ALTMANN

Potentiometer

Product Overview

www.potentiometer.de

ALTMANN Potentiometer

A family-owned, medium-sized and internationally oriented company located in Herford.

1963 Foundation of the company by Hans-Juergen Altmann in Herford

1974 Relocation to the present site in “Herringhauser Straße”

1987 Enlargement of the company`s premises

2005 Certification according to ISO 9001:2015

2013 50th company anniversary

2016 Alexandra Altmann, daughter of the company founder Hans-Juergen Altmann takes over the leadership of the family company as the General Manager

Since foundation of the company in 1963 we have been focusing on the development, construction and manufacturing of potentiometers as well as sensors for path, angle and position detection for the industrial applications.

We offer products in the highest precision, rounded by an adequate and comprehensive service supply. We will be pleased to support you from the first design to the final serial product with a longtime experience.

Our comprehensive standard program is completed by customer-specific single- and special solutions, focusing the quality on an appropriate cost effectiveness.

Our Competences:

Specialization, Development and Production

ALTMANN Potentiometer

Adaptation of the product according to your requirements – flexible solutions!

All of our standard products can be amended individually:

From standard to customized – this is one of our outstanding strengths. We offer series production as well as single part manufacturing. We produce your potentiometers exactly according to your requirements and specifications. The mechanical and electrical characteristics can be adapted as required – starting from 1 piece

Our Know-How for your development projects

Together with you we compile individual solutions with or without product finishing – at your option. We offer feasibility studies, development and project planning as well as testing of sample parts and series. From the project planning until the start of serial production – we will stand at your side.

Please contact us with your requests.

Phone: +49 5221 / 34 04-0

Product Categories

Precision Potentiometers and Sensors

Rotary Potentiometers and Sensors
LPT18, T18, DP18 — Page 5

Rotary Potentiometers and Sensors
DP113, DP120 — Page 6

Low Torque Potentiometers
Low Torque Resistors F25 — Page 7

Multiturn Potentiometers and Sensors
DMG18, DMG19, DMG22, DMG23, DMG24 — Page 8

Linear Potentiometers
LL30, DL30 — Page 9

Linear Potentiometers
Foil Potentiometers, Linear Elements — Page 10

Gear Potentiometers
GP40 — Page 11

Motor Potentiometers
MP40 — Page 12

Carbon / Conductive Plastic Potentiometers
Front Panel Potentiometer — Page 13

Rotary Potentiometers
LP11 — Page 14

Rotary Potentiometers

LPT18, T18, DP18

ALTMANN Potentiometer

The precision potentiometers of this product line are suitable for the application in all industrial branches. The glass fibre reinforced plastic housing offers high strength and thermal resistance. It can be further encapsulated and then achieves protection class up to max. IP67. The version with multiple noble metal tap is particularly well suited for the actual value acquisition. The shaft is additionally beared on the bottom to resist the axial loading. The potentiometer can be delivered with a shaft on both sides as an option and is available as a multiple version.

General technical data:

Housing:	Glass-fibre reinforced plastic housing
Shaft:	Stainless steel
Bearing types:	Maintenance-free sliding bearing, needle bearing
Slider tapping:	Finger or multiple tapping
Housing protection class:	Up to IP67
Connection types:	Plug connection, solder connection blade terminal (not for T18/LPT18), print connection, litz wires, plug-in connector, customer specific connector
Mounting types:	Central fixing / synchro flange 9

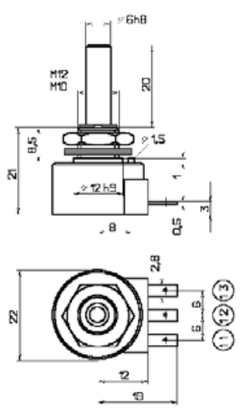
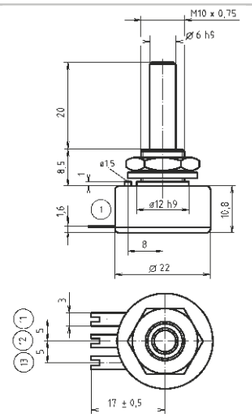
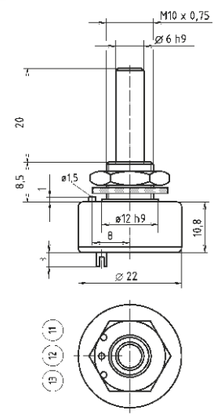
Options:

- multiple version
- centre tap
- potentiometer with internal spring reset or 10 lock-in positions
- available also as switch potentiometer

Precision Rotary Potentiometers for manual operation as setpoint device or for mechanical operation as angle transmitter up to 355°.

