



### 2.2.2.1.3. ELECTRICAL DRIVE MOTOR

Mark CM 607

Supplier : ABB

THERMODYN Reference Drawing 218 MOT 002

The shaft line is driven by an asynchronous (induction) motor having a nominal power of 1 850 kW at 1 850 rpm supplied in 3 Phase 5 500 V, 50 Hz, is equipped with the following accessories :

- an Expo type pressurization circuit
- a water cooling circuit
- an anti-condensation heating resistance
- a water leakage detector
- a set of vibrational speed sensors.

For further complementary information, refer to the Data Sheet and particular equipment notice which is the object of paragraphs 2.3.1. and 5.2.2. of the present manual.

PURCHASE ORDER NO.:

PO-FF-22-26-1001-0101

PROCUREMENT PACKAGE NO.: MA 02

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## VENDOR INFORMATION

COMPANY NAME THERMODYN DIVISION DE FRAMATOME

ADDRESS BP 119 F 71203 LE CREUSOT FRANCE

TELEX 801280F

TELEFAX 33-85.80.67.99

ENGINEERING CONTACT MR. GUILLET 33-85.80.66.17

VENDOR REF. NUMBER 1X1264

VENDOR DOCUMENT NUMBER I218NTSH101 REV. 04

DOCUMENT TITLE DATA SHEETS, ELECTRIC MOTOR DRIVERS FOR K603/604

PROJECT DOCUMENT N° DS-FF-22.26.8050

## FRØY INTEGRATION WORK ON TCP2

## VENDOR DOCUMENT REVIEW

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- 2 REVISE AND RESUBMIT. INCORPORATE CHANGES INDICATED.
- 3 REVISE AND RESUBMIT. NOT ACCEPTED.
- 4 REVIEWED WITHOUT COMMENT. SUBMIT WITH FINAL DOCUMENTATION.

ENGINEERS SIGNATURE


 DATE 11/8/93

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## FRØY INTEGRATION WORK ON TCP2

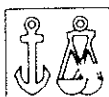
EQUIPMENT DESCRIPTION: FUEL GAS COMPRESSORS

PKGE TAG NO: MA 002 LOCATION: M35-I

VDRL CODES: C07

ITEM TAG Nos: CM 607

P.O. NUMBER	SEQUENCE No:	REV.	VDRL CAT
PO-FF-22-26-1001	C0001 ...	04	C07



DNV

VERITEC



## DATA-SHEETS

### ELECTRIC MOTOR DRIVER

For K603/4

DATE	REV.	MODIFICATIONS	NOM/VISA REDACTEUR	NOM/VISA VERIFICATEUR	NOM/VISA APPROBATEUR
17/12/92	01	FIRST ISSUE - E.Motor data sheets (7 pages)	KJS	TOL	GRE
F	02	Up to date - VT comments dated 14/1/93	KJS	TOL	GRE
APR.93	03	Up to date - VT comments dated 22/2/93	KJS	TOL	GRE
JUL.93	04	Up to date - V.T. comments dated 19/05/93	KJS	TOL	GRE

elf, equitoine norge o/s

DATA SHEET

Ref.No  
DS-FF-22-23-0004



3-PHASE INDUCTION MOTOR  
 MANUFACTURER: A.B.B. DRIVES - FRANCE  
 TYPE/SIZE: RPCC 500 LD 4  
 SERVICE: FUEL GAS COMPRESSOR K 603/604  
 TAG N° CM 607

Date effective 02.04.92  
 Revision No 020  
 Date revised 28.09.92  
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- NOTES: 1. PURCHASER OR DRIVEN EQUIPMENT MANUFACTURER DATA TO BE COMPLETED BY PACKAGE MANUFACTURER  
 2. MOTOR MANUFACTURER DATA TO BE FILLED IN

GENERAL DATA

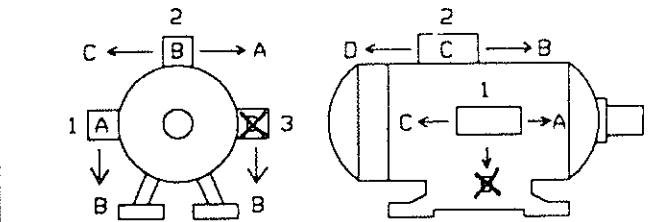
PURCHASER OR DRIVEN EQUIPMENT MANUFACTURER DATA

1. RATED VOLTAGE 5500 V 50 Hz  
 2. RATED SPEED 1485 RPM  
 3. DUTY TYPE CONTINUOUS  
 4. CONTINUOUS RATING 1850 kW  
 5. INTERMITTENT RATING N.A. kW

