

DPSENC8- BK5 (6)

INSTRUCTIONS OF OPERATION

AND

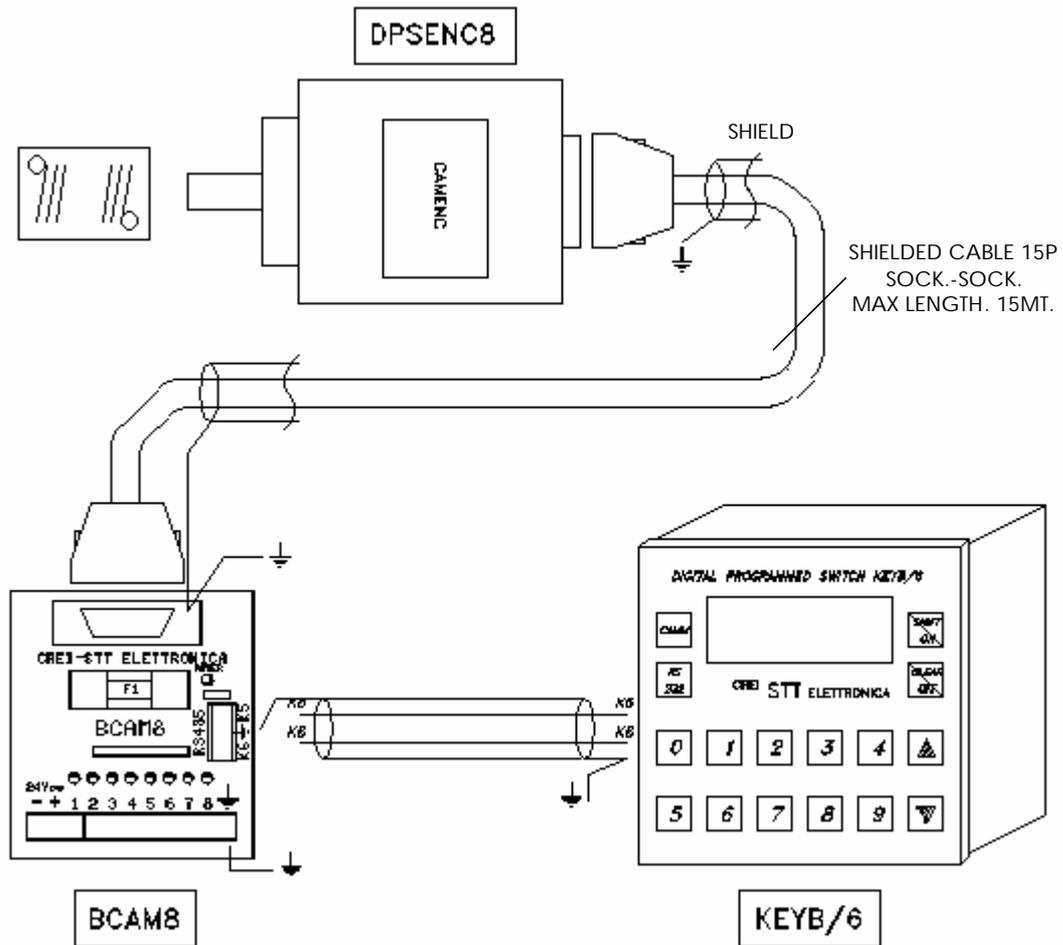
INSTALLATION

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DPSENC-8	SPECIFICHE TECNICHE																													
<p>Electrical features Power supply 24Vdc. ± 20% Max. current 140mA. Resolution encoder: 1° (360°/turn) 8 outputs 24Vcc Push Pull – PNP Standard (progr. NPN opt.) Max output current : 20 mA. Output are short-circuit protected. 180 phases for each output. 1 size stored. Linear automatic advance for single cam. Response speed up to 2400 RPM. Setting of the parameters from remote keyboard KEYB/ 5 or KEYB/ 6. RS485 for data upload or download from PC (with opt. interface RS485/RS232). 2 language selections (ITALIAN – ENGLISH)</p>	<p>Mechanical features Shaft (diameter) : 10 mm standard (different diameter on request). Load on the shaft: 200N (20,5 Kg) axial and radial. Number of revolutions (max) : 3000 RPM (for short periods 6000). Moment of inertia : 80 g/cm2. Insulation IP 54. Working temperature: 0/ +60 °C.