

Client :

Doc. Number :

Project:

Date :

Page 1 of 3 Rev: 00

# MOTOR CONTROL & STARTING RESISTOR DATA SHEET

Rev	Revision Date	Description	Compiled	Checked	Approved

Client :

Doc. Number :

Project:

Date :

Page 2 of 3 Rev: 00

<u>DESCRIPTION</u>	<u>REQUIRED SPECIFICATIN</u>	<u>BIDDER SPECIFICATION</u>
<b>1. GENERAL</b>		
1.1. QUANTITY		
1.2. CODES & STANDARDS		NEMA ICS-9, IEEE-32 (1972), IEC 60439-1
<b>2. SERVICE CONDITIONS</b>		
2.1. LOCATION	<input type="checkbox"/> INDOOR <input type="checkbox"/> OUTDOOR	<input type="checkbox"/> INDOOR <input type="checkbox"/> OUTDOOR
2.2. AMBIENT TEMPERATURE	MAX: °C      MIN: °C	MAX: °C      MIN: °C
2.3. MAX RELATIVE HUMIDITY	%	%
2.4. ALTITUDE (SEA LEVEL)	m	m
2.5. SEISMIC WITHSTAND FACTOR (Ver/Hor)	g	g
<b>3. SYSTEM &amp; RATING</b>		
<b>3.1. RATING OF MOTOR</b>		
3.1.1. RATED POWER	kW	kW
3.1.2. CURRENT TYPE (AC/DC)	<input type="checkbox"/> DC <input type="checkbox"/> AC	<input type="checkbox"/> DC <input type="checkbox"/> AC
3.1.3. MOTOR TYPE	<input type="checkbox"/> AC WOUND ROTOR INDUCTION MOTOR (SLIP RING) <input type="checkbox"/> AC SQUIRREL CAGE INDUCTION MOTOR <input type="checkbox"/> DC SERIES WOUND MOTOR	<input type="checkbox"/> AC WOUND ROTOR INDUCTION MOTOR (SLIP RING) <input type="checkbox"/> AC SQUIRREL CAGE INDUCTION MOTOR <input type="checkbox"/> DC SERIES WOUND MOTOR
3.1.4. NUMBER OF PHASES		
3.1.5. RATED VOLTAGE OF MOTOR SUPPLY	kV	kV
3.1.6. RATED CURRENT OF MOTOR SUPPLY	A	A
3.1.7. FULL LOAD SPEED	RPM	RPM
3.1.8. STARTING CURRENT PERCENT	%	%
3.1.9. MOTOR DUTY CYCLE	%	%
3.1.10. RATED FREQUENCY (if AC motor)	Hz	Hz
3.1.11. RATED POWER FACTOR (if AC motor)		
3.1.12. NUMBER OF POLE (if AC motor)		
3.1.13. SYNCHRONOUS SPEED (if AC motor)	RPM	RPM
3.1.14. RATED SLIP OF MOTOR (if AC motor)	%	%
3.1.15. RATED VOLTAGE OF ROTOR (if Slip Ring motor)	kV	kV
3.1.16. ROTOR STANDSTILL VOLTAGE (if Slip Ring motor)	kV	kV
3.1.17. ROTOR RATED CURRENT (if Slip Ring motor)	A	A
3.1.18. ROTOR CONFIG. (Δ/Y) (if Slip Ring motor)		
3.1.19. OHMIC VALUE OF ROTOR (if Slip Ring motor) or ARMATURE (if DC motor)	Ω/Phase	Ω/Phase
<b>4. RESISTOR RATING</b>		
<b>4.1. RATING OF RESISTOR</b>		
4.1.1. NUMBER OF RESISTOR PHASES		
4.1.2. RATED POWER OF RESISTOR	kW	kW
4.1.3. PHASE CONFIG. (Δ/Y) (if Slip Ring motor)		
4.1.4. RATED VOLTAGE OF RESISTOR	kV	kV
4.1.5. MAX. OPERATING VOLTAGE	kV	kV
4.1.6. PHASE TO NEUTRAL VOLTAGE	kV	kV
4.1.7. RATED WITHSTAND VOLTAGE	kV	kV
4.1.8. RATED LIGHTNING IMPULSE VOLTAGE	kV	kV
4.1.9. LINE RATED CURRENT (ON DUTY CYCLE)	A	A
4.1.10. NEMA RESISTOR CLASS		
4.1.11. NUMBER OF STEPS		
4.1.12. OHMIC VALUE OF STEPS@20°C/TOLERANCE	<input type="checkbox"/> STEP1: Ω / ± % <input type="checkbox"/> STEP2: Ω / ± % <input type="checkbox"/> STEP3: Ω / ± % <input type="checkbox"/> STEP4: Ω / ± % <input type="checkbox"/> STEP5: Ω / ± % <input type="checkbox"/> STEP6: Ω / ± %	<input type="checkbox"/> STEP1: Ω / ± % <input type="checkbox"/> STEP2: Ω / ± % <input type="checkbox"/> STEP3: Ω / ± % <input type="checkbox"/> STEP4: Ω / ± % <input type="checkbox"/> STEP5: Ω / ± % <input type="checkbox"/> STEP6: Ω / ± %
4.1.13. DUTY CYCLE OF RESISTOR	%	%
4.1.14. MAX. TEMPERATURE RISE	°C	°C