Product qualities:

- glass fibre reinforced plastic housing
- high strength and thermal resistance
- maintenance-free sliding bearing

DP18 St	T18 St	T18 Lt
		

Rotary Potentiometers and Sensors

DP113, DP120

The precision potentiometers of this product line are particularly well-suited for the use as actual value transmitters in all industrial branches. They are extremely robust due to the high-quality aluminium housing. The standard ball bearing / needle bearing mounted shaft of stainless steel absorbs axial and radial forces without any problem. The housing can be produced to meet the standard up to protection class IP67. For increased vibration or shock exposure the oil filling offers optimal reliability.

General technical data:

Housing:	Aluminium
Shaft:	Stainless steel
Bearing types:	ball bearing, needle bearing
Slider tapping:	Multiple tapping, noble metal
Housing protection class:	Up to IP67
Connection types:	Clamp connection, cable connection, sensor plug, customer specific connector
Mounting types:	Central fixing, synchro flange 13 or 20

Options:

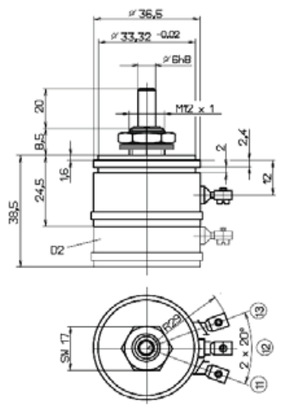
- multiple version
- measuring transducer 0/4…20mA or 0…10VDC available
- centre tap
- potentiometer with spring reset or 10 lock-in positions
- available also as switch potentiometer

High-quality precision potentiometers and sensors in a robust aluminium housing for the use as actual value transmitter, angle detection up to 355°.

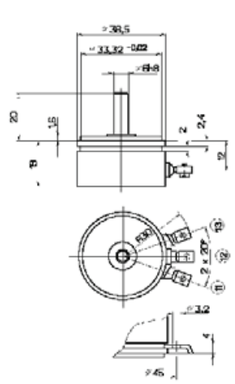
Product qualities:

- high-quality and robust aluminium housing
- synchro mounting
- high resolution
- ball bearing
- sensor output
- oil filling

DP113 Ze KL



DP113 Sy KL



Low Torque Potentiometers

Low Torque Resistors F25

The product line of the low torque resistors stands out due to the extremely low torque of 0,003 Ncm, which enable a very sensitive adjustment. In order to achieve this torque, the contact pressure of the tapper on the winding is kept as low as possible. The rotatable resistors consist of a wound resistance and a slider, which is coupled to the needle shaft of the measuring device by a clutch system. For tapper and winding only noble-metal alloys with high corrosion resistance are used.
The series F25 provides a long life and is particularly well-suited for the use in measuring instruments with pointer function. The model series F25Z is especially manufactured for this application. For the Low Torque Resistors we are offering clutch forks and clutch levers as accessories. A measuring transducer with output signal 0/4…20mA or 0…10VDC is additionally integrable.

General technical data:

Housing:	Aluminium / glass fibre reinforced plastic housing
Shaft:	Stainless steel
Bearing types:	Jewel bearing
Slider tapping:	Multiple tapping, noble metal
Housing protection class:	IP60
Connection types:	Solder connection, terminal wires, terminal block
Mounting type:	Clamping claws, mounting base/foot

Options:

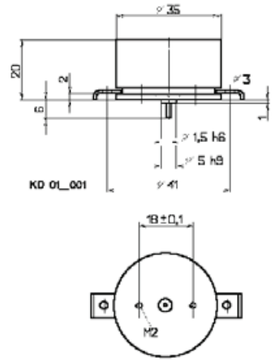
- costumer specific characteristic curve possible

Angle and position detection with the lowest torque, e.g. as wind direction sensor.

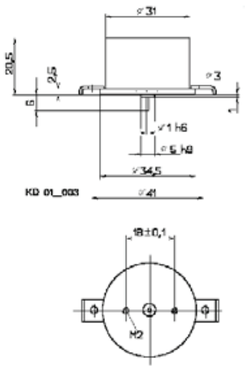
Product qualities:

- extremely low torque (very sensitively adjustable)
- long life
- measuring transducer integrable
- especially suitable for measuring instruments with pointer function

F25R



F25R V1



Multiturn Potentiometers and Sensors

DMG18, DMG19, DMG22, DMG23, DMG24

The product types DMG18 / 19 / 22 have a glass fibre reinforced housing and can be supplied with a shaft in inch version (Ø 6,35mm) as well as in metric version (Ø 6mm). Furthermore, the resistance wire can alternatively be furnished with a hybrid element which provides a longer life. The model types DMG23 & 24 are equipped with a high quality aluminium housing which protects against outside influences. Alternatively a hybrid element can be also inserted for these versions.
All types are available with 3, 5 or 10 turns. Optionally, the combination with a gear potentiometer offers the most varied reduction ratios. Moreover, a sensor installation with output signal 0/4…20mA or 0…10VDC is possible.

