



Absolute single and multiturn encoders

- ▶ 13 or 25 bit with synchro- or clamping flange
- ▶ IP 66 at housing, IP 64 at shaft inlet
- ▶ 58 mm diameter
- ▶ 5 Vdc
- ▶ Available with 6 or 10 mm stub-shaft or 12 mm hollow-shaft



674/684

675/685

674/684 Hollow shaft

ELECTRICAL SPECIFICATION

Supply voltage +EV	5V ±5%
Current consumption at no load	Singleturn: 90mA , Max 150mA Multiturn: 190mA, Max 250mA
Resolution	Singleturn 13 Bit, 8192 positions / revolution Multiturn 12 Bit, 4096 distinguishable revolutions
Accuracy	± ½ LSB
Incremental track Resolution	Sinusodial 1Vpp 512 ± 60"
Outputs, Serial	EnDat
Code	Pure Binary
Clock input	RS-485
Data output	RS-485
Frequency range	Max 2MHz
Cable length	Max 100m

ACCESSORIES

Profibus DP Gateway	Part. No. 01300210, 01300215
CAN Kingdom Gateway	Part. No. 01300220, 01300225
CAN Open Gateway	Part. No. 01300230, 01300235
Mating connector	Part. No. 01209085 (17 pin EML)
Mounting bracket	See datasheet for accessories
Mounting kit	
Bearing box	
Couplings	

DESCRIPTION EnDat

An advanced high speed serial point-to-point communication. With an **Encoder Data** interface you can not only read a positional value from the encoder, but you can also send parameters to and read information from the encoder.

Information (DATA) is sent synchronously with a CLOCK signal from the receiver electronics. A mode command is sent to the encoder on the DATA channel to determine whether the encoder must send the absolute positional value or parameter data. Each cycle of positional data begins with an alarm bit, which warns if anything is faulty in the encoder.

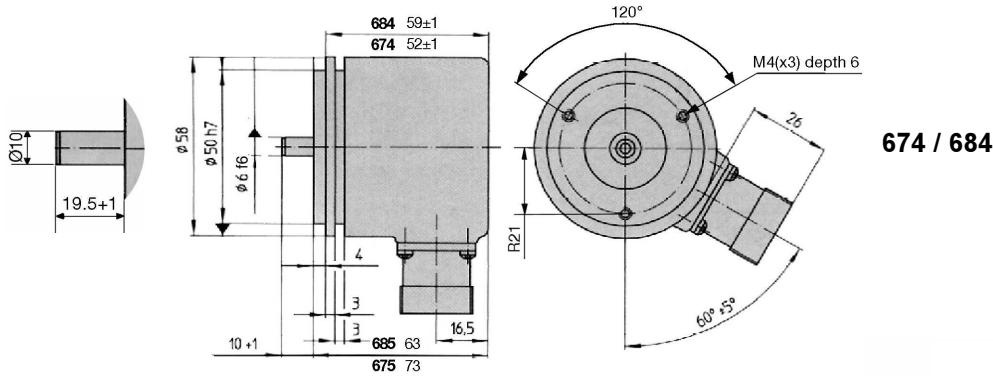
For applications which require fast communication, it is possible to send constant pulse trains on CLOCK and then to read positional data without having to send a mode command other than in conjunction with start-up.

The Leine&Linde fieldbus Gateways communicate with the encoder via EnDat.

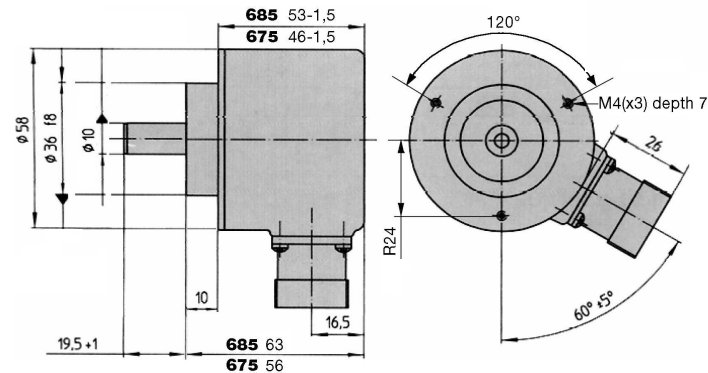
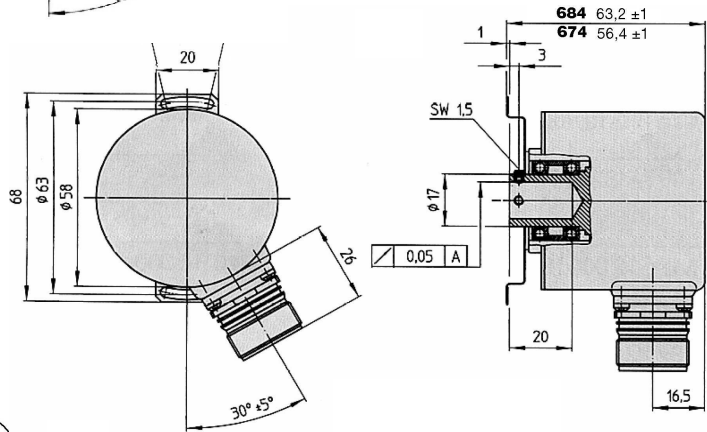
CONNECTION

Function	17 pin EML
Sensor + 5 Volt	1
Sensor 0 Volt	4
+ 5 Volt	7
0 Volt	10
Clock	8
Clock	9
Data	14
Data	17
Internal screen	11
<u>1</u>	12
<u>1</u>	13
<u>2</u>	15
<u>2</u>	16

674 / 675 / 684 / 685 EnDat



674 / 684 Hollow shaft



675 / 685

MECHANICAL SPECIFICATION

Shaft, Stainless steel	Stub-shaft Ø 6, 10mm	Hollow-shaft Ø 12 mm
Moment of inertia	3,8 x 10 ⁻⁶ kgm ²	4,6 x 10 ⁻⁶ kgm ²
Load max		
Radial	60N	20N
Axial	40N	10N
Speed max	6000 rpm	
Code disc	Glass disc	
Temperature		
Operating	-20°C ... +100°C	
Storage	-30°C ... +80°C	
Housing	Aluminum	
Weight	Approx. 300g	
Protection class	IP 66 according to IEC 529	
Shaft inlet	IP 64 according to IEC 529	
Vibration	<100m/s ² (50...2000 Hz)	
Shock	<1000m/s ² (11ms)	
Connection	17-pin radial EML	

ORDERING INFORMATION

Available models

- 674 002211**
13 Bit singleturn with 6mm stub-shaft and syncro flange
- 674 005211**
13 Bit singleturn with 12mm hollow-shaft and stator coupling
- 675 004211**
13 Bit singleturn with 10mm stub-shaft and clamping flange
- 684 002211**
25 Bit singleturn with 6mm stub-shaft and syncro flange
- 684 004211**
25 Bit singleturn with 10mm stub-shaft and syncro flange
- 684 005211**
25 Bit singleturn with 12mm hollow-shaft and stator coupling
- 685 004211**
25 Bit singleturn with 10mm stub-shaft and clamping flange

Leine&Linde ISO 9001 certified

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01-03-22 PS. Specifications can be changed without prior notice.