

# Hybrid Gearheads

## 0,4 Nm

**For combination with** (overview on page 14-15)  
 DC-Micromotors:  
 2224, 2230, 2232, 2233  
 Brushless DC-Servomotors:  
 2232, 2248  
 DC-Motor-Tacho Combinations:  
 2251

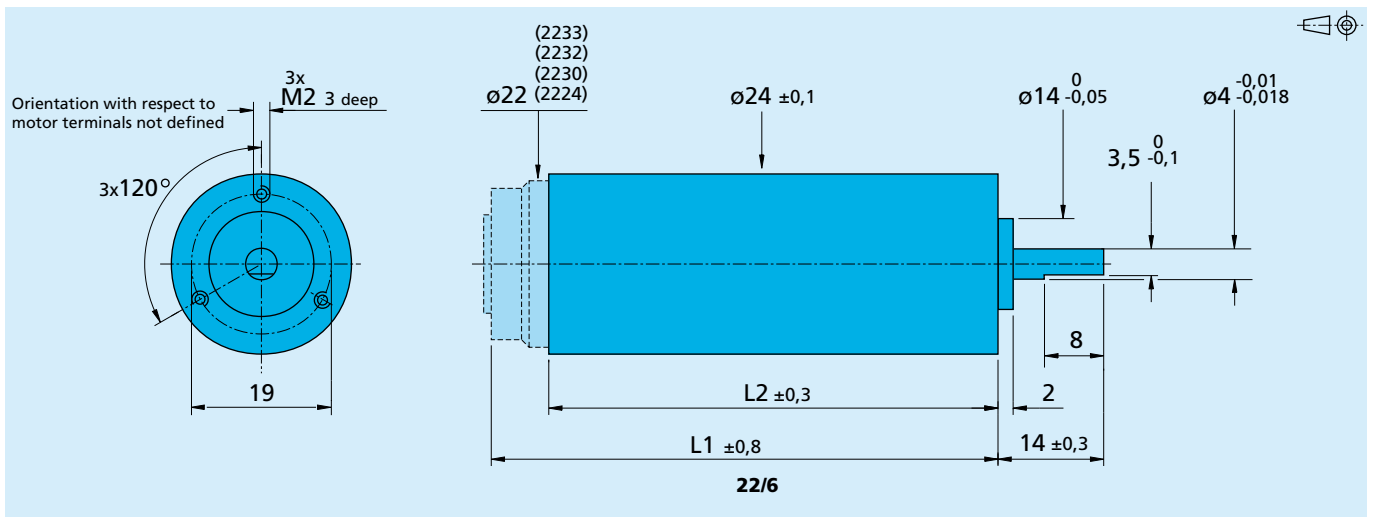
### Series 22/6

	22/6
Housing material	Plastic
Geartrain material	metal/plastic
Recommended max. input speed for:	
– continuous operation	4 000 rpm
Backlash, at no-load	≤ 3°
Bearings on output shaft	preloaded ball bearings
Shaft load, max.:	
– radial (7 mm from mounting face)	≤ 20 N
– axial	≤ 5 N
Shaft press fit force, max.	≤ 50 N
Shaft play (on bearing output):	
– radial	≤ 0,02 mm
– axial	= 0 mm
Operating temperature range	– 30 ... + 85 °C

### Specifications

reduction ratio (nominal)	weight without motor	length without motor	length with motor				output torque		direction of rotation (reversible)	efficiency
			2224 R	2230 F	2232 R	2233 F	continuous operation	intermittent operation		
	g	mm	L1 mm	L1 mm	L1 mm	L1 mm	M max. mNm	M max. mNm		%
14,6 :1	32	59,4	59,9	65,7	67,9	68,3	400	600	≠	80
20,4 :1	32	59,4	59,9	65,7	67,9	68,3	400	600	≠	80
34 :1	32	59,4	59,9	65,7	67,9	68,3	400	600	=	75
47,6 :1	32	59,4	59,9	65,7	67,9	68,3	400	600	=	75
79,4 :1	34	59,4	63,1	68,9	71,1	71,5	400	600	≠	70
111 :1	34	59,4	63,1	68,9	71,1	71,5	400	600	≠	70
185 :1	36	59,4	66,3	72,1	74,3	74,7	400	600	=	65
259 :1	36	59,4	66,3	72,1	74,3	74,7	400	600	=	65
432 :1	38	59,4	69,5	75,3	77,5	77,9	400	600	≠	60
605 :1	38	59,4	69,5	75,3	77,5	77,9	400	600	≠	60
1 009 :1	40	59,4	72,7	78,5	80,7	81,1	400	600	=	55
1 412 :1	40	59,4	72,7	78,5	80,7	81,1	400	600	=	55
2 354 :1	42	59,4	75,9	81,7	83,9	84,3	400	600	≠	50
3 295 :1	42	59,4	75,9	81,7	83,9	84,3	400	600	≠	50

**Note:** The reduction ratios are rounded, the exact values are available on request.



For details on technical information and lifetime performance refer to pages 118-122.

Specifications subject to change without notice.