Document Title	COMPANY Document No.	Rev.:
LV Induction Motor Typical Data Sheet (690V)	RLNG-000-EL-SP-5001	1

Rev.	S.No	SYSTEM DATA	REQUIREMENTS	NOTE	SUPPLIER DATA
	1	**GENERAL**			
	2	Equipment Tag (Motor)	As per Requisition		**SpData_Equipment Tag (Motor)**
	3	Equipment Quantity	As per Requisition		**SpData_Equipment Quantity**
	4	**ENVIRONEMENTAL CONDITION**			
	5	Location (Onshore/ Offshore)	Onshore		**SpData_Location (Onshore/ Offshore)**
	6	Equipment Location (Indoor/ Outdoor)	As per Requisition		**SpData_Equipment Location (Indoor/ Outdoor)**
	7	Minimum Ambient air temperature	>5°C		**SpData_Minimum Ambient air temperature**
	8	Annual Average Temperature	34°C		**SpData_Annual Average Temperature**
	9	Hottest Monthly Average Temperature	48°C		**SpData_Hottest Monthly Average Temperature**
	10	Maximum Ambient air temperature	54°C		**SpData_Maximum Ambient air temperature**
	11	Altitude	Less than 1000 m above mean sea level		**SpData_Altitude**
	12	Relative Humidity	Maximum: 97% at 43°C, Minimum: 60% at 54°C		**SpData_Relative Humidity**
	13	Environment Class of Corrosion	Saliferous, Sulphureous and Dusty environment (C5-I)		**SpData_Environment Class of Corrosion**
	14	Earthquake	ASCE 7-16 Zone D		**SpData_Earthquake**
	15	AREA CLASSIFICATION	Where applicable		**SpData_AREA CLASSIFICATION**
	16	Zone1 or Zone2	TBC - As per Motor Location	NOTE-6 **NOTE-9**	**SpData_Zone1 or Zone2**
	17	Gas Group	IIB		**SpData_Gas Group**
	18	Temperature Class	T3		**SpData_Temperature Class**
	19	Type of Protection required (in compliance with IEC 60079)	Ex "ec" for motors located in Zone 2 Hazardous Area Ex "db" with terminal box "eb" for motors located in Zone 1&2 Hazardous Area		**SpData_Type of Protection**
	20	**SYSTEM PARTICULARS**			
	21	**Motor Rating**	**0.18 - 315 kW**		**SpData_rating**
	22	System Voltage, Frequency & Phases	690V, 50 Hz & 3Phase	NOTE-7	**SpData_System Voltage, Frequency & Phases**
	23	Voltage & Frequency Variations	Voltage: ±5% / Frequency: ±1%	NOTE-6	**SpData_Voltage & Frequency Variations**
	24	No. of Phases/ Wire	3 Phase/ 3 Wire	NOTE-6	**SpData_No. of Phases/ Wire**
	25	System Earthing	Low Resistance earthing (**200**A, 10sec)		**SpData_System Earthing**
	26	System Short circuit level	80kA for 1 sec	NOTE-6 **HOLD-1**	**SpData_System Short circuit level**
	27	**MOTOR GENERAL CHARACTERISTICS**			**SpData_MOTOR GENERAL CHARACTERISTICS**
	28	Motor Type	Squirrel cage Induction motor		**SpData_Motor Type**
	29	Rated Output	TBC		**SpData_Rated Output**
	30	No of Poles/ Speed	TBC		**SpData_No of Poles/ Speed**
	31	Rated Voltage, Frequency & Phases	690V, 50 Hz & 3Phase	NOTE-7	**SpData_Rated Voltage, Frequency & Phases**
	32	Type of Duty	S1: Continuous Running Duty	Note-1	**SpData_Type of Duty**
	33	Service Life	Minimum 30 years		**SpData_Service Life**
	34	Protection degree: Enclosure / terminal box	IP 55 for the motor in conformance with IEC 60034-5. IP 55 for auxiliary junction boxes in conformance with IEC 60529. **IP 68 for submersible motors in conformance with IEC 60034-5**		**SpData_IP Enclosure / terminal box**
	35	Mechanical Shock protection	IK 08 as per IEC 62262.		**SpData_Mechanical Shock protection**
	36	Enclosure cooling	IC4A1A1 in accordance with IEC 60034-6.		**SpData_Enclosure cooling**
	37	Method of Starting	DOL (unless Process required ASD)		**SpData_Method of Starting**
	38	**Locked Rotor Current (LRC)**	**As per IEC 60034-12 / up to 7 times at 100% Un (Maximum) for > 55kW motor**		**SpData_Locked Rotor Current (LRC)**
	39	Starting Performance	Suitable to start at 80% of Rated Voltage		**SpData_Starting Performance**
	40	No of consecutive starts (Cold / Hot)	Cold: 3, Hot: 2		**SpData_No of consecutive starts (Cold / Hot)**
	41	Efficiency class	IE3 in accordance with IEC 60034-30-1		**SpData_Efficiency class**
	42	Class of Insulation	Class "F" (in accordance with IEC 60085) with Temperature Rise limited to Class "B".	Note-2	**SpData_Class of Insulation**
	43	Direction of Rotation (looking from motor coupling)	Clockwise / Counter clockwise		**SpData_Direction of Rotation**
	44	Position of Main / Auxiliary terminal box	Right Hand Side as viewed from Drive End		**SpData_Position of terminal box**
	45	Terminal Box Short Circuit Withstand Current/Time	VTA - Vendor to Advise		**SpData_Terminal Box SC**
	46	Cable Type and Size on main terminal box	TBC		**SpData_Cable Type and Size main box**
	47	Terminal boxes provided with cable glands	No, without cable gland **For submersible pumps: With Cable glands and lugs**		**SpData_Terminal boxe cable glands**
	47	**Main Terminal Box Material**	**Steel or Cast iron**		**SpData_External Paint finish color**
	48	External Paint finish color	Light Gray, RAL 7035		**SpData_External Paint finish color**
	49	Protective Coating	As per document "Painting and Coating Specification-**RLNG-000-MT-SP-2301**"		**SpData_Protective Coating**
	50	Noise Level at 1 m	77 dBA for LV Motors, 85dbA for ASD fed Motors **in accordance with ISO 1680**		**SpData_Noise Level at 1 m**

