PARALLEL ABSOLUTE MULTITURN ENCODER – PNP - NPN - PHK5 RANGE

- Blind shaft 14mm, reduction hub available, 15mm option,
- Robustness and excellent resistance to shocks / vibrations,
- High protection level IP65,
- High performances in temperature -20°C to +85°C,
- Parallel output, PNP or NPN,
- Universal electronic circuits from 11 to 30Vdc,
- Protection against short-circuits and inversion of polarity,
- High resolutions available: 8192 (13 bits) per turn,
- Turn counting up to 65 536 (16 bits),
- Reset, select, Latch, Direction functions,
- Option: push-button on the cover for an encoder reset to a value X.

MECHANICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Material</th>
<th>Cover: treated steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body: aluminium</td>
<td></td>
</tr>
<tr>
<td>Shaft: stainless steel</td>
<td></td>
</tr>
<tr>
<td>Bearings</td>
<td>6 803 serie</td>
</tr>
<tr>
<td>Maximum load</td>
<td>Axial : 20 N</td>
</tr>
<tr>
<td></td>
<td>Radial : 50 N</td>
</tr>
<tr>
<td>Shaft inertia</td>
<td>≤ 2.2.10^4 kg.m^2</td>
</tr>
<tr>
<td>Torque</td>
<td>≤ 6.10^3 N.m</td>
</tr>
<tr>
<td>Permissible max. speed</td>
<td>6 000 min^-1</td>
</tr>
<tr>
<td>Continuous max. speed</td>
<td>6 000 min^-1</td>
</tr>
<tr>
<td>Shock (EN60068-2-27)</td>
<td>≤ 500m.s^-2 (during 6 ms)</td>
</tr>
</tbody>
</table>

ELECTRONIC

<table>
<thead>
<tr>
<th>DAC SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be ordered separately - several types available:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTRONIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Cons. without load</td>
</tr>
<tr>
<td>Position refresh</td>
</tr>
</tbody>
</table>
PARALLELABSOLUTE MULTITURN ENCODER – PNP - NPN - PHK5 RANGE

ELECTRONIC

550 Electronic: OC NPN
Power supply: 11 to 30Vdc
Current consumption (no load) : <100mA
Max ondulation : 500mV
Level "0" max : 1,25Vdc
Protection against polarity inversion

551 Electronic: OC NPN + CTP
Power supply: 11 to 30Vdc
Current consumption (no load) : <100mA
Max ondulation : 500mV
Level "0" max : 3,75V at Is max
Protection against short-circuits
Protection against polarity inversion

556 Electronic : OC PNP + CTP
Power supply: 11 to 30Vdc
Current consumption (no load): <100mA
Max ondulation : 500mV
Level ''1'' mini : Vcc- 4,5Vdc at Is max
Protection against short circuits
Protection against polarity inversion

PARALLEL CONNECTION

1  GN green Output Bit 0
2  YE yellow Output Bit 1
3  GY grey Output Bit 2
4  PK pink Output Bit 3
5  BU blue Output Bit 4
6  RD red Output Bit 5
7  BK black Output Bit 6
8  VT violet Output Bit 7
9  WH/BN white/brown Output Bit 8
10 WH/GN white/green Output Bit 9
11 WH/YE white/yellow Output Bit 10
12 WH/GY white/grey Output Bit 11
13 WH/PK white/pink Output Bit 12
14 WH/BU white/blue Output Bit 13
15 WH/RD white/red Output Bit 14
16 WH/BK white/black Output Bit 15
17 BN/GN brown/green Output Bit 16
18 BN/YE brown/yellow Output Bit 17
19 BN/GY brown/grey Output Bit 18
20 BN/PK brown/pink Output Bit 19
21 BN/BU brown/blue Output Bit 20
22 BN/RD brown/red Output Bit 21
23 BN/BK brown/black Output Bit 22
24 GN/GY green/grey Output Bit 23
25 GN/PK green/pink Output Bit 24
26 GN/BLU green/blue Reserved
27 GN/RD green/red RESET
28 GN/BK green/black SELECT
29 YE/GY yellow/grey LAT.CH
30 YE/PK yellow/pink DIREC.TION
31 YE/BU yellow/blue Reserved
32 YE/RD yellow/red Reserved
33 NC Reserved
34 YE/BK yellow/black Reserved
35 RD/BK red/black Reserved
36 BN brown 11 to 30Vdc
37 WH white 0 Vdc

SELECT
Active data output, pin SELECT at 0Vdc
Non active data output: pin select to +Vcc

LATCH
Active data: pin LATCH to 0Vdc
Data frozen: pin LATCH to +Vcc

DIRECTION
Increasing code clockwise: pin DIRECTION at 0Vdc
Increasing code counter clockwise: Pin DIRECTION at +Vcc

RAX (PRESET to X):
For an electrical RAX (or push-button option) : pin RAX to +Vcc
during minimum 100ms.

DIRECTION, LATCH, RAX and SELECT inputs have to be connected to 0Vdc or +Vcc (LATCH, SELECT and RAX at 0V if not used)
Reserved: Do not connect!

Example of pin assignment for configuration 10x7 bits : data available on pin 1 to 17 - Max: 25 bits (Resolution + Number of turns)

ORDERING REFERENCE (Contact the factory for special versions, ex: special flanges, connections, electronics...)

<table>
<thead>
<tr>
<th>Shaft ø</th>
<th>Supply</th>
<th>Output stage</th>
<th>Code</th>
<th>Resolution</th>
<th>Number of turns</th>
<th>Connection</th>
<th>Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHK5</td>
<td>14</td>
<td>5</td>
<td>S0</td>
<td>Gray</td>
<td>12</td>
<td>12</td>
<td>A010</td>
</tr>
<tr>
<td></td>
<td>15mm</td>
<td></td>
<td>S1</td>
<td>Binary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>option</td>
<td></td>
<td>S6</td>
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Made in France

Changes possible without further notice - Version 110317