General technical data

Housing:	Aluminium / Plastic
Shaft:	Stainless steel
Bearing types:	Maintenance-free sliding bearing
Slider tapping:	Single tapping, noble metal
Housing protection class:	Up to IP67 (as from DMG22)
Connection types:	Solder connection, cable connection, terminal block, customer specific connector
Mounting types:	Central fixing, synchro flange

Options:

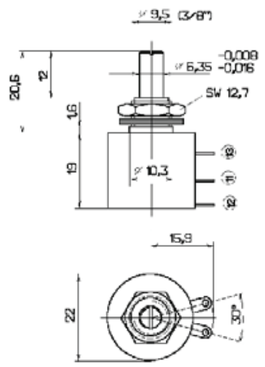
- other turns possible
- friction clutch
- multiple version

Precision multiturn potentiometers for highest requirements. Rotation angle area up to 3600°, with 3, 5 or 10 turns.

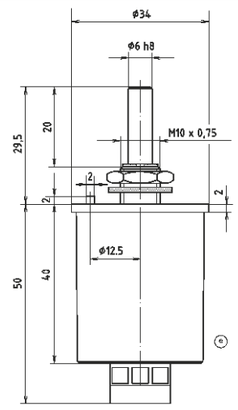
Product qualities:

- rotation angle area up to 3600°
- standard versions with 3, 5 or 10 turns
- maintenance-free sliding bearing
- protection class up to IP67
- high resolution

DMG18 Lt zo



DMG22 Ze Rk



Linear Potentiometers

LL30, DL30

The precision linear potentiometer types LL30/DL30 reliably measure linear paths for industrial application. Precision wire or conductive plastic can be chosen as resistor element. Standard parths are available up to 500mm. The anodized aluminium housing is very robust and offers protection against outside influences, the standard version available up to protection class IP65. Sliding bearing ensures smooth running. Optionally, the potentiometers can be equipped with calliper spring or integrated return spring.The absolute output signal can be displayed by an integrated measuring transducer as 0…10VDC or 0/4…20mA signal.

General technical data

Housing:	Aluminium
Push rod:	Stainless steel
Bearing types:	Maintenance-free sliding bearing
Slider tapping:	Multiple tapping, noble metal
Housing protection class:	Up to IP65
Connection types:	Cable connection
Mounting types:	Clamping claws, flange mounting

Options:

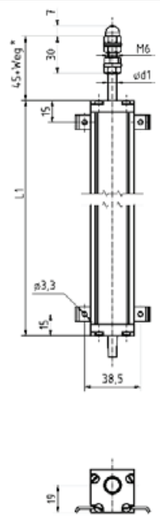
- link head
- adapter plate
- customer specific measuring paths as well as special lengths on request

Precision linear potentiometers for detection of linear paths up to 500mm.

Product qualities:

- robust aluminium housing
- maintenance-free sliding bearing
- optional calliper spring or integrated return spring
- measuring transducer integrable
- high resolution

DL30



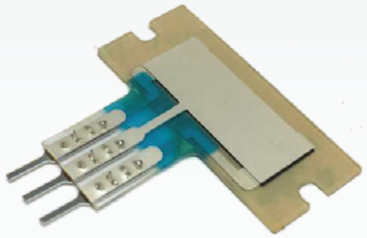
Linear Potentiometers

Foil Potentiometers, Linear Elements

Foil Potentiometer - AFP
As an alternative to our linear wirewound and conductive plastic potentiometers we also offer foil potentiometers. The foil potentiometers are hermetically sealed conductive plastic membrane potentiometers. They operate as an endlessly variable voltage divider. Due to their flat design they are especially well-suited for applications with limited space and can be adapted easily to the most varied requirements. The operation can be effected by slider tapping or manually.
Standard linear elements are available from 50 - 500mm, customer -specific versions can be supplied both with smaller and larger lengths. Furthermore also rotary versions with an outside diameter as from approx. 40 mm are possible. Magnetic foil potentiometers offer another possibility. This contactless measuring method exceeds the principle of a conventional foil potentiometer. It is extremely long-lasting and can be used in the same applications.