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	51	**ACCESSORIES**						
	52	Motor Space Heaters	Required for Motor Rating >=37kW				Note-5	**SpData_Motor Space Heaters**
	53	Winding Temperature Detectors	Required for ASD started LV Motors				Note-3,4	**SpData_Winding Temperature Detectors**
	54	Earth Terminals	on Motor Frame (2 nos.) & inside Main Terminal Box				Note-4	**SpData_Earth Terminals**
	55	Canopy for Outdoor Motors	Required					**SpData_Canopy for Outdoor Motors**
	56	**DRIVEN MACHINE DATA**						
	57	Manufacturer	TBC					**SpData_Manufacturer**
	58	Machine Type (Fan, Pump, Compressor, etc.)	TBC					**SpData_Machine Type**
	59	Driven Machines Quantity	TBC					**SpData_Driven Machines Quantity**
	60	Maximum Shaft Power / Shaft Power at Operating Point	TBC			kW		**SpData_Shaft Power**
	61	Coupling Type	TBC					**SpData_Coupling Type**
	62	Coupling To be Designed for Restarting	TBC					**SpData_Coupling for Restarting**
	63	Driven Machine Thrust	TBC			kg		**SpData_Driven Machine Thrust**
	64	Driven Machine Inertia (GD2/4)	TBC			kg.m2		**SpData_Driven Machine Inertia (GD2/4)**
	65	Mounting (Horizontal/ Vertical/ Foot/ Flange)	TBC					**SpData_Mounting**
	66	Rotation (Viewed from Driving End)	TBC					**SpData_Rotation (Viewed from Driving End)**
	67	Driven Machine Speed v/s Torque curve	TBC					**SpData_Driven Machine Speed v/s Torque curve**
	68	Required Starting, Brake Torque	TBC			N.m		**SpData_Required Starting, Brake Torque**
	69	**DATA TO BE PROVIDED BY MOTOR SUPPLIER**						
	70	Manufacturer type / Frame Size	ABB / 80					
	71	Mounting Arrangement				IM B35		
	72	Winding Connection (star, delta)/No. of terminals brought out	delta / 3					
	73	BkW at full load/ kW at end of curve				100 kW / 80 kW		
	74	Rated Current / No load current / Locked Rotor Current	**11 A**	**22 A**	**600 %**			
	75	Starting Time (80% / 100% of Voltage) at full load	**80%: 20 s**		**100%: 7 s**			
	76	Allowable Locked Rotor withstand Time at 80%/100% voltage	**80%: 6 s**		**100%: 7 s**			
	77	Thermal Time Constant	6					
	78	Efficiency @ 100%, 75%, 50%, 25% of Full Load	95 '%	90 '%	85 '%	80 '%		
	79	Power Factor @ 100%, 75%, 50%, 25% of Full Load	0.96	0.94	0.92	0.90		
	80	Speed @ 100%, 75%, 50%, 25% of Full Load	1755 'rpm	1600 'rpm	1500 'rpm	1400 'rpm		
	81	Locked Rotor Power Factor	0.55					
	82	Full load Torque				201 N.m		
	83	Starting/ Pull Up/ Breakdown Torque	50 '%	40 '%	30 '%			
	84	Starting/ Pull Up/ Breakdown Torque at 80% terminal voltage	40 %	30 %	20 %			
	85	Rotor Motor Inertia (GD2)				0.3861 kg.m2		
	86	Bearing Type (Drive End/Non Drive End)	DE: Ball		NDE: Ball			
	87	Lubrication Type/ Interval	Grease			1000 hours		
	88	**For VSD Motors- Thermistors/RTDs (RTDs/Thermistors shall be wired to VSD for monitoring and protection)**	ABC123					
	89	Motor Space Heater (Power Rating / Voltage)	100W / 230V					
	90	Thermistor (Make / Type / Quantity)	ABB / NTC / 1					
	91	Shaft Voltage	999 V					
	92	Main Cable Gland Entry Size	M25					
	93	Ground lug size	10					
	94	Motor Weight	273 kg					

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	95	**INSPECTION AND TESTING REQUIREMENTS**			
	96	**Certifying Authority**	**An approved IEC Ex Certification Body, ECAS-Ex or An approved ATEX Notified Body if permitted by the COMPANY**		
	97	Type tests	As per clause no 14.3 of Appendix-1 of document "Specification for Induction Motor-**RLNG-000-EL-SP-0003**"		
	98	Routine tests	As per clause no 14.4 of Appendix-1 of document "Specification for Induction Motor-**RLNG-000-EL-SP-0003**"		
	99	Performance Testing	As per clause no 14.6 of Appendix-1 of document "Specification for Induction Motor-**RLNG-000-EL-SP-0003**"		