

The purpose of this document is to identify the main input data required by 5LM for dimensioning a reduction drive. This form is not necessarily exhaustive but constitute a support document to define the main requirements at the beginning of the collaboration.

Please return this completed form with the information you have to your usual 5LM contact or to contact@5LM.fr.

Should some of requirements being free, unknown or hardly quantified by customer, 5LM can provide assistance to determine or propose such important input data.

The cells colored as follows have to be filled (checkbox, drop-down list, text box):



1 Identification

Society		
Project		
Contact	Name	
	Phone	
	E-mail	
Date		

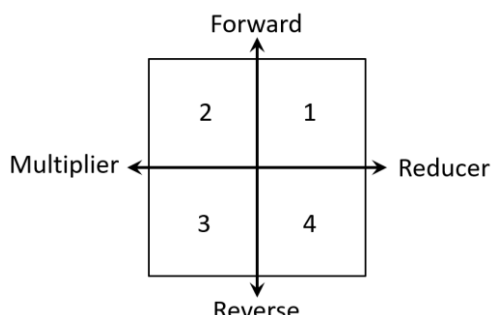
2 Applicable standards

Appropriate standards to be complied with:

3 Performance

3.1 Operation

Several of the choices presented below may be selected:

<input type="checkbox"/>	Quadrant 1 (Reducer – Forward)	
<input type="checkbox"/>	Quadrant 2 (Multiplier – Forward)	
<input type="checkbox"/>	Quadrant 3 (Multiplier – Reverse)	
<input type="checkbox"/>	Quadrant 4 (Reducer – Reverse)	

Speed ratio	<input type="checkbox"/>	Exact value	<input type="checkbox"/>	Approximate value
Reversible?				
Targeted efficiency				
Starting torque				
Reversibility torque				
Max. backlash	arcmin (at the input shaft, output shaft blocked)			
Angular stiffness	N.m/arcmin (at the input shaft)			

3.2 Continuous requirements (at the output)

The operating points here below are defined at the level of the output shaft of the reduction drive.

Designation	Couple continue	Rotation speed (\pm)	Duration (h / min / s)
Continuous 1	N.m	rpm	
Continuous 2	N.m	rpm	
Continuous 3	N.m	rpm	

Maximum rotation speed	rpm
------------------------	-----

3.3 Peak and dynamic requirements

Maximum moment of inertia driven	kg.m ² (at the input shaft)
Maximum Acceleration / Deceleration	rad/s ² (at the input shaft)

Type	Number	Duty cycle
<input type="checkbox"/>	Cycle 1	
<input type="checkbox"/>	Cycle 2	

Maximum torque	N.m
----------------	-----

4 Lubrication

Precise the lubrication type required:

<input type="checkbox"/>	Grease	<input type="checkbox"/>	Oil	<input type="checkbox"/>	Other	<input type="checkbox"/>	No requirement

5 Input and output interfaces

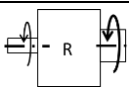
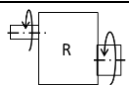

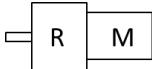
Input type	<input type="checkbox"/>	Shaft key	<input type="checkbox"/>	Spline shaft	<input type="checkbox"/>	Solid-shaft
	<input type="checkbox"/>	Input gear	<input type="checkbox"/>	External flange	<input type="checkbox"/>	Hollow-shaft
Main dimensions						

Output type	<input type="checkbox"/>	Shaft key	<input type="checkbox"/>	Spline shaft	<input type="checkbox"/>	Solid-shaft
	<input type="checkbox"/>	Output gear	<input type="checkbox"/>	External flange	<input type="checkbox"/>	Hollow-shaft
Main dimensions						

6 Reduction drive configuration

6.1 Design

If a design is already intended, precise the matching items (design requirements):

<input type="checkbox"/>	Coaxial		<input type="checkbox"/>	Parallel		<input type="checkbox"/>	Right angle	
<input type="checkbox"/>	Geared motor <i>(cf. motor template)</i>				<input type="checkbox"/>	Reduction drive only		
<input type="checkbox"/>	Mechanical technology (gear)				<input type="checkbox"/>	Magnetic technology		

Or else:

<input type="checkbox"/>	No specific design requirement
--------------------------	--------------------------------

6.2 Components to integrate

<input type="checkbox"/>	Torque limitation	Torque to be limited from	N.m
<input type="checkbox"/>			

7 Mechanical interface

Dimension Space envelop	
Weight	kg Max
Bonding resistance	mΩ Max
Marking identification	

Housing fixing	
<input type="checkbox"/> Round flange	<input type="checkbox"/> Square flange

Reduction drive orientation (main axis with respect to gravity):

<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical <i>(input at the top)</i>	<input type="checkbox"/> Vertical <i>(input at the bottom)</i>	<input type="checkbox"/> Indifferent
-------------------------------------	--	---	--------------------------------------

Mechanical interface drawing to be attached:

Precise all the external loads applied to the reduction drive (forces on the shaft, on the case, axial loads, radial loads/moments or their point of application).

Attach a detailed description (especially with schemes) if possible.

8 Cooling conditions

<input type="checkbox"/>	Air natural convection		
<input type="checkbox"/>	Forced air cooling	Speed	m/s
<input type="checkbox"/>	Cooling by circulation of lubricant (oil)	Oil type	
		Max temperature	°C
		Flow rate	L/s

9 Environment

Select the environment requirements applicable to the motor and precise for each one the detailed specification. Attach specific documents accordingly if necessary.

<input type="checkbox"/>	Operating ambient temperature	Temperature Min	°C
		Temperature Max	°C
<input type="checkbox"/>	Other temperature requirements		
<input type="checkbox"/>	Solid particle and liquid ingress withstand levels (IP)		
<input type="checkbox"/>	Corrosive atmosphere (humidity, salt fog...)		
<input type="checkbox"/>	Fluid compatibility		
<input type="checkbox"/>	Vibrations / Shocks withstand levels		
<input type="checkbox"/>	Ambient pressure/altitude		
<input type="checkbox"/>	Acoustic noise levels		

10 Life and reliability

Duty cycle to be considered		
Life expectancy		
MTBF (Mean Time Between Failures)		

11 Other

Precise here below any other requirements and comments not dealt with previous sections of this document: