

Motor Data Sheet

No.	Description	Unit	Manufacturer's Design Data
1.	Name of Motor	-	Condensate Booster Pump Motor 50LCB50AP010M01/ 50LCB60AP010M01/ 50LCB70AP010M01/ 60LCB50AP010M01/ 60LCB60AP010M01/ 60LCB70AP010M01
2.	Manufacturer	-	ABB Electrical Machines
3.	Country of Origin	-	China
4.	Type/Machine Code	-	AMI 450L4A BAS
5.	Applied Standard (characteristics)	-	IEC60034
6.	Ratings		
(1)	Rated output	kW	1400
(2)	Service factor	-	1
(3)	Number of pole	-	4
(4)	Rated speed	min ⁻¹	1487
(5)	Rated voltage	V	10000
(6)	Number of phases	-	3
(7)	Rated frequency	Hz	50
(8)	Insulation class	-	F
(9)	Temperature rise	-	B
(10)	Rated duty	-	S1
7.	Service Conditions		
(1)	Starting method	-	Direct on line
(2)	Direction of rotation (viewed from DE (<u>D</u> rive <u>E</u> nd))	-	Clockwise, seen from DE
(3)	Reverse rotation (Yes / No)	-	No
(4)	Location (Indoor / Outdoor)	-	Indoor
(5)	Enclosure IP rating		
(a)	Motor frame	-	IP55
(b)	Terminal boxes	-	IP55
(6)	Installation (Horizontal / Vertical)	-	Horizontal
(7)	Design ambient temperature	deg C	40
(8)	Explosion proof (Yes / No)	-	No
(9)	Noise level (at full-load condition, at 1m from motor frame)	dB(A)	77 dB(A), tol. + 3 dB(A), no load
8.	Characteristics		
(1)	Current		
(a)	Normal current	A	100
(b)	No-load current	A	35
(c)	Starting current	A	550
(2)	Torque		
(a)	Starting torque	%	63%
(b)	Maximum torque	%	230%
(3)	Slip at rated output	%	0.85%
(4)	Efficiencies		
(a)	At 100% load	%	95.70%
(b)	At 75% load	%	95.70%
(c)	At 50% load	%	95.10%
(d)	At 25% load	%	92.20%
(5)	Power factor		
(a)	At rated load	%	85%
(b)	At starting load	%	13.60%
(6)	GD ² coupled with driven equipment	kg-m ²	734
(7)	Starting time with driven equipment	sec	5s

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(8)	Allowable number of starts		
(a)	From cold condition per hour	-	2
(b)	From hot condition per hour	-	1
(c)	Minimum time between 2 starts (running state)	min	NA
(d)	Minimum time between 2 starts (stop state)	min	NA
(9)	Allowable locked-rotor time		
(a)	At cold condition	sec	18s
(b)	At hot condition	sec	14s
9.	Constructions		
(1)	Stator winding connection (Wye / Delta)	-	Wye
(2)	Type of bearing		
	Bearing of DE (<u>D</u> rive <u>E</u> nd)	-	Ball bearing
	Bearing of NDE (<u>N</u> on <u>D</u> rive <u>E</u> nd)	-	Ball bearing
(3)	Lubricants		
(a)	Recommended lubricant and brand name	-	Kluberplex BEM 41-132
(b)	Pouring method (if applicable)	-	Grease Pump
(c)	Quantity of lubricant for initial filling (if applicable)	g	DE side 80g, NDE side 40g
(d)	Recommended interval for recharging (if applicable)	hr	2200
(e)	Recharging quantity (if applicable)	g	120
(f)	Location of pouring (indicated in the outline drawing) (if applicable)	-	Yes
(4)	Bearing cooling water requirement (if required)		
(a)	Quantity (if required)	m ³ /h	NA
(b)	Inlet water temperature (if required)	deg C	NA
(c)	Required cooling water pressure (if required)	kPa	NA
(d)	Type of cooling water (if required)	-	
(5)	Water to air heat exchanger (if applicable)		
(a)	Quantity of cooling water (if applicable)	m ³ /h	NA
(b)	Inlet water temperature (if applicable)	deg C	NA
(c)	Required cooling water pressure (if applicable)	kPa	NA
(d)	Type of cooling water (if applicable)	-	NA
(6)	Space heater (AC 220V 1 phase) (if applicable)	W	430
(7)	Weight	kg	4750
10.	Related Document Numbers		
(1)	Motor outline drawing	-	3GYB3877181 *
(2)	Terminal box drawings		
(a)	For main power	-	3GYB3881657 *
(b)	For instruments	-	3GYB3881658 *
(c)	For space heater	-	3GYB3881659 *
(3)	Current transformers (for MV motors only)		
(a)	Characteristics curves (for MV motors only)	-	NA
(b)	Outline drawing (for MV motors only)	-	NA
(4)	Efficiency curves	-	1181Y200_SPC_B *
(5)	Thermal capability curves		
(a)	At cold condition	-	1181Y200_SPC_B *
(b)	At hot condition	-	1181Y200_SPC_B *
(6)	Starting and speed torque characteristics at 80, 90 and 100 % voltage	-	1181Y200_SPC_B (Non 90%) *

Note :

1) The "*" marked drawing are provide as part of TJB56-L1-OFF-C-LCB-E-DRD-2682, Motor Drawing for Condensate Booster Pump document.

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No.	Description	Unit	Manufacturer's Design Data
11.	Additional Motor Data required by Toshiba		
(1)	Ratings		
(a)	Type of cooling (TEFC (IC411) / TEAAC (IC511,611) / TENV (IC410))	-	IC611
(2)	Characteristics		
(a)	Minimum starting voltage	V	8000
(b)	Starting current (based on rated current)	%	550
(3)	Constructions		
(a)	Life-time of bearing (DE)	hr	>80000
(b)	Life-time of bearing (NDE)	hr	>80000
(c)	Painting color (RAL5014)	-	RAL5014
(d)	Total painting thickness	μm	>320
(e)	Cover / Cap for refilling plug (Yes / No) (if applicable)	-	Yes
(f)	Bearing insulation from motor frame (DE) (Yes / No)	-	Yes
(g)	Bearing insulation from motor frame (NDE) (Yes / No)	-	NA
(h)	Indication plate for rotating direction (Yes / No)	-	Yes
(i)	Terminal lugs for power / instrument cables (Included / Not included)	-	Yes
(j)	Type of terminal lug	-	sleeve
(k)	Grounding terminal within terminal box (Yes / No)	-	Yes
(l)	Number of search-coil per one(1) bearing (if required)	-	NA
(m)	Number of thermo couple per one(1) bearing (if required)	-	NA
(n)	Number of temperature element per one(1) bearing (if required)	-	1pc PT100/per bearing
(4)	Related Document Numbers		
(a)	Test report	-	Yes
(b)	Calibration records for the testing tools / equipments	-	Yes
(c)	Test report will be included into the packing of motor. (Yes / No)	-	Yes