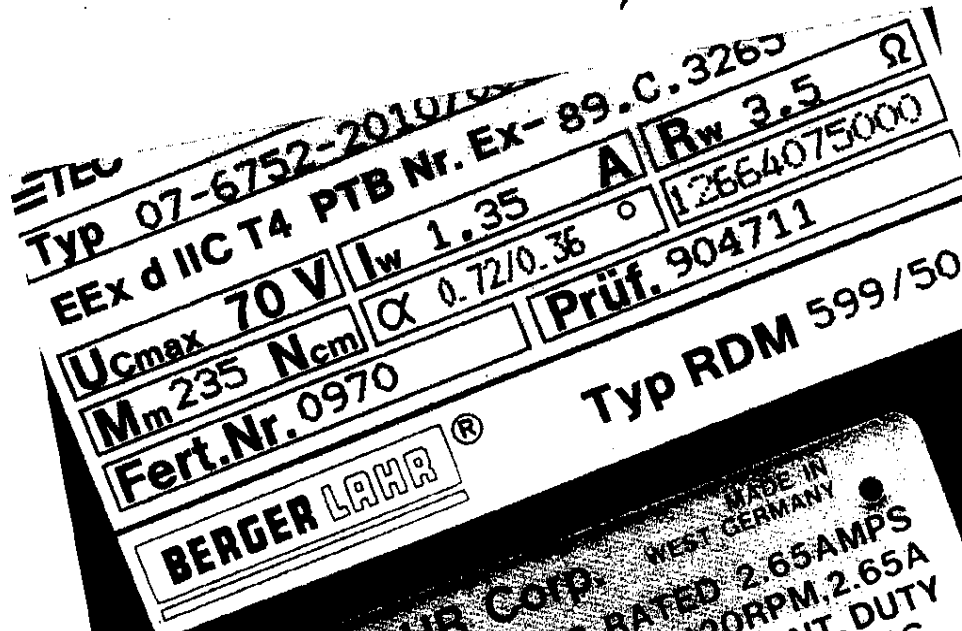


Berger Lahr - System Solutions

AR → LP. H. H. H. H. H.



BERGER LAHR Corp. MADE IN WEST GERMANY
 DM5913/50 Ex 5PH 70VDC RATED 2.65AMPS
 MAX. TORQUE = 28.3in-lbs@1KHz, 120RPM, 2.65A
 MAX. SPEED = 3600RPM 0.72°/0.36° CONT. DUTY
 INSULATION - CLASS B AMBIENT TEMP. 40°C
 SUITABLE FOR 0-20KHz
 WHEN OPERATED PER
 MANUFACTURER INSTRUCTION
 CLASS I GROUP D
 OPER. TEMP. CODE T4
 UL LISTED
 ELECTRIC MOTOR FOR USE IN HAZARDOUS LOCATIONS

Explosion-Protected 5-Phase Stepping Motors

BERGER LAHR

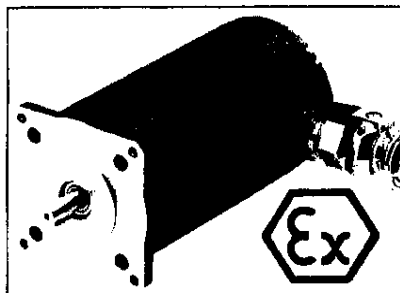
we make things move

Explosion-Protected 5-Phase Stepping Motors

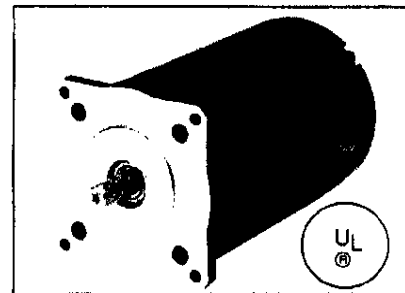
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5-phase EEx stepping motors RDM 599/50 and RDM 5913/50

These motors offer explosion protection according to the European standard EN 50014. The motors are certified for use in hazardous locations of group IIC. Ignition protection type is flameproof enclosure "d". The 5-phase EEx stepping motors belong to temperature class "T4" (135° C).



5-Phasen-EEx-Stepping Motor



5-Phasen-UL-Stepping Motor

5-phase UL stepping motors RDM 599/50 and RDM 5913/50

These motors offer explosion protection according to the US standard ANSI/UL 674. They are certified for use in hazardous locations of class I, group D. The 5-phase UL stepping motors belong to temperature class "T4" (135° C).