38. CROSS SECTION OF FIELD CABLE 2x2,5 mm<sup>2</sup>  
 39. OUTER SHEATH DIAMETER OF FIELD CABLE by VT mm<sup>2</sup>  
 40. CROSS SECTION OF HEATER CABLE 2x2,5+E mm<sup>2</sup>  
 41. OUTER SHEATH DIAMETER OF HEATING CABLE by VT mm<sup>2</sup>  
 42. MAINPOWER CABLE GLAND ENTRY 80 mm<sup>2</sup> ISO  
 43. SPACE HEATER CABLE GLAND ENTRY mm<sup>2</sup> ISO  
 44. D.P. SWITCH CABLE GLAND ENTRY N.A. mm<sup>2</sup> ISO  
 45. TEMPERATURE SWITCH CABLE GLAND ENTRY N.A. mm<sup>2</sup> ISO  
 46. AIR FLOW SWITCH CABLE GLAND ENTRY N.A. mm<sup>2</sup> ISO  
 47. BLOWER FAN CABLE GLAND ENTRY N.A. mm<sup>2</sup> ISO  
 48. BLANKED CABLE PLATES FOR THE AUXILIARIES -

CONSTRUCTION

- STANDARDS AND CODES IEC 34 AND NFC 51111  
 7. DEGREE OF PROTECTION P55  
 8. INSULATION CLASS F ARMAT. FIELD  
 9. TEMPERATURE RISE 80 °C  
 10. COOLING METHOD WATER  
 11. Ex PROTECTION EExp  
 12. TEMPERATURE CLASS T3  
 13. GAS GROUP IIA IC  
 14. PAINT COLOUR GREY RAL 7001



JUNCTION BOXES POSITION AND CABLES ENTRIES

LOCATION

15. HAZARDOUS AREA CLASSIFICATION ZONE 2  
 16. AMBIENT TEMPERATURE MAX -10 MIN +22 °C

EARTHING

DRIVEN EQUIPMENT MECHANICAL DATA

17. DRIVEN EQUIPMENT TYPE GEAR AND CENT. COMPRESSOR  
 18. MAX POWER ABS. BY DRIVEN EQUIPMENT 1650 kW  
 19. STARTING TORQUE REQUIRED ≈ 0.2 N.T.  
 20. INERTIA OF DRIVEN EQUIPMENT AT RATED SPEED 10 kgm<sup>2</sup>  
 21. MOUNTING ARRANGEMENT Motor/Gear/Comp. on skid  
 22. DIRECTION OF ROTATION SEEN FROM DRIVING END CCW  
 23. COUPLING FLEXIBOX  
 24. THRUST DIRECTION OF DRIVEN EQUIPMENT ±  
 25. TRANSIT THRUST ±  
 26. PERMANENT THRUST ±  
 27. TYPE OF BEARING USED ON DRIVEN EQUIPMENT T.P. and sleeves  
 28. DUTY CYCLE CONTINUOUS  
 29. SPECIAL FEATURE N.A.

49. EARTHING TERMINAL INTERNAL EXTERNAL  
 50. EARTHING TERMINAL CROSS SECTION \* mm<sup>2</sup>  
 51. MAIN TERMINAL BOX EARTHING 10 mm INSIDE  
 52. AUX TERMINAL BOX EARTHING 2,5 mm INSIDE  
 \* MAIN TERMINAL Box = 52 mm<sup>2</sup>  
 \* AUX. TERMINAL BOXES = 4 mm<sup>2</sup>  
 SPECIAL REQUIREMENTS

HEATING

30. SPACE HEATER REQUIRED YES YES/NO  
 31. SPACE HEATER VOLTAGE 220 V 50 Hz  
 32. SPACE HEATER ENCLOSURE EExp d

53. D.P. SWITCH VOLTAGE N.A.  
 54. D.P. SWITCH ENCLOSURE N.A.  
 55. TEMPERATURE SWITCH VOLTAGE N.A.  
 56. TEMPERATURE SWITCH ENCLOSURE N.A.  
 57. AIR FLOW SWITCH VOLTAGE N.A.  
 58. AIR FLOW SWITCH ENCLOSURE N.A.  
 59. TEMPERATURE SENSORS WINDINGS \* YES (6)  
 60. TEMPERATURE SENSORS BEARINGS \* YES (2 duplex)  
 61. BLOWER FAN VOLTAGE N.A. V Hz  
 62. NAMEPLATE S.S. - INTERNAL/EXTERNAL  
 63. TEST YES ROUTING/COMPLETE FULL LOAD

CABLE AND TERMINAL BOXES

33. TERMINAL BOXES PROTECTION & Ex CERTIF IP 56 / Ex e  
 34. CABLE GLAND TYPE CAPRI ADE HF. N° 14  
 35. INCOMING CABLE TYPE RFOU 2x3x70 + E mm<sup>2</sup>  
 36. CROSS SECTION OF POWER CABLE 70 mm<sup>2</sup>  
 37. OUTER SHEATH DIAMETER OF POWER CABLE 63 mm<sup>2</sup>

\* RTD/S PT 100Ω at 0°C

33.5 mm<sup>2</sup>

elf acquitaine norge o/s



DATA SHEET

Ref No: DS-FF-22-23-0004

MANUFACTOR: A.B.B. DRIVES - FRANCE  
 TYPE/SIZE: RPCC 500 LD 4  
 SERVICE: FUEL GAS COMPRESSOR K 603/604  
 TAG N° CM 607

