

# Servoazionamento B&R

## ACOPOS MULTI

Modulo plug-in: **ENDAT 8BAC0120.000-1**

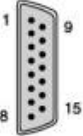
| Figure                                                                            | X11                                                                               | Pin | Name      | Function              |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----|-----------|-----------------------|
|  |  | 1   | A         | Channel A             |
|                                                                                   |                                                                                   | 2   | COM       | Encoder supply 0 V    |
|                                                                                   |                                                                                   | 3   | B         | Channel B             |
|                                                                                   |                                                                                   | 4   | +5V       | Encoder supply +5 V   |
|                                                                                   |                                                                                   | 5   | D         | Data input            |
|                                                                                   |                                                                                   | 6   | ---       | ---                   |
|                                                                                   |                                                                                   | 7   | T+        | Temperature sensor +  |
|                                                                                   |                                                                                   | 8   | T         | Clock output          |
|                                                                                   |                                                                                   | 9   | A\        | Channel A inverted    |
|                                                                                   |                                                                                   | 10  | Sense COM | Sense input 0 V       |
|                                                                                   |                                                                                   | 11  | B\        | Channel B inverted    |
|                                                                                   |                                                                                   | 12  | Sense +5V | Sense input +5 V      |
|                                                                                   |                                                                                   | 13  | D\        | Data input inverted   |
|                                                                                   |                                                                                   | 14  | T-        | Temperature sensor -  |
|                                                                                   |                                                                                   | 15  | T\        | Clock output inverted |

Table: Pin assignments - EnDat 2.1 interface 8BAC0120.000-1

Modulo plug-in: **SIN/COS 8BAC0124.000-1**

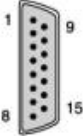
| Figure                                                                              | X11                                                                                 | Pin | Name      | Function                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----|-----------|--------------------------|
|  |  | 1   | A         | Channel A                |
|                                                                                     |                                                                                     | 2   | COM       | Encoder supply 0 V       |
|                                                                                     |                                                                                     | 3   | B         | Channel B                |
|                                                                                     |                                                                                     | 4   | +5V       | Encoder supply +5 V      |
|                                                                                     |                                                                                     | 5   | T+        | Temperature sensor +     |
|                                                                                     |                                                                                     | 6   | Limit -   | Negative limit (L2)      |
|                                                                                     |                                                                                     | 7   | R\        | Reference pulse inverted |
|                                                                                     |                                                                                     | 8   | Limit+    | Positive limit (L1)      |
|                                                                                     |                                                                                     | 9   | A\        | Channel A inverted       |
|                                                                                     |                                                                                     | 10  | Sense COM | Sense input 0 V          |
|                                                                                     |                                                                                     | 11  | B\        | Channel B inverted       |
|                                                                                     |                                                                                     | 12  | Sense +5V | Sense input +5 V         |
|                                                                                     |                                                                                     | 13  | T-        | Temperature sensor -     |
|                                                                                     |                                                                                     | 14  | R         | Reference pulse          |
|                                                                                     |                                                                                     | 15  | ---       | ---                      |

Table: Pin assignments - SinCos interface 8BAC0124.000-1

## Acopos

Modulo plug-in:**8AC120.60-1**

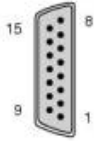
| Figure                                                                            | X11                                                                               | Pin | Name                        | Function              |                          |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----|-----------------------------|-----------------------|--------------------------|
|                                                                                   |                                                                                   |     |                             | EnDat mode            | Incremental mode         |
|  |  | 1   | A                           | Channel A             |                          |
|                                                                                   |                                                                                   | 2   | COM (1, 3 - 9, 11, 13 - 15) | Encoder supply 0 V    |                          |
|                                                                                   |                                                                                   | 3   | B                           | Channel B             |                          |
|                                                                                   |                                                                                   | 4   | +5V out / 0.25A             | Encoder supply +5 V   |                          |
|                                                                                   |                                                                                   | 5   | D                           | Data input            | ---                      |
|                                                                                   |                                                                                   | 6   | ---                         | ---                   |                          |
|                                                                                   |                                                                                   | 7   | R\                          | ---                   | Reference pulse Inverted |
|                                                                                   |                                                                                   | 8   | T                           | Clock output          | ---                      |
|                                                                                   |                                                                                   | 9   | A\                          | Channel A inverted    |                          |
|                                                                                   |                                                                                   | 10  | Sense COM                   | Sense input 0 V       |                          |
|                                                                                   |                                                                                   | 11  | B\                          | Channel B inverted    |                          |
|                                                                                   |                                                                                   | 12  | Sense +5V                   | Sense input +5 V      |                          |
|                                                                                   |                                                                                   | 13  | D\                          | Data Inverted         | ---                      |
|                                                                                   |                                                                                   | 14  | R                           | ---                   | Reference pulse          |
|                                                                                   |                                                                                   | 15  | T\                          | Clock output Inverted | ---                      |