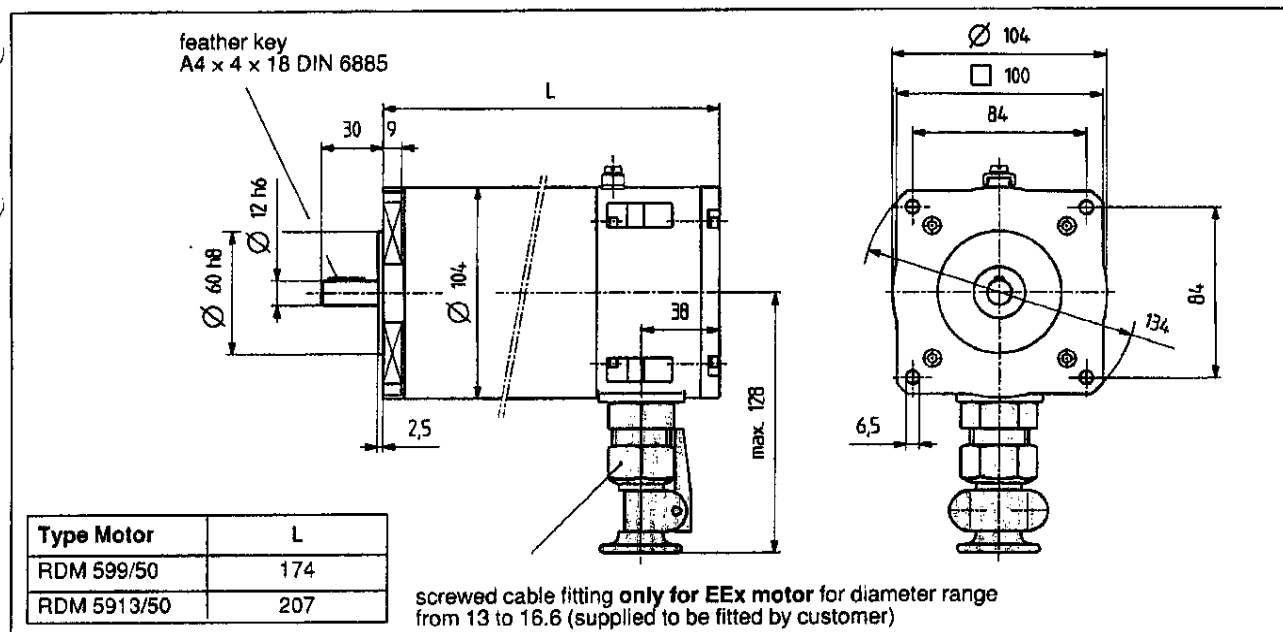
Type Motor	RDM		599/50	5913-50
Number of steps (HS/FS)	z		1000/500	
Step angle	α		0,36°/0,72°	
Max. torque	M_m	Ncm	235	320
Holding torque	M_H	Ncm	260	350
Rotor moment of inertia	J_R	kgcm ²	1,30	1,90
Systematic angular tolerance per step	$\Delta\alpha_s$		± 3'	
Nominal current/winding	I_w	A	1,35	2,65
Nominal voltage/winding	R_w	Ohm	3,50	1,0
Max. chopper voltage	U_{CHmax}	V	70	70
Current rise time constant	τ	ms	ca. 9	ca. 10
Max. dynamic shaft load*	axial radial	N	ca. 30 ca. 100	ca. 30 ca. 100
weight	m	kg	5,8	7,5

*at half shaft length (from motor flange)