**MOTOR CONTROL & STARTING RESISTOR DATA SHEET**

Client :

Doc. Number :

Project:

Date :

Page 3 of 3 Rev: 00

<u>DESCRIPTION</u>	<u>REQUIRED SPECIFICATIN</u>	<u>BIDDER SPECIFICATION</u>
<b>5. CONSTRUCTION OF RESISTOR</b>		
<b>5.1. RESISTOR ELEMENTS</b>		
5.1.1. TYPE OF RESISTOR		
5.1.2. MATERIAL OF RESISTOR		
5.1.3. RESISTOR SCREW & NUT MATERIAL	<input type="checkbox"/> GALVANIZED <input type="checkbox"/> STAINLESS STEEL	<input type="checkbox"/> GALVANIZED <input type="checkbox"/> STAINLESS STEEL
5.1.4. CONNECTIONS MATERIAL	<input type="checkbox"/> STAINLESS STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> BRASS <input type="checkbox"/> COPPER	<input type="checkbox"/> STAINLESS STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> BRASS <input type="checkbox"/> COPPER
<b>5.2. CABLE ENTRY</b>		
5.2.1. ENTRY CONNECTION	<input type="checkbox"/> BUSHING <input type="checkbox"/> INDUSTRIAL SOCKET <input type="checkbox"/> BUSBAR <input type="checkbox"/> TERMINAL	<input type="checkbox"/> BUSHING <input type="checkbox"/> INDUSTRIAL SOCKET <input type="checkbox"/> BUSBAR <input type="checkbox"/> TERMINAL
5.2.2. INCOMING POSITION	<input type="checkbox"/> TOP <input type="checkbox"/> SIDE <input type="checkbox"/> BOTTOM <input type="checkbox"/> FROM CABLE BOX	<input type="checkbox"/> TOP <input type="checkbox"/> SIDE <input type="checkbox"/> BOTTOM <input type="checkbox"/> FROM CABLE BOX
5.2.3. OUTGOING POSITION	<input type="checkbox"/> SIDE <input type="checkbox"/> BOTTOM <input type="checkbox"/> FROM CABLE BOX	<input type="checkbox"/> SIDE <input type="checkbox"/> BOTTOM <input type="checkbox"/> FROM CABLE BOX
5.2.4. INCOMING PROTECTION	<input type="checkbox"/> CABLE BOX <input type="checkbox"/> COVERED <input type="checkbox"/> UNCOVERED	<input type="checkbox"/> CABLE BOX <input type="checkbox"/> COVERED <input type="checkbox"/> UNCOVERED
5.2.5. OUTCOMING PROTECTION	<input type="checkbox"/> CABLE BOX <input type="checkbox"/> COVERED <input type="checkbox"/> UNCOVERED	<input type="checkbox"/> CABLE BOX <input type="checkbox"/> COVERED <input type="checkbox"/> UNCOVERED
<b>5.3. ENCLOSURE</b>		
5.3.1. INDEX OF PROTECTION (IEC 60529)	IP	IP
5.3.2. ENCLOSURE MOUNTING	<input type="checkbox"/> FIX ON WALL <input type="checkbox"/> FIX ON FLOOR	<input type="checkbox"/> FIX ON WALL <input type="checkbox"/> FIX ON FLOOR
5.3.3. ENCLOSURE MATERIAL	<input type="checkbox"/> BLACK IRON <input type="checkbox"/> PRE GALVANIZED STEEL <input type="checkbox"/> HOT DIP GALVANIZED <input type="checkbox"/> STAINLESS STEEL	<input type="checkbox"/> BLACK IRON <input type="checkbox"/> PRE GALVANIZED STEEL <input type="checkbox"/> HOT DIP GALVANIZED <input type="checkbox"/> STAINLESS STEEL
