DP1100

HIGH PERFORMANCE INDUSTRIAL DECODER

- Real time decoding (100,000 characters/sec)
- Simultaneous connection of 2 scanning heads
- PCS level control
- VERIFIER mode
- Automatic overflow
- Code position detection
- 2 standard serial interfaces
- Modular expansion for I/O & communication cards
- Backlit display and keyboard for programming
- Rugged industrial housing
- Fast wiring system

GENERAL DESCRIPTION

The new generation of Datalogic products includes the **DP1100**, a versatile high performance industrial decoder.

The new **DP1100** is a technologically advanced product, characterised by excellent decoding performance, new functions and exceptional flexibility.

Thanks to its powerful multiprocessor architecture based on the DSP (Digital Signal Processor), the **DP1100** offers high performance and innovative functions at reduced costs, which broaden the application range of automatic identification systems.

Unbeatable for its decoding ability, the **DP1100** allows two reading heads to be connected simultaneously. This enables compact and inexpensive systems to be created, which can also be used for omnidirectional type applications.

The new **DP1100** decoder is the ideal choice for applications that require much flexibility: it can adapt itself to the different needs of complex systems, perfectly solving all connection and integration problems, and can utilise the main communication standards. It is based on an open and expandable hardware architecture and employs a new fast wiring system that saves time and money during installation.

The **DP1100** offers advantages in many application areas, such as automatic identification on conveyors, low-cost omnidirectional reading systems, quality control, production line identification and automatic packaging machines.

APPLICATIONS

- Object sorting
- Automatic identification on conveyors
- Low cost omnidirectional reading system
- Quality control
- Work-in-progress control
- Packaging machines
- Pharmaceutical verifiers
- Labelling machines

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TECHNICAL DESCRIPTION

Thanks to the most advanced microprocessor technology, the DP1100 represents an innovative product in many ways.

A sophisticated multiprocessor architecture has been created inside the new decoder. It is based on the DSP (Digital Signal Processor) with a 60 MHz clock. Its high processing power enables it to carry out real time decoding at speeds up to 100,000 characters per second.

In addition, the DP1100 can simultaneously decode two reading heads: the two powerful DSPs process the signals arriving from the readers concurrently and send the decoding results to two microcontrollers.

These are responsible for the general control of the system, communication management and driving the I/O signal.
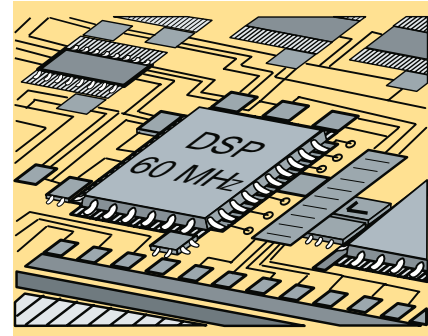
The multiprocessor architecture guarantees maximum performance in any type of application.

A particular advantage can be gained by applications where the decoder simultaneously manages two independent reading points, or by those which require omnidirectional reading systems.

The DP1100 not only decodes, but also allows label verification and control using new functions. A few of which are: Print Contrast Signal (PCS) control, code posittition measurement and testing, functioning mode as verifier and automatic overflow management.

To offer maximum operative flexibility, the DP1100 features four functioning modes (on-line, serial on-line, automatic and test), as well as the standard functions for multicode reading, pattern matching and complete formatting of outgoing data.