</p>	<p>Pin-out conn. 15P. maschio</p> <table border="0"> <tr><td>Pin 1</td><td>OUT 1</td></tr> <tr><td>Pin 2</td><td>OUT 2</td></tr> <tr><td>Pin 3</td><td>OUT 3</td></tr> <tr><td>Pin 4</td><td>OUT 4</td></tr> <tr><td>Pin 5</td><td>OUT 5</td></tr> <tr><td>Pin 6</td><td>OUT 6</td></tr> <tr><td>Pin 7</td><td>OUT 7</td></tr> <tr><td>Pin 8</td><td>OUT 8</td></tr> <tr><td>Pin 10</td><td>K6 (remote keyb.)</td></tr> <tr><td>Pin 11</td><td>K5 (remote keyb.)</td></tr> <tr><td>Pin 13</td><td>+24Vcc</td></tr> <tr><td>Pin 14</td><td>+24Vcc</td></tr> <tr><td>Pin 15</td><td>GND</td></tr> <tr><td>SCH :</td><td>on connector</td></tr> </table> <p>The cable of connection with the interface BCAM8 must be shielded. The shield must be connected to earth.</p>	Pin 1	OUT 1	Pin 2	OUT 2	Pin 3	OUT 3	Pin 4	OUT 4	Pin 5	OUT 5	Pin 6	OUT 6	Pin 7	OUT 7	Pin 8	OUT 8	Pin 10	K6 (remote keyb.)	Pin 11	K5 (remote keyb.)	Pin 13	+24Vcc	Pin 14	+24Vcc	Pin 15	GND	SCH :	on connector
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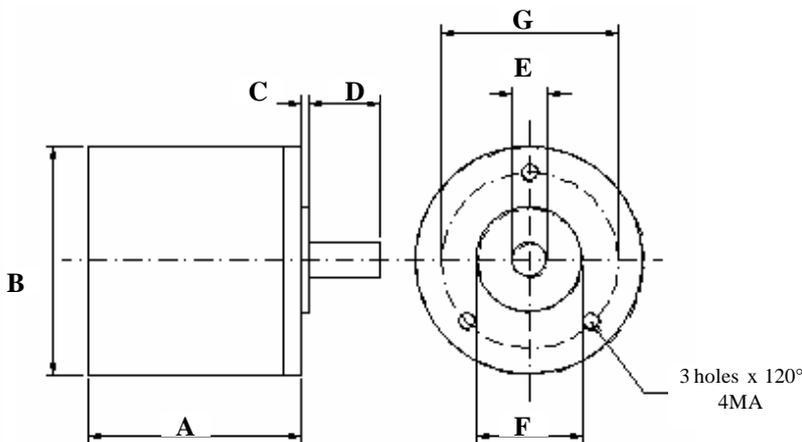
1. LAY-OUT of connections



WARNING !!!