Table: Pin assignments for AC120 - EnDat Encoder Interface

Acopos P3

Modulo plug-in: 8EAC0152.001-1

| Figure                                                                             | X41M                                                                                | Pin | Name | Function depending on configured encoder type |           |            |                                |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----|------|-----------------------------------------------|-----------|------------|--------------------------------|
|                                                                                    |                                                                                     |     |      | SinCos                                        | EnDat 2.1 | SSI SinCos | HIPERFACE                      |
|  |  | 1   | B\   | Channel B inverted                            |           |            | REF cosine                     |
|                                                                                    |                                                                                     | 2   | B    | Channel B                                     |           |            | Cosine                         |
|                                                                                    |                                                                                     | 3   | GND  | Encoder power supply 0 V                      |           |            |                                |
|                                                                                    |                                                                                     | 4   | A\   | Channel A inverted                            |           |            | REF sine                       |
|                                                                                    |                                                                                     | 5   | A    | Channel A                                     |           |            | Sine                           |
|                                                                                    |                                                                                     | 6   | R    | Reference pulse                               | Data +    |            |                                |
|                                                                                    |                                                                                     | 7   | R\   | Reference pulse in-verted                     | Data -    |            |                                |
|                                                                                    |                                                                                     | 8   | U+   | Encoder power supply 5 V                      |           |            | Encoder power sup-<br>ply 12 V |
|                                                                                    |                                                                                     | 9   | T-   | Temperature sensor -                          | Clock -   |            | Temperature sensor -           |
|                                                                                    |                                                                                     | 10  | T+   | Temperature sensor +                          | Clock +   |            | Temperature sensor +           |

Esempio di parametrizzazione

Motore: GD250XS

```

<Module Name="GD250XS_80_Nitek" Type="MotorSynchronous_any" Version="1.0.0.1">
  <Connection Connector="EC" TargetModule="8BAC0120.000-1c" TargetConnector="EC" />
  <Connection Connector="MT" TargetModule="8BVI0028HWS0.000-1a" TargetConnector="MT1" />
  <Parameter ID="MOTOR_WIND_CONNECT" Value="1" />
  <Parameter ID="MOTOR_POLEPAIRS" Value="1" />
  <Parameter ID="MOTOR_BRAKE_CURR_RATED" Value="0" />
  <Parameter ID="MOTOR_BRAKE_TORQ_RATED" Value="0" />
  <Parameter ID="MOTOR_BRAKE_ON_TIME" Value="0" />
  <Parameter ID="MOTOR_BRAKE_OFF_TIME" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR1" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR2" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR3" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR4" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR5" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR6" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR7" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR8" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR9" Value="0" />
  <Parameter ID="MOTOR_TEMPSSENS_PAR10" Value="0" />
  <Parameter ID="MOTOR_VOLTAGE_RATED" Value="400" />
  <Parameter ID="MOTOR_VOLTAGE_CONST" Value="32.39" />
  <Parameter ID="MOTOR_SPEED_RATED" Value="4000" />
  <Parameter ID="MOTOR_SPEED_MAX" Value="6000" />
  <Parameter ID="MOTOR_TORQ_STALL" Value="0.95" />
  <Parameter ID="MOTOR_TORQ_RATED" Value="0.95" />
  <Parameter ID="MOTOR_TORQ_MAX" Value="3.78" />
  <Parameter ID="MOTOR_TORQ_CONST" Value="0.497" />
  <Parameter ID="MOTOR_CURR_STALL" Value="1.9" />
  <Parameter ID="MOTOR_CURR_RATED" Value="1.9" />
  <Parameter ID="MOTOR_CURR_MAX" Value="7.6" />
  <Parameter ID="MOTOR_WIND_CROSS_SECT" Value="0.63" />
  <Parameter ID="MOTOR_STATOR_RESISTANCE" Value="10.6" />
  <Parameter ID="MOTOR_STATOR_INDUCTANCE" Value="0.0165" />
  <Parameter ID="MOTOR_INERTIA" Value="0.0001053" />
  <Parameter ID="MOTOR_COMMUT_OFFSET" Value="1.803" />
  <Parameter ID="MOTOR_TAU_THERM" Value="2694" />
  <Parameter ID="MOTOR_WIND_TEMP_MAX" Value="130" />
</Module>|

```

## Configurazione encoder

Encoder incrementale (ncINC) con **ParID 109** = 16384 (fattore di interpolazione)

## Fasi motore

Fase V e W invertite.

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Last update: **2026/09/11 12:19**