The DP1100 industrial decoder is equipped with two standard serial ports offering RS232, RS485 and 20 mA C.L. communication interfaces. In addition, it manages the most important communication protocols and the multipoint connection. The decoder's modular architecture includes a hardware expansion slot which allows a third serial communication interface or an I/O card to
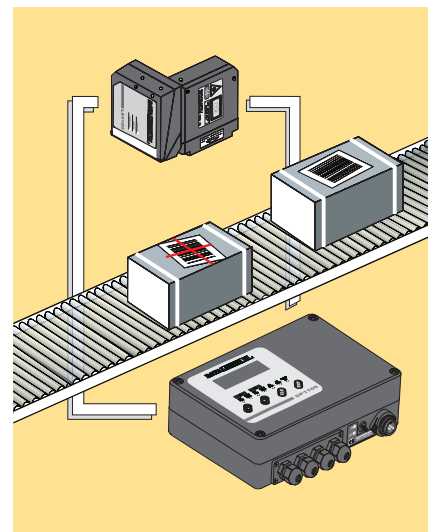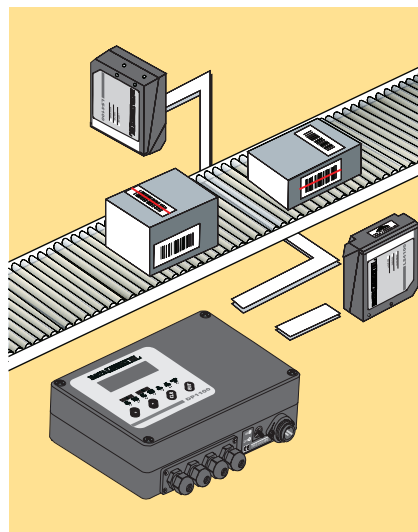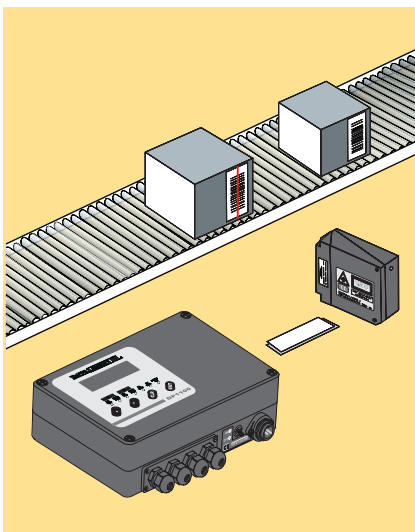

Real time decoding based on DSP 60 MHz
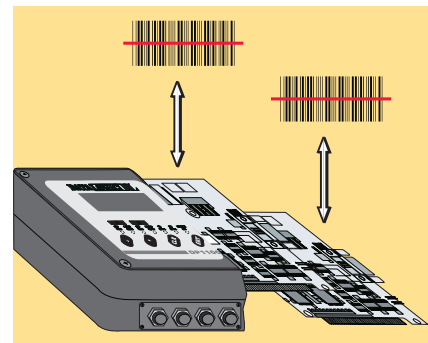
Multiprocessor architecture for simultaneous decoding of two scanning heads
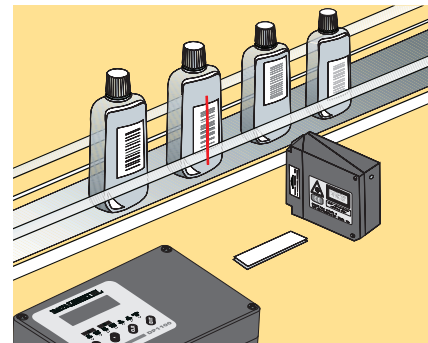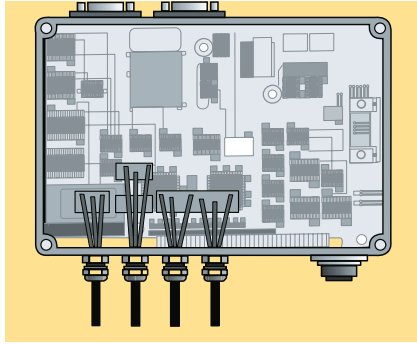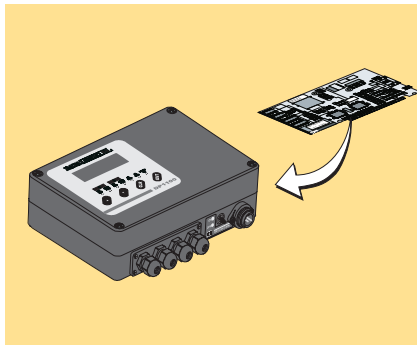