Product qualities:

- extremely flat (0,5 - 1mm)
- small design
- hermetically sealed (IP54)
- long life
- versatilely usable
- easy handling due to high quality adhesive foil to glue on almost every surface
- individual connection types possible



Linear Elements
Based on our longterm experience with linear resistor elements we offer versions with conductive plastic. These elements can be adapted easily to individual customer requirements and can be integrated into existing applications. Due to their long life they offer a very attractive cost/performance ratio. They consist of a base material and a resistor track. Furthermore, special customer solutions, which consist of a linear element and a functioning potentiometer with slider system are available. Individual solutions regarding fixing and slider can be developed here. The connections are variable: The customer can choose between cable or wires which may already be converted with a plug, if applicable.

Product qualities:

- individual design
- long life
- versatilely usable
- individual connections possible

Gear Potentiometers

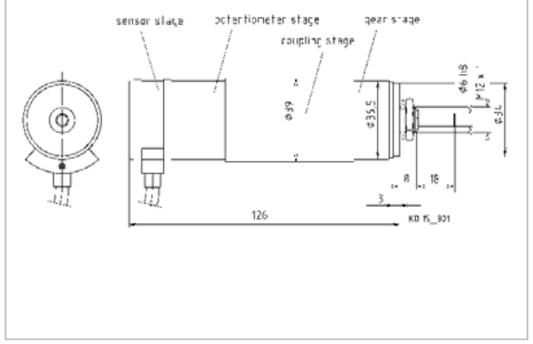
GP40

The potentiometers are using our multiturn potentiometer type DMG23 and our precision potentiometers of types DP18 and DP113. All potentiometers are equipped with end stops. In order to protect the gear against overloading a special slide coupling is integrated. In addition we offer to provide the gear potentiometer with further components such as a limit switch and respective cam or segment disc. The limit switches can either be integrated in a construction stage or can be mounted on the rear-side. The gear potentiometer has a robust aluminium housing (optionally stainless steel housing) and is equipped with central fixing M12x1. Additionally it can be furnished with a sensor output signal (0/4...20mA or 0...10VDC). The connection of the gear potentiometer is effected by cable.

Options:

- limit switches with silver or gold contacts

GP40



The gear potentiometers are characterized by their modular construction. The assembly of the components is effected according to your specifications. Available with potentiometer types: DP18, DP18 D2, DP113, DP113 D2, DMG23, DMG23 D2.

Product qualities:

- assembly of components as per customers requirements
- different types of potentiometers are usable (singleturn, multiturn)
- sensor output possible

Motor Potentiometers

MP40

We are using direct current motors of well-known brand name manufacturers. You may choose between operational voltages of 6, 12 and 24 volts. The potentiometers we are using are our multiturn potentiometer type DMG23 and our singleturn potentiometers of types DP18 and DP113. All potentiometers are fitted with end stops. In order to protect the motor and the gear against overloading a special slide coupling is integrated. In addition we offer to equip the motor potentiometer with further components such as a limit switch and a respective cam or segment disc (only singleturn potentiometers). The motor potentiometer is equipped with a robust aluminium housing (optionally stainless steel housing) and central fixing (depending upon the potentiometer type). Additionally it can be furnished with a sensor output signal (0/4...20mA or 0...10VDC). For mounting to your application we offer a clamp block.

Options:

- limit switches with silver or gold contacts

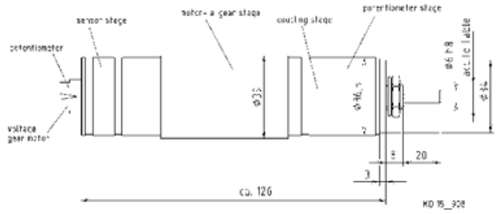
The motor potentiometers stand out due to their modular construction: Potentiometer – gear motor.

The assembly of the components is effected according to your specifications.

Product qualities:

- assembly of components as per customers requirements
- different types of potentiometers are usable (singleturn/multiturn)
- sensor output possible

MP40



Carbon / Conductive Plastic Potentiometers

Front Panel Potentiometers

These series have a metal or plastic housing as well as carbon layer resp. conductive plastic resistor element. Thus these series offer a cost-effective solution. They can be supplied with two different shaft diameters and central fixings as well as optionally with a classic linear or positive-logarithmic signal. Furthermore options with switch and centre locking as well as tandem versions are possible.

