

## Data sheet for Absolute encoder

Article No. : 6FX2001-5FP12

Client order no. :  
Order no. :  
Offer no. :  
Remarks :



Figure similar

| Electrical data        |                                                             |
|------------------------|-------------------------------------------------------------|
| Operating voltage Up   | DC 10 ... 30 V                                              |
| Interface              | PROFIBUS DP-V2                                              |
| Clock input            | Differential line receiver according to EIA Standard RS 485 |
| Data output            | Differential line driver according to EIA Standard RS 485   |
| Short-circuit strength | Yes                                                         |
| Transmission rate      | 12 Mbit/s                                                   |

### Cable length up to the subsequent electronics, max.

|                    |         |
|--------------------|---------|
| Up to 93.75 kbit/s | 1,200 m |
| Up to 1.5 Mbit/s   | 200 m   |

|            |                                                                                                                                      |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Connection | Terminal block with address selector switch and bus terminating resistor with removable cover and cable glands (3 units)<br>, Radial |
|------------|--------------------------------------------------------------------------------------------------------------------------------------|

|            |        |
|------------|--------|
| Resolution | 13 bit |
|------------|--------|

|          |                                                                                      |
|----------|--------------------------------------------------------------------------------------|
| Telegram | According to PNO cncoder profile V4.1 Class1, Class 2, Class 3, standard telegram 81 |
|----------|--------------------------------------------------------------------------------------|

### Code type

|              |                  |
|--------------|------------------|
| Sampling     | Gray             |
| Transmission | binary, PROFIBUS |

### Parameterizability

|                              |                                |
|------------------------------|--------------------------------|
| Preset                       | Yes                            |
| Counting direction           | Yes                            |
| Resolution per revolution    | Any 1 ... 8192                 |
| Total resolution             | Any 1 ... 8192                 |
| Speed signal                 | Yes                            |
| Limit switch                 | Yes                            |
| Clock synchronism            | Yes                            |
| Slave-to-slave communication | Yes                            |
| Accuracy                     | ± 79 " (± 1 LSB at 8192 steps) |
| Friction torque (at 20°C)    | ≤ 0.01                         |
| Starting torque (at 20°C)    | ≤ 0.01                         |

| Mechanical data       |            |
|-----------------------|------------|
| Speed max.            |            |
| With ± 1 LSB accuracy | 5,800 rpm  |
| Mechanical            | 12,000 rpm |

### Load capacity

|                            |                |
|----------------------------|----------------|
| n ≤ 6000 rpm               |                |
| - Axial                    | 40 N           |
| - Radial at shaft end      | 110 N          |
| n > 6000 rpm               |                |
| - Axial                    | 10 N           |
| - Radial at shaft end      | 20 N           |
| Shaft diameter             | 6 mm           |
| Shaft length               | 10 mm          |
| Angular acceleration, max. | 100,000 rad/s² |
| Rotor moment of inertia    | 0.0000019 kgm² |

### Vibration and shock

|                                                         |            |
|---------------------------------------------------------|------------|
| Vibration (55...2000 Hz) according to EN 60068-2-6, max | 100 m/s²   |
| 6 ms according to EN 60068-2-27, max                    | 1,000 m/s² |

### Degree of protection

|                |        |
|----------------|--------|
| At housing     | IP67   |
| At shaft input | IP64   |
| Net weight     | 0.4 kg |

| Ambient temperature |               |
|---------------------|---------------|
| During operation    | -40 ... 85 °C |

| Standards                 |                                     |
|---------------------------|-------------------------------------|
| Compliance with standards | CE, cULus                           |
| EMC class filter          | Tested to DIN EN 50081 and EN 50082 |