

1A2

CUSTOMER'S INSTALLATION

MAIN POWER SUPPLY [b]

VOLTAGE :	400 V
FREQ. :	50 Hz 3 PH

MAX FUSE [a]

IEC : gL/gG Type "2"	A
	800

MAX FUSE [a]

CSA : HRC Form II	A
	NA
UL : Class K5	A
	NA

OPTIONS

- 7 ID : Integrated dryer
- 12 ER : Energy Recovery
- 13 DDF : DD-filter, only with option : integrated dryer
- 25 SPM : Shock pulse monitoring
- 27 External Speed Control (4-20mA)
- 29 Tube coolers
- 41 Electronic oil bypass valve

INSTALLED

- 
- 
- 
- 
- 
- 
- 

COMPRESSOR

M1	
290 KW	S.F. 105
395 HP	S.F. 105
Q1	Q2
2 A	63 A

[p] M25	[p] M26
42.5 KW	45 KW
64 HP	61.2 HP
[p] Q20	[p] Q26
32 A	10 A
[p] Q25	[p] Q26
10 A	10 A

[q] M40
11.5 KW
15.76 HP

[q] M41	[q] M42
079 KW	079 KW
107 HP	107 HP

[q] Q41	[q] Q42
2.1 A	2.1 A

Control voltage 115V 60Hz : CSA certified and UL listed industrial control panel.  
Applicable for all components unless a different location is specified.

Name		DIAGRAM SERVICE	
Material		NOT APPLICABLE	
Treatment		Not Applicable	
Scale		---	
Drawn by		AIR15123	
Version Dwg		03.00	
Blank wt.		0	
Kg		Fini wt. 0	
Prod checked.		Approved.	
Date checked.		Date	
Preliminary		2011-10-18	
Est. Version 3D		9823 1821 61	
Parent 3D Model		9823 1821 61	
Date		2014-02-18	
Intr. Appd.		KOSI SANJ	
Modified from		Terminal TX4-2 changed to TX4-1,3	
Post-Item		03.00	
Note		p2/08	

This document is the property of and shall not be used without the express permission of the company. Copied, used for manufacturing or otherwise, or transmitted in any form, printed or electronic, is prohibited.







LOCATION	TAGNAME	PAGE	DESCRIPTION	FUNCTION
CANOPY	TT42	43	TEMPERATURE SENSOR	OIL INJECTION
CANOPY	TT51	43	TEMPERATURE SENSOR	COOLING AIR IN / COOLING WATER OUTLET
CANOPY	TT90	62	TEMPERATURE SENSOR	DRYER LAT
CANOPY	TT92	62	TEMPERATURE SENSOR	DRYER AMBIENT
CANOPY	TT93	62	TEMPERATURE SENSOR	DRYER CONDENSING TEMP.
CANOPY	TTER 1	62	TEMPERATURE SENSOR	ENERGY RECOVERY WATER INLET
CANOPY	TTER 2	62	TEMPERATURE SENSOR	ENERGY RECOVERY WATER OUTLET
CANOPY	Y1	22	SOLENOID VALVE	BLOW OFF VALVE
CANOPY	Y3	61	SOLENOID VALVE	DRYER HGBP VALVE
CANOPY	Y40	65	PROPORTIONAL VALVE	BYPASS OIL COOLER
CONNECTION BOX	F41	21	OVERLOAD RELAY	OVERLOAD FANMOTOR M25
CONNECTION BOX	F42	21	OVERLOAD RELAY	OVERLOAD FANMOTOR M25
CONNECTION BOX	R1	24	TEMPERATURE SENSOR	MAIN MOTOR
CONNECTION BOX	Rs	08	HEATER	CRANKCASE DRYER
CONTROL	1X11	22	CONNECTOR	BLOW OFF VALVE Y1
CONTROL	1X14	21	CONNECTOR	AUTOMATIC CONDENSATE DRAIN
CONTROL	1X15	21	CONNECTOR	DRYER CONDENSATE DRAIN
CONTROL	1X18	22	CONNECTOR	CAN CONVERTER
CONTROL	1X19	21	CONNECTOR	DRYER HIGH PRES. SWITCH
CONTROL	1X20	22	CONNECTOR	DRYER SOLENOID VALVE
CONTROL	1X22	65	CONNECTOR	OIL BYPASS VALVE Y40
CONTROL	1X30	64	CONNECTOR	DP WATER IN/OUT SENSOR
CONTROL	1X31	64	CONNECTOR	DP DD FILTER SENSOR
CONTROL	2X1	41	D-SUB(9) E1	LAN ETHERNET CONN
CONTROL	2X10	24	CONNECTOR E1	AUX. RELAYS
CONTROL	2X11	22	CONNECTOR E1	AUX. RELAYS
CONTROL	2X2	41	D-SUB(9) E1	RS485 COMMUNICATION
CONTROL	2X3	41	D-SUB(9) E1	I/O EXPANSION MODULES
CONTROL	2X5	43	CONNECTOR E1	TEMPERATURE SENSORS
CONTROL	2X6	43	CONNECTOR E1	TEMPERATURE SENSORS
CONTROL	2X7	62	CONNECTOR E1	TEMPERATURE SENSORS
CONTROL	2X8	62	CONNECTOR E1	TEMPERATURE SENSORS
CONTROL	2X9	42	CONNECTOR E1	AUX. INPUTS
CONTROL	3X3	63	D-SUB(9) E2	I/O IN AIE1
CONTROL	3X4	63	D-SUB(9) E2	I/O OUT AIE1
CONTROL	3X5	64	CONNECTOR E2	PRESSURE SENSORS AIE1
CONTROL	4X3	63	D-SUB(9) E3.1	I/O IN AIE2
CONTROL	4X4	63	D-SUB(9) E3.1	I/O OUT AIE2