5.3.4. ENCLOSURE SCREW & NUT MATERIAL	<input type="checkbox"/> GALVANIZED <input type="checkbox"/> STAINLESS STEEL	<input type="checkbox"/> GALVANIZED <input type="checkbox"/> STAINLESS STEEL
5.3.5. ENCLOSURE COLOR (if applicable)	RAL	RAL
5.3.6. LIFTING LUGS	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED
5.3.7. FOUNDATION BOLTS	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED
5.3.8. NAME PLATES	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED
5.3.9. WARNING PLATES	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED
<b>6. COOLING SYSTEM OF RESISTOR</b>		
6.1. COOLANT FLUID	<input type="checkbox"/> AIR <input type="checkbox"/> OIL	<input type="checkbox"/> AIR <input type="checkbox"/> OIL
6.2. COOLING METHOD	<input type="checkbox"/> NATURAL <input type="checkbox"/> FORCED	<input type="checkbox"/> NATURAL <input type="checkbox"/> FORCED
6.3. COOLING FLOW DIRECTION (if AF)	<input type="checkbox"/> HORIZONTAL <input type="checkbox"/> VERTICAL	<input type="checkbox"/> HORIZONTAL <input type="checkbox"/> VERTICAL
6.4. VOLUMETRIC AIRFLOW RATE (if AF)	m <sup>3</sup> /h	m <sup>3</sup> /h
6.5. ENTRY SUPPLY	<input type="checkbox"/> INDEPENDENT EXTERNAL SUPPLY (by Customer) <input type="checkbox"/> COMMON SUPPLY with MOTOR	<input type="checkbox"/> INDEPENDENT EXTERNAL SUPPLY (by Customer) <input type="checkbox"/> COMMON SUPPLY with MOTOR
6.6. ENTRY CONNECTION (if INDEPENDENT EXTERNAL SUPPLY)	<input type="checkbox"/> INDUSTRIAL SOCKET <input type="checkbox"/> TERMINAL <input type="checkbox"/> BUSBAR/BUSHING	<input type="checkbox"/> INDUSTRIAL SOCKET <input type="checkbox"/> TERMINAL <input type="checkbox"/> BUSBAR/BUSHING
<b>7. DIMENSIONS &amp; WEIGHT OF RESISTOR UNIT</b>		
7.1. DIMENSIONS (W×L×D)	mm <sup>3</sup>	mm <sup>3</sup>
7.2. NET WEIGHT	kg	kg
7.3. ENCLOSURE WEIGHT	kg	kg
<b>8. SPARE PARTS</b>		
8.1. FOR START UP & COMMISSIONING	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED
8.2. FOR 2 YEAR OPERATION & MAINTENANCE	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED	<input type="checkbox"/> REQUIRED <input type="checkbox"/> NOT REQUIRED
<b>9. PACKAGING</b>		
9.1. PACKAGING (According to Packing Procedure)	<input type="checkbox"/> NOT REQUIRED <input type="checkbox"/> SOFT COVER <input type="checkbox"/> SOLID STRUCTURE	<input type="checkbox"/> NOT REQUIRED <input type="checkbox"/> SOFT COVER <input type="checkbox"/> SOLID STRUCTURE