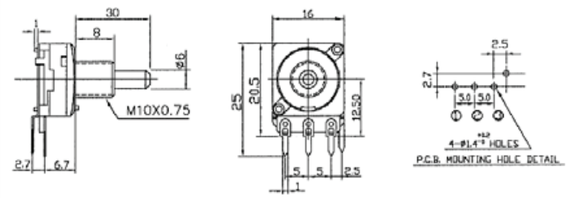
Options:

- encapsulated version via housing possible
- customer specific connector
- print connection support

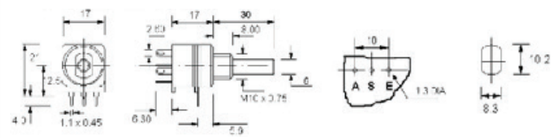
Product qualities:

- setpoint device in different versions for industrial standards such as tandem or switch version
- linear or positive-logarithmic curve possible
- print connections

KS15 Pr



LP15 Pr



Rotary Potentiometers

LP11

The LP11 stands out by it's especially compact construction. The housing with integrated thread is made of plastic and therefore offers a very cost-efficient version. The customizable torque of the shaft can be adjusted to the respective customer requirements on our site. Conductive plastic will be used as resistor element. Litz wires with a cross section of 0,5mm² can be used as connection. The lengths are also customized upon request.

General technical data

Housing:	Plastic
Shaft:	Plastic
Slider tapping:	Multiple tapping
Housing protection class:	Up to IP65
Connecting type:	litz wires
Mounting type:	Central fixing

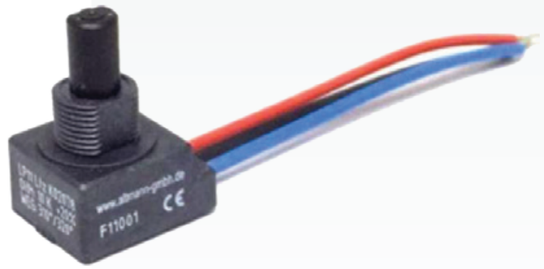
Options:

- metal-reinforced shaft can be supplied

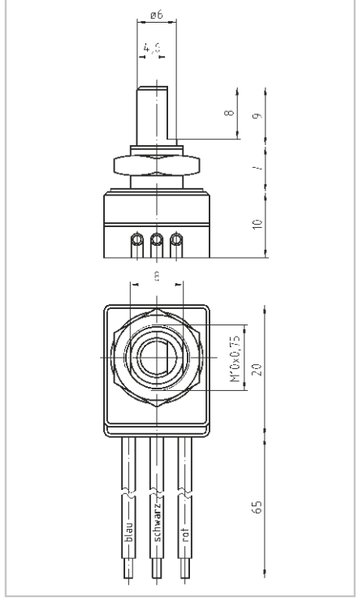
Precision rotary potentiometers for manual operation as desired value encoder.

Product qualities:

- glass fibre reinforced plastic housing
- high strength and thermal resistance
- high torque



LP11



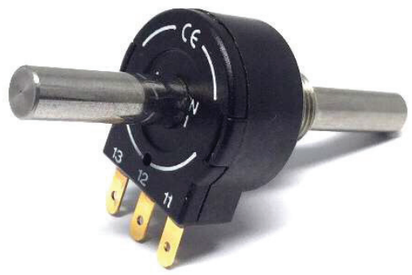
You don't find the correct potentiometer or miss a certain size ?

No problem, with our solutions of **AE Potentiometer GmbH** we always deliver the suitable part. This subsidiary of Altmann GmbH Bauteile für Meß- und Regeltechnik GmbH is dealing with worldwide sourcing of potentiometers, no matter whether the resistance element is made of cermet, conductive plastic, carbon layer or wire. As usual the focus is on the highest precision and quality.

We are working close together with our production partners; the auditing as well as the production processes correspond with our good practice. You can be sure to receive high-quality products at all times, which meet both your and our requirements. Due to the high product variety and the corresponding parameters we will serve your request with the appropriate solution at the right price.

Ask our sales department for starting series and alternative potentiometers.

We also offer corresponding plug connections and cable assemblies to supplement our potentiometric solutions.



IHK Ausbildungsbetrieb

Im kaufmännischen und
gewerblichen Bereich

Qualitätsmanagement ISO 9001:2015

ALTMANN Potentiometer

ALTMANN GmbH Bauteile für Meß- und Regeltechnik

Herringhauser Straße 29
D-32051 Herford

Telefon: +49 5221 3404 -0
Telefax: +49 5221 3404 -29

eMail: info@potentiometer.de
Internet: www.potentiometer.de

Edition October 2018