Date effective 02.04.92  
 Revision No 020  
 Date revised 28.09.92  
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MOTOR MANUFACTURER DATA

GENERAL DATA

- 70. SERIAL NUMBER 348597
- 71. RATED POWER CONTINUOUS 1850 kW, INTERMITTENT - kW
- 72. RATED SPEED 1485 RPM
- 73. MAXIMUM SPEED N.A. RPM
- 74. MINIMUM CONTINUOUS SPEED N.A. RPM
- 75. TEMPERATURE RISE FOR P<sub>N</sub> 80 °C
- 76. RATED CURRENT I<sub>N</sub> 227 A  
 ARM CURRENT AT 50%, 75%, 100% LOAD N.A. A  
 RATED EXCITATION CURRENT A / VOLTAGE -V AC
- EFFICIENCY AT 50%, 75%, 100% LOAD 96.2-96.5-96.3 %
- 80. RATED VOLTAGE 5500 V AC
- 81. TYPE OF START DIRECT 2.5 MVAR CAPACITOR
- 82. FULL VOLTAGE / RESISTANCE START
- 83. 1 STEP N.A. ohm
- 84. 2 STEP N.A. ohm
- 85. 3 STEP N.A. ohm
- 86. 4 STEP N.A. ohm
- 87. 5 STEP N.A. ohm
- 88. NUMBER OF CONSECUTIVE STARTS, COLD 2
- 89. NUMBER OF CONSECUTIVE STARTS, HOT 1
- 90. NUMBER OF STARTS REPEATED PR. HOUR 3
- 91. ROTOR INERIA W R 2 44.8 kgm<sup>2</sup>
- 92. TORQUE AT 50%, 75%, 100% LOAD 1213 kgm
- 93. VIBRATION LEVEL 1.8 mm/s on test condition
- 94. NOISE LEVEL 80 1/3 dBA db
- 95. WEIGHT 5435 kg
- 96. ROTOR WEIGHT 1445 kg

CERTIFICATION

- 117. TEST INSTITUTION L.C.I.E
- 118. CERTIFICATE NUMBER 93 C 6089 K

REMARKS

- 119. DEVIATIONS FROM REQUIREMENT N.A.
- 120. DIRECTION OF ROTATION: CW
- 121. FRAME REF. NUMBER = RPCC 500 LD 4
- 122. DIMENSION DWG. NB. 24 J 9420
- 123. STARTING CURRENT RATIO = 5  
Max = 5.8
- 124. POWER CURRENT RATIO = 5
- 125. POWER FACTOR = 50% = 0.83  
75% = 0.88 - 100% = 0.89
- 126. STARTING P.F. = 0.17
- 127. PULL UP TORQUE/FLT = 0.65
- 128. WINDING CONNECTION = STAR
- 129. PRESSURE LUBE OIL = 0.5 bar
- 130. COOLING SYSTEM FLOW = 11.5 m<sup>3</sup>/h  
PRESSURE = 7 bar
- 131. COOLING WATER TEMP. = 25°C MAX
- 132. ROTOR END PLAY = ± 6.5 mm  
END FLOAT = 3 mm  
AIR GAP = 3 mm
- 133. VIBRATION LEVEL PEAK TO PEAK  
- Normal operat. = 80 microns  
- TRIP LEVEL = 120 microns  
VELOCITY = 4.5 mm/s
- 134. Coolant leak detector =  
Magnetrol - MQ 1003 - XC 75  
1B20 - WNU
- 135. PRESSURIZATION:  
EXPO SYSTEM - LCA 102  
Scavenging = 100 Nm<sup>3</sup>/h - 10 minutes  
Normal air flow = 9 Nm<sup>3</sup>/h

INSTRUCTION

- 97. INSULATION CLASS ARMATURE F FIELD N.A
- 98. IMPREGNATION TYPE VPI - EPOXY
- 99. COOLING METHOD CACW ICW 37 A 81
- 100. FRAME SIZE 500
- 101. FRAME ENCLOSURE MATERIAL Welded steel E24-2
- 102. COOLING FAN MATERIAL INTERNAL - WELDED STEEL
- 103. EXTERNAL FAN COVER MATERIAL N.A.
- 104. EXTERNAL NAMEPLATE MATERIAL S. STEEL
- 105. INTERNAL NAMEPLATE MATERIAL S. STEEL
- 106. SCREWS, BOLTS MATERIAL S. STEEL
- 107. BEARING DRIVING END SLEEVE
- 108. BEARING NON - DRIVING END SLEEVE
- 109. LUBRICATION SYSTEM AND DEVICES FORCED OIL
- 110. TYPE OF OIL AND GREASE ISO VG 32
- 111. OILING AND GREASING FREQUENCY N.A
- 112. PAINTING JS CHIM ABB SPEC. 24 J 8117/A
- 113. LIFTING LUG YES

HEATING AND ACCESSOIRES

- 114. SPACE HEATER POWER 500 W
- 115. BLOWER FAN POWER N.A. kW
- 116. SPACE HEATER 'BLOWER FAN' POWER N.A. W

TOLERANCES IN ACCORD. IEC 34