Minimum requirements connection cable for EEx motor

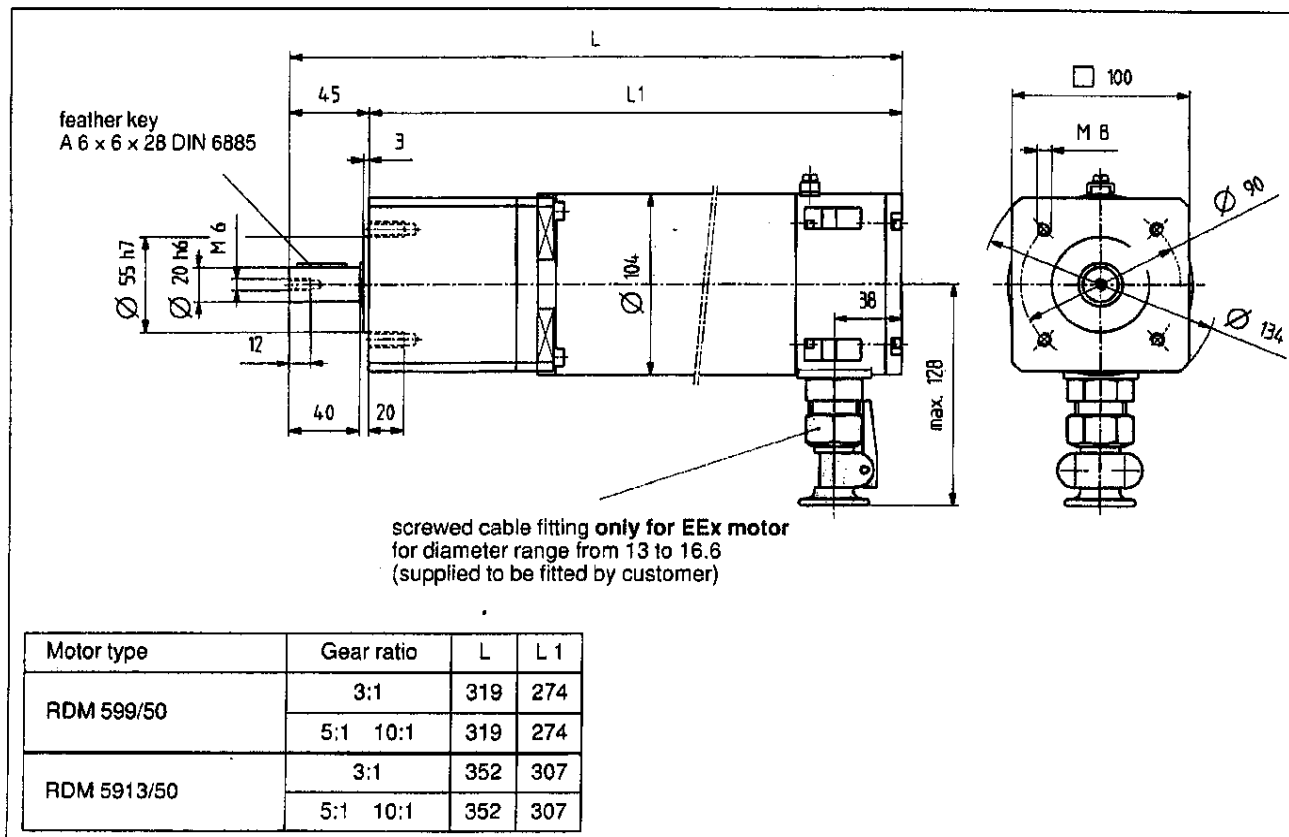
12 wires 0.75 mm² (PE = gn/ye);
as per VDE 0165, polyester inner sheath foil; screening made of tinned Cu wires; screen tracer of blank Cu wires 29 x 0.25 mm²

Nominal voltage: 500 V
Test voltage: > 3 kV
Insulation resistance: > 20 M Ω /km
Temperature range: -20° C to + 115° C



Outline drawing and specifications explosion-protected 5-phase stepping motors, size 90

Explosion-Protected 5-Phase Stepping Motors with Gearbox

BERGER LAHR


Outline drawing and specifications explosion-protected 5-phase stepping motors with planetary gearbox PL 50

5-phase stepping motors with planetary gearbox PL 50

The torques available during operation depend on the motor drive and the step frequency. Use the characteristics printed on the last page and the gear ratio i to determine the torques.

5-phase stepping motor with gearbox PL 50	Gear ratio i	Moment of inertia of gearbox at motor side JG (kg cm ²)	Maximum torque (Nm) ^a
RDM 599/50 RDM 5913/50	10:1	0,16	19,9 27,2
RDM 599/50 RDM 5913/50	5:1	0,21	9,9 13,6
RDM 599/50 RDM 5913/50	3:1	0,33	6,0 8,2

Specifications planetary gearbox PL 50

Type of gearbox:	Planetary gearbox, single-stage
Weight: (PL 50 gearbox, single-stage):	3,0 kg
Continuous load:	50 Nm
Max. radial load:	500 Nm
Max. axial load:	250 Nm
Standard circumferential backlash motor shaft - gearbox output shaft:	< 15'
Efficiency:	approx. 85%
Housing material and surface:	Aluminum, eloxed
Shaft material:	C45

