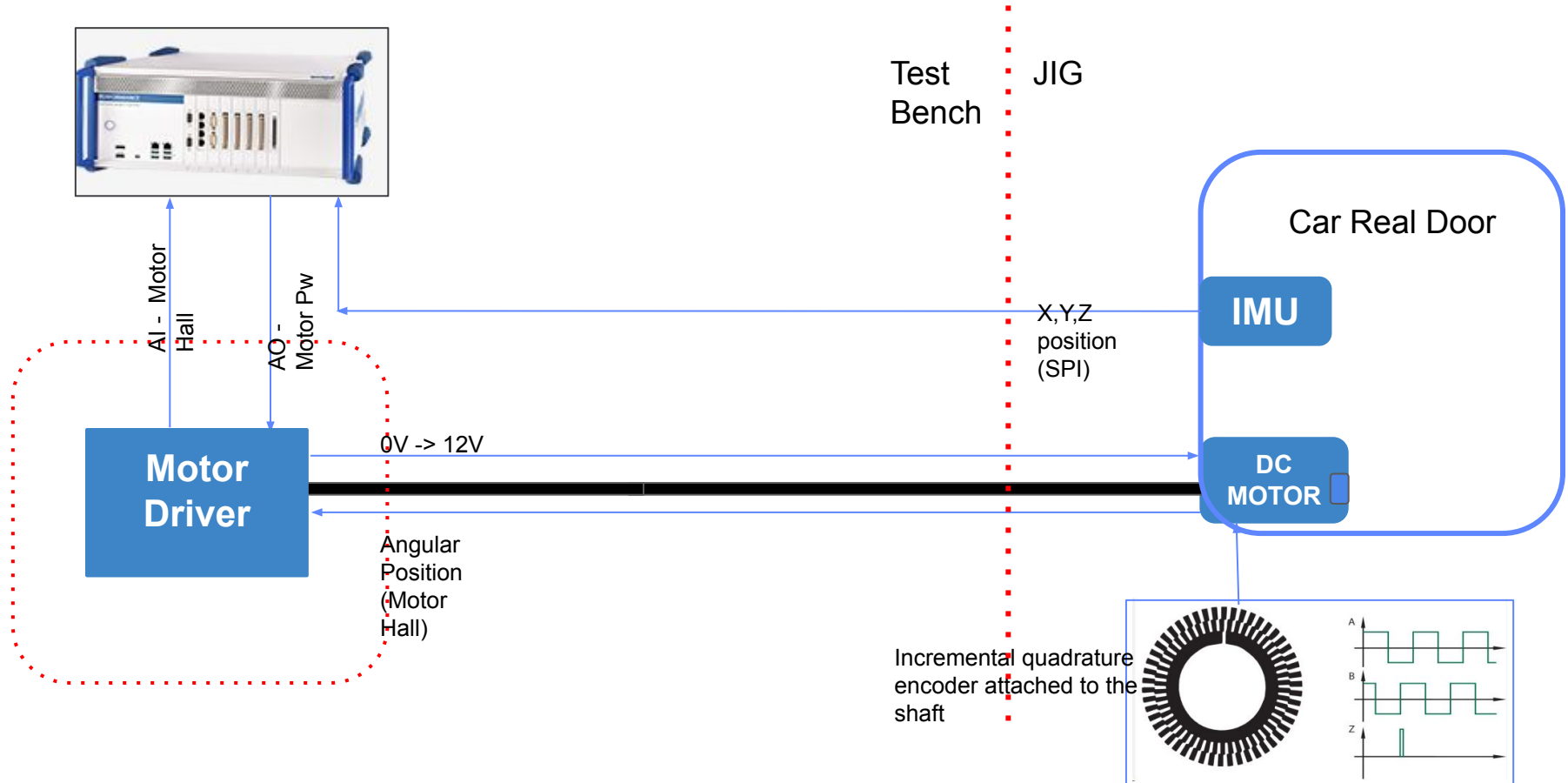


Validation Setup



One-Axis Brushed DC motor spec.



Parameter description	Value	Unit
Peak Current	30.5 @ 10V	A
Motor ohmic resistance temperature axis	-30°C : 0.285 ; 20°C : 0.36; 80°C : 0.437	Ohm
Motor inductance	0,0186	mH
Motor torque constant	0,018	Nm/A
Motor back-emf constant	1,4024	V/(rad/s)
Motor cogging breakaway torque	12	mNm
Motor inertia	2,70E-05	kg*m^2
Speed proportional damping of the motor	2,62E-10	Nm/(rad/s)
Thermal mass case	0,12	kg
Specific heat capacity case	434	J/kg/K
Thermal mass magnet	0,04	kg
Specific heat capacity magnet	886,071	J/kg/K
Thermal mass armature	0,097	kg
Specific heat capacity armature	502,4	J/kg/K
Thermal mass windings	0,03	kg
Specific heat capacity windings	504	J/kg/K
Thermal resistance (environment - case)	19,919	K/W
Thermal resistance (case - magnet)	0,006	K/W
Thermal resistance (magnet - armature)	7.626 ref.	K/W
Thermal resistance (armature - windings)	0,006	K/W