PCS control and code position

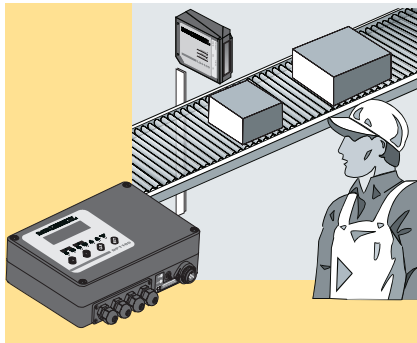
Main reading system configurations

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Fast wiring system through a terminal strip

*Modular expansion for I/O and communication cards*

Keypad and display for control and programming

be added in order to satisfy any connection requirement. The robust housing, makes the DP1100 ideal for use even in the harshest industrial environments. Furthermore, the DP1100 is equipped with a keyboard and backlit display, which makes it easy for the operator to program local parameters and monitor reading operations. The wiring system makes installation and connection faster, saving of time and money.

The DP1100 can be connected to all Datalogic readers.

APPLICATION DESCRIPTION

The DP1100 decoder, connected to one of Datalogic's industrial readers, represents the perfect solution for applications which require high performance and extreme flexibility. In object sorting or production control applications on conveyors, the DP1100 completely satisfies the need for high decoding capability, extreme flexibility in serial connection for data transmission and installation ease. All this is possible thanks to its multiprocessor architecture, the possibility of having up to three independent serial channels (with any type of industrial standard) and its fast wiring system. In the two-reading head configuration, the DP1100 enables low cost, compact systems to be created for omnidirectional reading of "oversquare" codes. For applications on packaging machines and in the pharmaceutical sector, the potential offered by real time decoding can be exploited fully. In each application, especially regarding labelling systems, the functions for verifying print quality and correct label positioning are extremely useful. Finally, for applications which require the presence of an operator to control and carry out manual interventions, noteable advantages are offered by the large display and integrated keyboard.

Due to the mechanical characteristics of the robust metallic housing, the DP1100 can operate in any industrial environment where there is contact with water and dust.
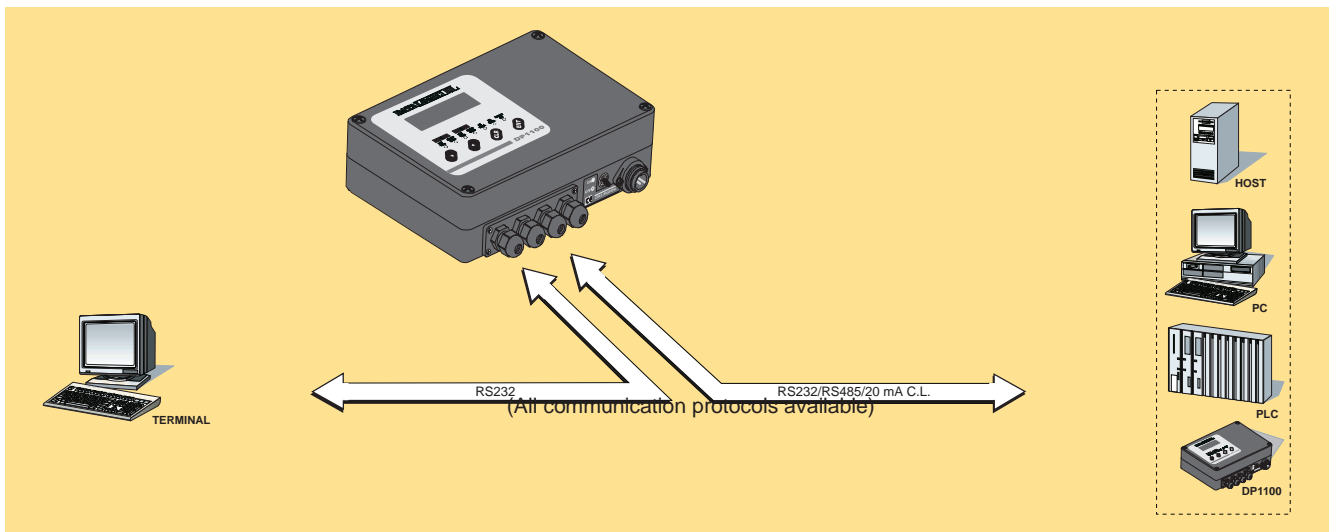