CORRECT EARTH IS VITAL

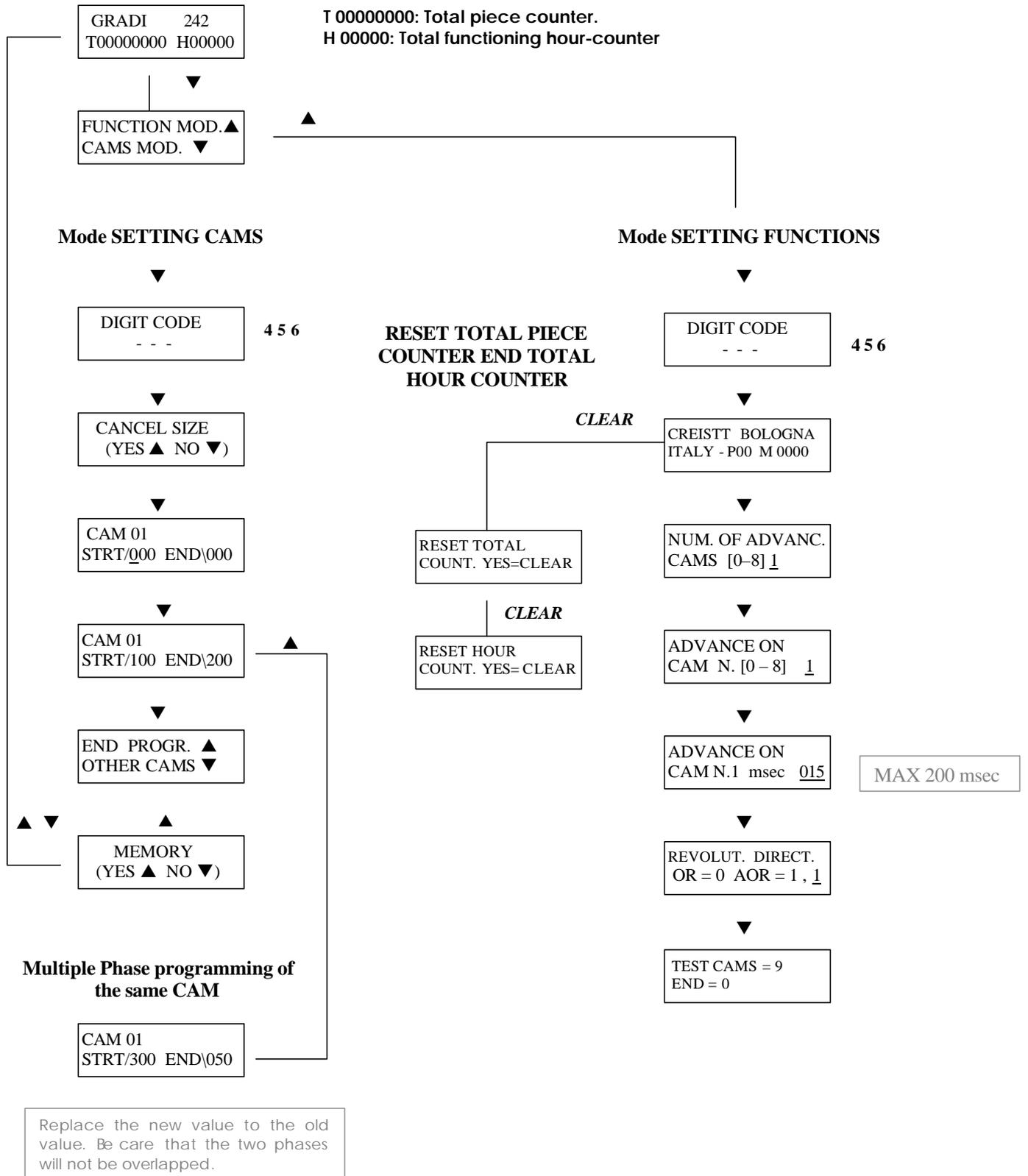
2. Dimensions - Holes



Model	Fastener	fixing
DPS ENC/8	servo	Axial

A	B	C	D	E	F	G
57	65	3	27.5	10	29	48

3. DATA PROGRAMMING



4. INSTRUCTIONS

Write date in memory :

The DPSENC8 allows to modify the values of the phases and advances ON-LINE for all those adjustments that must be done on machine while it's running.

ATTENTION: the data are stored in memory only when the encoder is stopped. In case of interrupted feeding (24Vcc) while the encoder is turning, the value of the piece-counter, of hour-counter and of the parameters changed ON-LINE (phases or advance), go back to the value stored before the last start.

4.1 Language selection

From the main display use the ▲ key to access the language selection menu. Type the number which correspond to the desired language:

1 - ITALIAN 2 - ENGLISH

4.2 Advance function

Once the advances sets has been selected, the programmer will require an advances value in Milliseconds .This value can be found in practice or with a simple mathematical formula (illustrated later on) but may not correspond to the true requirements. This for the reason that no variables are taken into consideration which distinguishes delays or mechanical differences between machines. A more practical way is by starting with a very low value and gradually increasing it until the correct value is found. It is preferable that the advanced value is found at the maximum speed for the machine. This assures that the value will work correctly even at the low speeds.

The mathematical formula is as follows:

Known data : Encoder Rotation speed (Cycles/Min), anticipation/Delay necessary (Degrees)

Value to Find: Value in ms (milliseconds to set on the programmer)

$\text{Cycles/Min}/60 = n$ (Cycles/Sec)

$1000 / n = N$ (milliseconds/Revolution)

$N / 360 = Q$ (milliseconds/degree)

$Q \times \text{Degrees of Advances} = T$ (time in milliseconds to set on the programmer)

Example:

Encoder shaft = 300 Turns/Min

Advances Required = 30 Degrees at max. speed

$300 / 60 = 5$ Cycles/Sec.

$1000 / 5 = 200$ milliseconds/turn

$200 / 360 = 0.55$ milliseconds per degree

$0.55 \times 30 = 16.6$ (anticipation time to set on the programmer)

4.3 Revolution direction function

The DPSENC8 accepts the encoder signals in both clockwise and anticlockwise directions. The keyboard can be used to set the rotation direction so the display will always show an incremental value.

4.5 Cams test function

It gives the possibility to test the cam outputs. This useful after machine installation or for diagnosing an eventual problem situation.

GENERAL INSTRUCTIONS OF INSTALLATION.

The laying of the cables must be done possibly keeping apart power cables from logical and control cables so that avoid possible coupling voltages that could disturb or damage electronic components.

The GND is connected to earth. It's advisable to keep shielded GND and electronic circuits GND separate from that of power circuits.

The resistance of the circuit of earth must be within the allowed limits (0,2 / 0.3 ohm)

 The product DPSENC8 is in conformity with the standard 89/336/EEC 92/31/EEC 93/68/EEC on electromagnetic compatibility for emissions EN 50081-2 and immunity EN 50082-2 .