

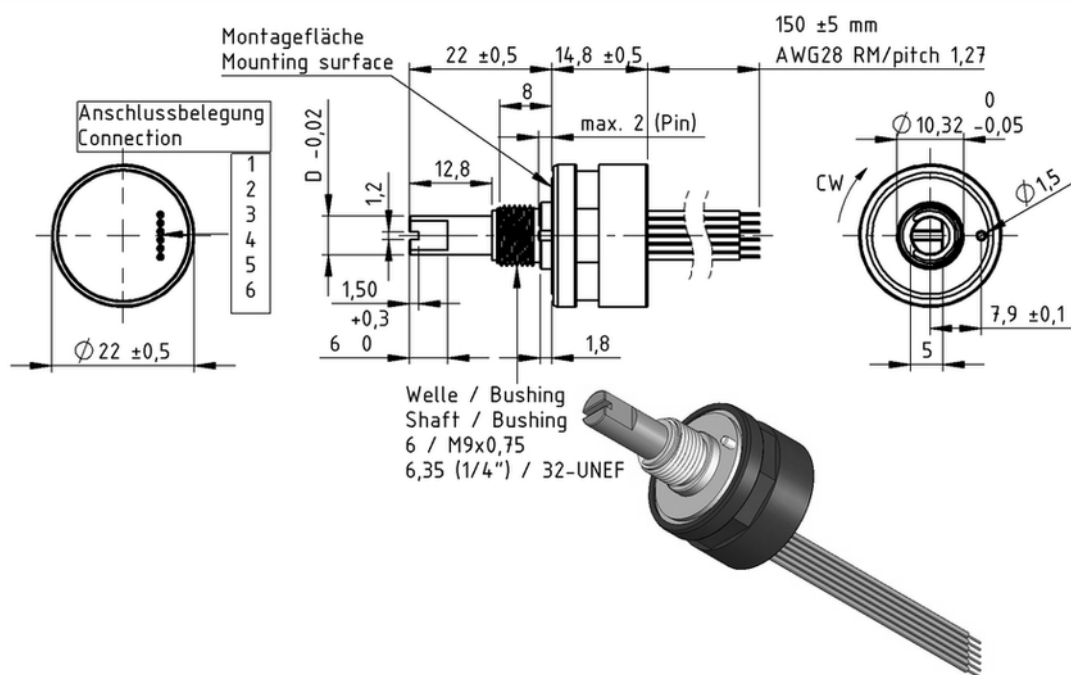
Datasheet Series ENA 22 PM Hall effect absolute-encoder (Multiturn)

- Alternative to multi-turn-potentiometers
- Start and end points easily set in field via dry contacts
10° to 200 x 360°
- Ø 22 mm housing with bushing
- 12 bit resolution
- Analog output: 0-10V
- Supply voltage: 16-30V
- More than 25 mill. turns life

The Series ENA 22 PM allows a flexible and exact adjusting of the start and end point as well as the direction of the signal by the customer. On the series ENA 22 PM the counter state of up to 200 turns is stored in a nonvolatile memory. During power off it is possible to turn the shaft $\pm 179^\circ$ without loss of the position value.



Drawing



Dimensions in mm

Please see the supplemental sheet "Configuration manual programmable multiturn with short description"

Wiring

1	2	3	4	5	6
Ground	Signal Out	Supply Voltage	Set Start	Set End	Change Direction to CCW

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Electrical Data

Electrical angle ENA 22 PM	0°-10°.....0°-72000° (200 turns) start point, end point and signal direction adjustable by the customer. Delivery status: 0°-3600° (10-Turn) For detecting the absolute position the sensor shouldn't be turned more than $\pm 179^\circ$ during power off.
Independent linearity tolerance	$\pm 0,3\%$ (@ 360°)
Resolution Adjusted angle $\geq 360^\circ$	12 Bit
Resolution Adjusted angle $< 360^\circ$	4096 steps x adjusted angle [°] / 360°
Update rate	5 ms (High speed on request)
Max. number of write cycles in programming mode	10.000
Output signal	0-10 V
Supply voltage	16-30 VDC
Current consumption (no load)	< 15 mA (typ. 5-6 mA)
Output load	$> 5K$ Ohm

Mechanical Data

Mechanical angle	endless
Maximum rotational speed standard Maximum rotational speed with polymer bearing	800 U/min. 4000 U/min.
Life time standard Life time with polymer bearing	> 10 Mio. turns (depend on application) > 25 Mio. turns (depend on application) tested under room temperature, with radial load 1 N, without sealing ring.
Starting torque	$< 0,3$ Ncm
Max. fastening torque mounting nut	1 Nm

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Other Data

Protection class	IP65 For temperatures below 0 °C we recommend the option D (sealing ring in the bushing)
Operating temperature	-40 .. + 85° C , fixed cable (please ask for other temperatures)
Storage temperature	-40 .. + 105° C (+ 90°C with polymer sleeve bearing)
Bearing: Standard Option P	. Brass bushing Polymer sleeve bearing
Housing material	Fiberglass reinforced polyamid (Nylon 66/30% GF)
Shaft material	Stainless steel
Mounting parts (included)	Hex-nut wrench size 14 mm, tooth washer
Weight	approx. 20 g

Order Description

Thread / Shaft	Output Signal	Bearing	Optional sealing ring (only with option LT)
ENA 22 PM B3 (Thread M10 / Shaft Ø6mm)	2410 (0-10V)	LT (Standard)	D
		PLT (with polymer bearing)	
ENA 22 PM B3 (Thread 3/8" / Shaft Ø6,35mm)	2410 (0-10V)	LT	D
Example standard version:			
ENA 22 PM B1	2410	LT	
Example with options:			
ENA 22 PM B1	2410	LT	D

Our speciality are custom solutions

On serial demand we offer these and other customized products

- 0-5 V output signal
- Serial interfaces with higher resolution
- Defined programming by factory
- Customized shaft
- Different rotation torques
- Mechanical stops
- Customized housing
- Cable and connector assemblies
- Mounting of gear wheels and other mechanical parts

The specifications and information in this datasheet cannot consider all special demands that are caused by the application. Because of this, they are no general description of the properties of the product.

All specifications have been determined at room temperature + 20°C.

17. August 2012. All specifications are subject to change without notice.