 x 0,75mm	CAV 000258	6°,7°,8° Display

All price displays are connected to the HDP BASE which is located behind the Master display



LED DRIVER

The table indicates how many and which type of LED driver are required and to which terminal blocks of the HDP BASE they must be connected. For example, a 2 + 2 system, that is 2 HDP25 LED displays per side (double-sided), requires an HLG-150H-15 LED driver connected to the + V1-GND terminal blocks of the HDP BASE.

Code	Available LED driver models
D 100 001240	LPF-60-15 Wired
D 100 001241	HLG-150H-15A Wired
D 100 001242	HLG-240-15 Wired
D 100 001243	HLG-320-15 Wired

LED displays	LED driver model	Terminal blocks on HDP BASE
1+0	LPF-60-15	+V1-GND
1+1	HLG-150H-15	+V1-GND
2+0	HLG-150H-15	+V1-GND
2+2	HLG-150H-15	+V1-GND
3+0	HLG-150H-15	+V1-GND; +V2-GND
3+3	HLG-240-15	+V1-GND; +V2-GND
4+0	HLG-150H-15	+V1-GND; +V2-GND
4+4	HLG-320-15	+V1-GND; +V2-GND
5+0	HLG-240-15	+V1-GND; +V2-GND; +V3-GND
5+5	HLG-320-15 HLG-150-15	+V1-GND; +V2-GND +V3-GND
6+0	HLG-240-15	+V1-GND; +V2-GND; +V3-GND
6+6	HLG-320-15 HLG-150H-15	+V1-GND; +V2-GND +V3-GND

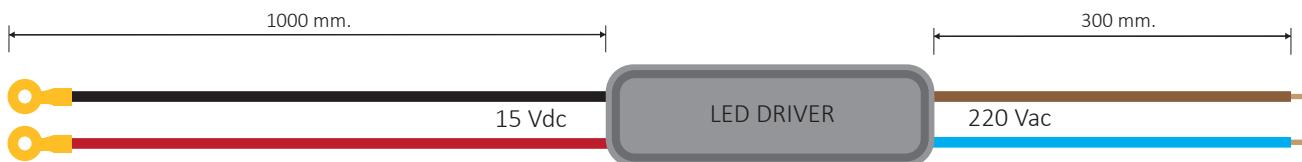
LED driver wiring

INPUT 220 Vac - The lenght of 220v input cable or wires is 300 mm.

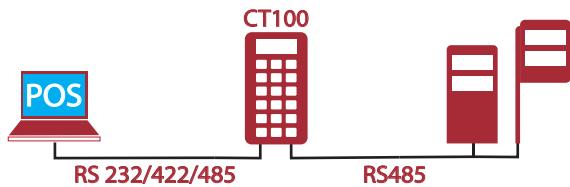
OUTPUT 15 Vdc - The lenght of red and black wires is 1000 mm. The wires have a ring termination and must be firmly connected to the appropriate terminal blocks on the HDP BASE.

 **WARNING !!**

- The two red and black output wires 15 Vdc (1000 mm.) must not be extended.
- Connection to the line 220 VAC must be carried out by qualified personnel and must be carried out in compliance with current regulations.



PROGRAMMING

**Remote RDC**

18-key remote control, 10-50 m range for manual programming of fuel prices and various setting functions.

Keyboard CT100

The CT100 LCD keypad allows you to program fuel prices and manage messages from text or graphic panels, or it can become transparent allowing programming directly from POS, or both modes at the same time, use category 5 LAN cable (max. cable lenght: 1000m).

Wired PC

Programmation of one or more LED display systems by PC through category 5 LAN cable (max. cable lenght: 1000m), suitable for use with the LED PROG software, the remote control can be used at the same time. If necessary, add CONV-SU01 for RS422 serial, or TCPIP for RS485 serial.

Wired POS

Programmation of one or more LED display systems by POS through category 5 LAN cable (max. cable lenght: 1000m), all protocols are available, the remote control can be used at the same time. If necessary, add CONV-SU01 for RS422 serial, or TCPIP for RS485 serial.

Wireless PC

Programming of one or more LED display systems from POS via radio modem WT868 and WR868, the range is 80m in open field and up to 800m in open field with the addition of the yagi antenna. Suitable for use with LED PROG software, the remote control can be used at the same time.

Wireless POS

Programmation of one or more LED display systems by POS through the CUPW868 wireless control unit and WR868 radio modem, the range is 80m in open field and up to 800m in open field with the addition of the yagi antenna. All protocols are available, the remote control can be used at the same time.

AVAILABLE COMMUNICATION PROTOCOLS



- PC LEDPRO
- HITECH 1200Hz
- OMV



- TOKHEIM KA (KOPPENS AUTOMATIC) ver. 4.2
- TOKHEIM JUPITER ST 39



- PROEDA V21-02-01/CK



- LOGITRON GILBARCO 70RPLSUPSIT.E04 (PASSPORT EUROPE)
- ENI
- GILBARCO ESTESO



- SCHEIDT & BACHMANN V11



- SCHENK 68000/68020 ver.2.02 2400 BAUD RATE
- SCHENK 68000/68020 ver.2.02 4800 BAUD RATE



- WAYNE DRESSER SYSTEM MARKETER PIGNONE SM2000/3000
- WAYNE DRESSER NUCLEUS 8 (1200 BAUD RATE MONODIREZIONALE)
- WAYNE DRESSER NUCLEUS 9 (9600 BAUD RATE BIDIREZIONALE)
- HITECH_PIGNONE-TON1070S
- ENI
- WAYNE DRESSER ESTESO BIDIREZIONALE