Main serial connections

MODELS

MODELS	SCANNING HEADS		POWER SUPPLY		ORDER NO.
	One	**Two**	**110 Vac**	**230 Vac**	
DP1100-1100	●		●		911601010
DP1100-1200	●			●	911601020
DP1100-2100		●	●		911601040
DP1100-2200		●		●	911601050
ACCESSORIES					
PBK-1100	Profibus communication card kit				91C071000

SPECIFICATIONS

POWER SUPPLY	230 Vac, 110 Vac
MAX. CONSUMPTION	35 VA
CPU	Multi-processor architecture
DECODING	Real Time
MAIN INTERFACE	Programmable RS232 / RS485 Multidrop / 20 mA C.L.
AUXILIARY INTERFACE	RS232
BAUD RATE	150 to 19,200 bauds
INPUT SIGNAL	'Presence Sensor' (Optocoupled NPN/PNP transistor)
OUTPUT SIGNAL	'No Read', 'Right', 'Wrong', (NPN transistor, open collector & emitter)
LED INDICATORS	Presence Sensor, Good Read, Tx, Rx, Power On
KEYPAD	4 membrane keys
DISPLAY	Backlit LCD, 20 characters on 4 lines
CONFIGURATION METHOD	
Manual	Through the keyboard
Automatic	Through the serial interface (Winhost)
BAR CODES	22 types including 2/5, Code 39, Code 93, Code 128, EAN/UPC, Codabar, EAN 128
MULTI-LABEL READING	Up to 6 different codes in the same presence sensor phase
OPERATING MODES	'On Line', 'Serial On Line', 'Automatic', 'Test'
DIMENSIONS	240 x 200 x 66 mm (9.45 x 7.87 x 2.6 in)
WEIGHT	2.8 Kg (6.16 lb)
CASE MATERIAL	Alluminium
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °F)
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90 % non condensing
VIBRATION RESISTANCE	IEC 68-2-6 test FC 1.5 mm; 10 to 55 Hz; 2 hours on each axis
SHOCK RESISTANCE	IEC 68-2-27 test EA 30 G; 11 ms; 3 shocks on each axis

DIMENSIONS

4 x PG9

mm / inch
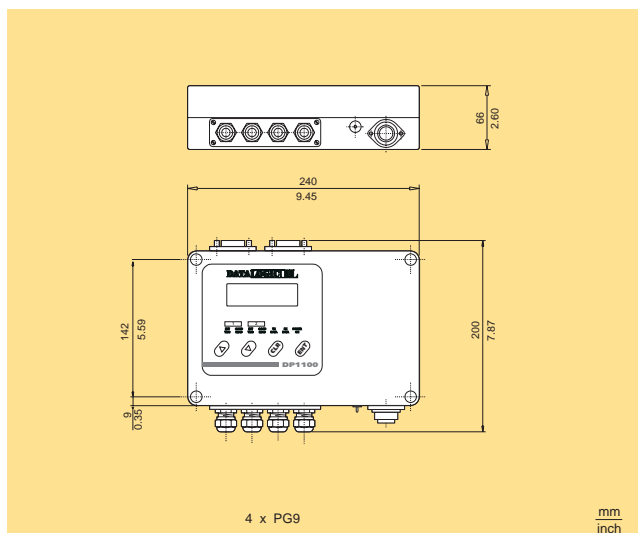
CONNECTABLE SCANNERS

SCANNERS	LS2100	LS4100	LS50	LS6100
DIMENSIONS*	84x68x28	84x68x28	101x83.5x66	101x83.5x66
SCAN RATE (scans/sec)	350	800 (1300)	500	800 (1000)
READING DISTANCE*	300	400	1050	1500
DEPTH OF FIELD*	250	360	900	1300
RESOLUTION*	0.15	0.10	0.15	0.20

* All measurements are in mm