Berger Lahr: The Difference

24-MONTH

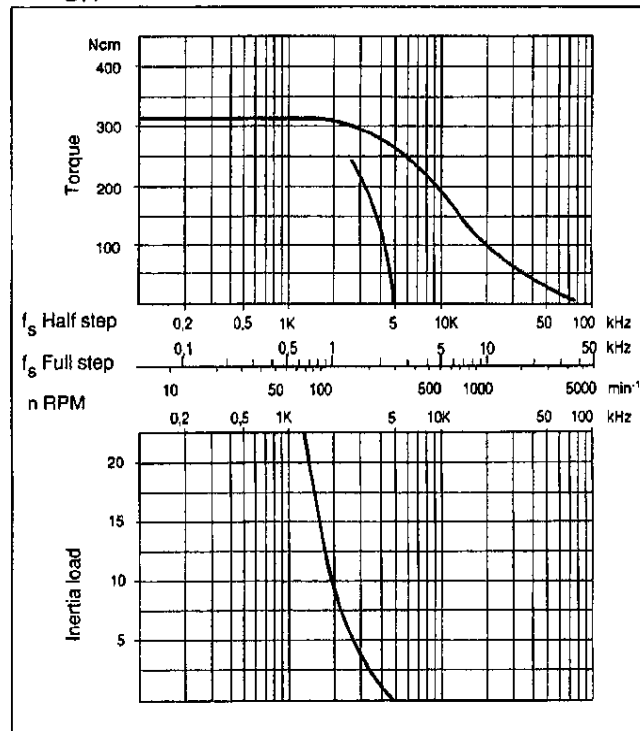
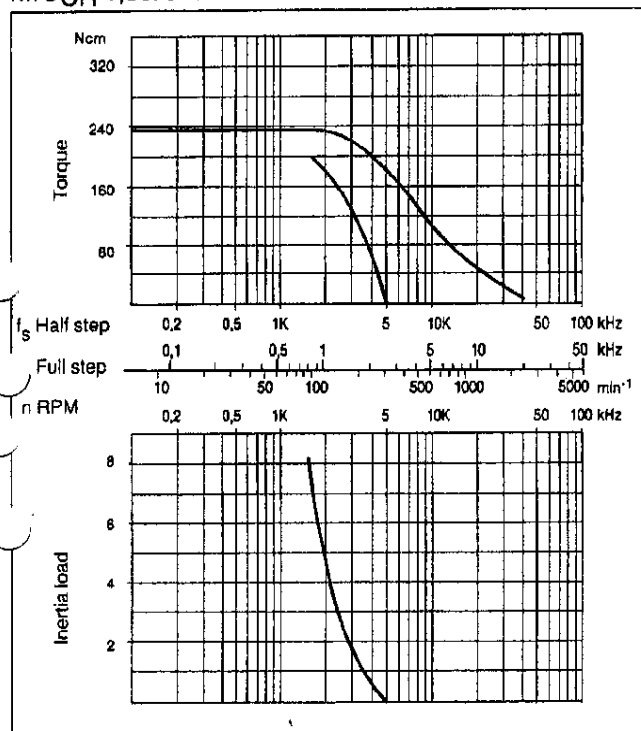
WARRANTY
on all
motors
BERGER LAHR

Characteristics

BERGER LAHR

Explosion-protected
5-phase stepping motor
RDM 599/50
Power drive D550
Iw/U_{CH} 1,35A/70 V

Explosion-protected
5-phase stepping motor
RDM 5913/50
Power drive D550
Iw/U_{CH} 2,65A/70 V



Ordering key

Motor			Connection cable (accessories)		Gearbox (option)	
Type	Ordering no. EEx	Ordering no. UL	Length	Ordering no.	Gear ratio	Suffix for ordering no.
RDM 599/50	12 664 0750 00	12 964 0751 00	please specify length required (in m)		3:1	.../03
RDM 5913/50	12 665 0450 00	12 965 0450 00		98 078 3050 92	5:1	.../05
					10:1	.../010

Ordering example: Stepping motor RDM 599/50 L with gearbox 5:1 plus
4 meter connection cable
→ Ordering number 12 664 0750 00/05
+ ordering number 98 078 3050 92x4 m

The following power drives are certified for use with the BERGER LAHR EEx motors:

- BERGER LAHR power drive D550
- BERGER LAHR single-axis complete devices with power drive D550
- BERGER LAHR multi-axis complete devices with power drive D550

Please refer to our catalogue 360 "Power Drives for 5-Phase Stepping Motors" for details on these control units.

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BERGER LAHR GmbH · Breslauer Str. 7 · D-7830 Lahr · Postf. 1180 · Tel. (07821) 582-0 · Fax (07821) 582313 · Tlx 17-782119

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