- IFSF LON WORK (It needs an additional interface)



- MASER AUTOMATION



- LAFON - MAGIC 2000

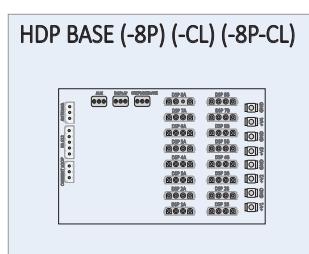


- FORTECH



- ALVIC

ACCESSORIES

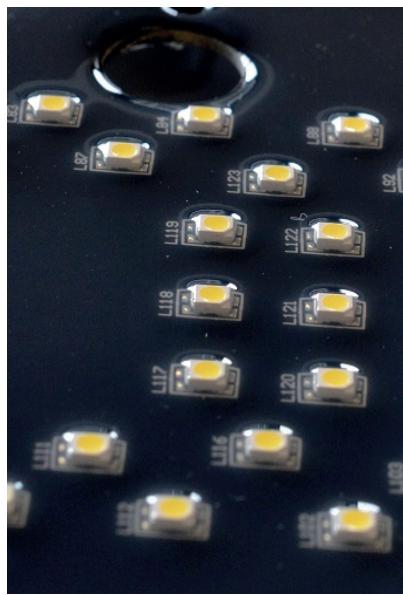


Code	Models	Description
D 100 001032	RDC	Remote control
D 100 002322	CT100	LCD keyboard
D 100 002200	CONV_SU01	USB - RS422 converter
O 100 003023	TCPIP	Interface RS485/USB - LAN
D 100 002271	WT868	Tx Radio modem
D 100 002272	WR868	Rx Radio modem
D 100 002164	CUPW868	Wireless control unit

Code	Model	Description
D 100 002285	YAGI868	Yagi Antenna
D 100 002284	LS1	Twilight switch
D 100 002336	SP HDP BASE	Protective shield for HDP BASE
D 100 001255	HDP BASE-8P	8+8 LED display version
D 100 001257	HDP BASE-CL	Current loop version
D 100 001258	HDP BASE-8P-CL	8+8 and current loop version
O 091 000405	ANT433-4	Additional antenna for RDC

** These options must be requested when ordering, cannot be added after sale.

QUALITY



Protective coating

The considerable thermal excursion and the high moisture to which the LED displays are subjected, drove Hitechled design department to prefer a protection of the electronic boards made of pure silicone. This material, unlike common protective resins, has the advantage of always remaining elastic and unaltered over time, avoiding cracks and related moisture infiltrations.

The dosage of this precious material is performed by automatic machines, avoiding to deposit sediments on the surface of the LEDs.

Sealed connectors

The rugged connectors designed for the industrial sector are equipped with protective silicone seals into the gap between the male and female socket and in the collars around the wires. The safety lock ensures a stable connection, thus avoiding malfunctions due to hasty wiring. The contacts coated with anti-oxidation metal are suitable for use in humid environments and guarantee a considerable duration over time.

LEDs controlled by constant current drivers



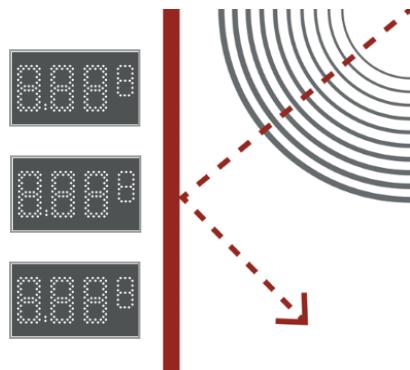
LED displays are equipped with constant current drivers, furthermore the LEDs are divided into many branches and connected together in series of only 4 units, this serves to minimize the problem of illegibility in the event that a spoiled.

The brightness of the LEDs is automatically adjusted by the microprocessor integrated in each single digit with PWM (Pulse Width Modulation) procedure.

Overheating protection for LEDs

An integrated temperature micro-sensor reduces the current in the LEDs in case of ambient overtemperature, then bringing it back to the normal level with the restoration of the temperature values below the limit, this automatic system serves to avoid premature aging of the LEDs, allowing them to age in accordance with the manufacturer's expected derating curve in the 100,000 hours of operating life of the LEDs.

QUALITY

**Sturdy wiring and high immunity to interference**

The connection between the HDP BASE and the LED displays consists of a single cable with 4 wires (double insulation) and therefore mechanically robust, so the cables can be fixed to the structure by fastening strings.

The HDP BASE is equipped with 16 independent RS485 serial communication channels, one for each single LED display which are each equipped with a microprocessor that decrypts and correctly displays the prices arriving from the HDP BASE. The hardware thus designed in addition to the software filters of the main microprocessor makes communication extremely safe and immune to electromagnetic disturbances, avoiding to display of wrong or deformed characters.

Opto Isolated communication serial port

The optical device for the galvanic separation of the RS422 / 485 communication serial port included on the HDP BASE, establishes a very high level of immunity to electrical discharges induced in the cable towards the POS.

**Resistance to solar radiation and temperature**

All the LED displays are equipped with a sunshade front in non-deformable in fiber-glass which being a poor conductor of heat, plays a role of heat shield and protection from the effects of solar radiation as well as finishing the display.

Brightness sensor on each LED display

Each individual LED display is equipped with a brightness sensor, all the displays connected to the DSP 1A ... DSP 8A connectors measure continuously the amount of ambient light and send this value to the HDP BASE board, consequently the brightness of the all LED display connected to HDP BASE (A side and B side) is automatically adjusted, optimizing consumption and making the reading of the displays more comfortable.