**ACD**  
 Drawing owner  
**AIF**

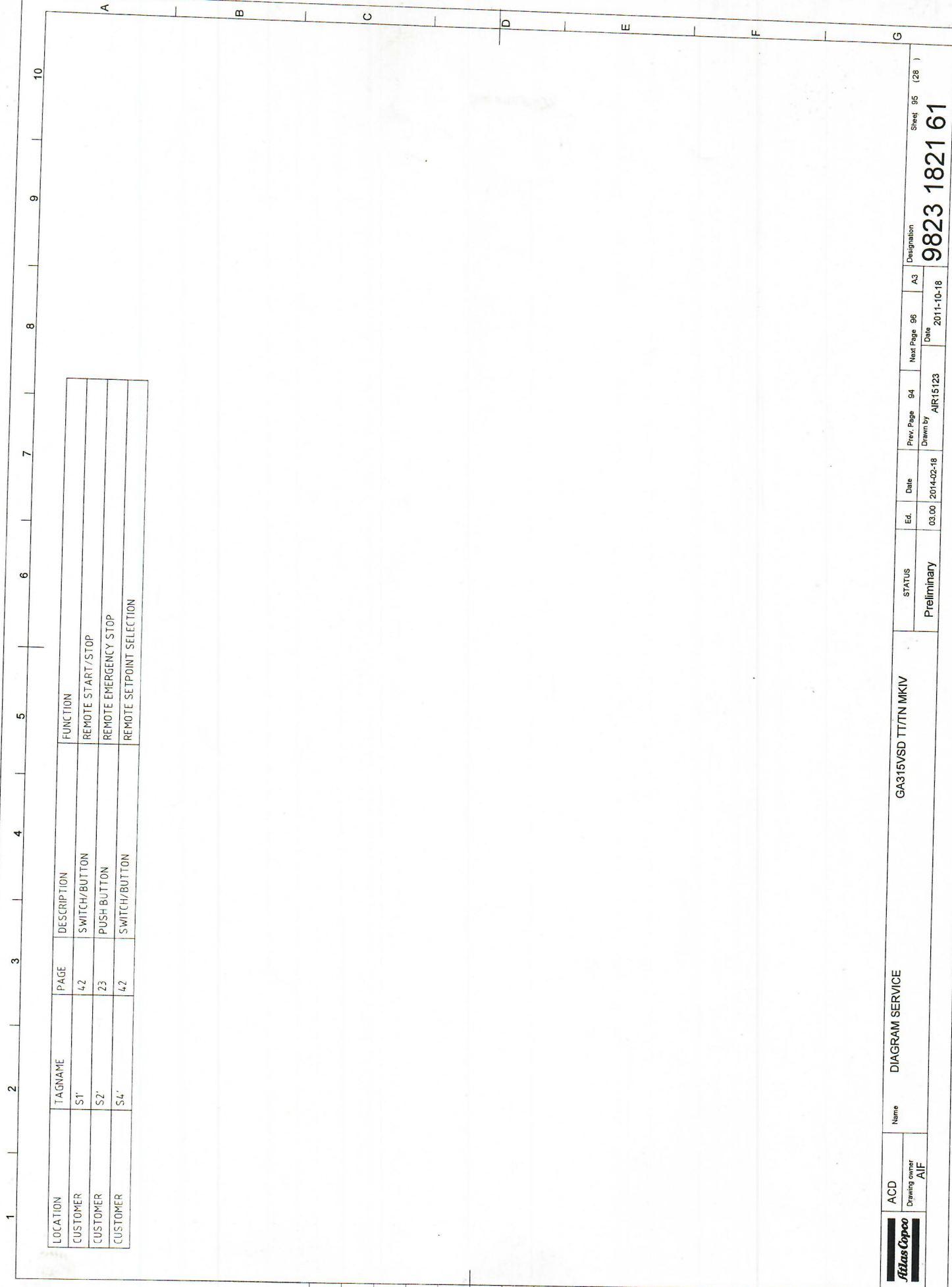
**DIAGRAM SERVICE**  
**GA315VSD TTTN MKIV**

STATUS: Preliminary

Ed. 03.00	Date 2014-02-18	Prev. Page 91	Next Page 93
Drawn by AIR15123		Date 2011-10-18	
Designation		Sheet 92 (28 )	

# 9823 1821 61

This document is our property and shall not be distributed or communicated to any other person or company.




LOCATION	TAGNAME	PAGE	DESCRIPTION	FUNCTION
CUSTOMER	S1'	42	SWITCH/BUTTON	REMOTE START/STOP
CUSTOMER	S2'	23	PUSH BUTTON	REMOTE EMERGENCY STOP
CUSTOMER	S4'	42	SWITCH/BUTTON	REMOTE SETPOINT SELECTION

	ACD	Name	DIAGRAM SERVICE		GA315VSD T1/TN MKIV		STATUS	Preliminary	Ed.	Date	Prev. Page	Next Page	Designation	Sheet	
	Drawing owner	AIF							03.00	2014-02-18	94	96	A3	9823 1821 61	95 (28)
											Drawn by	Date			
											AIR15123	2011-10-18			

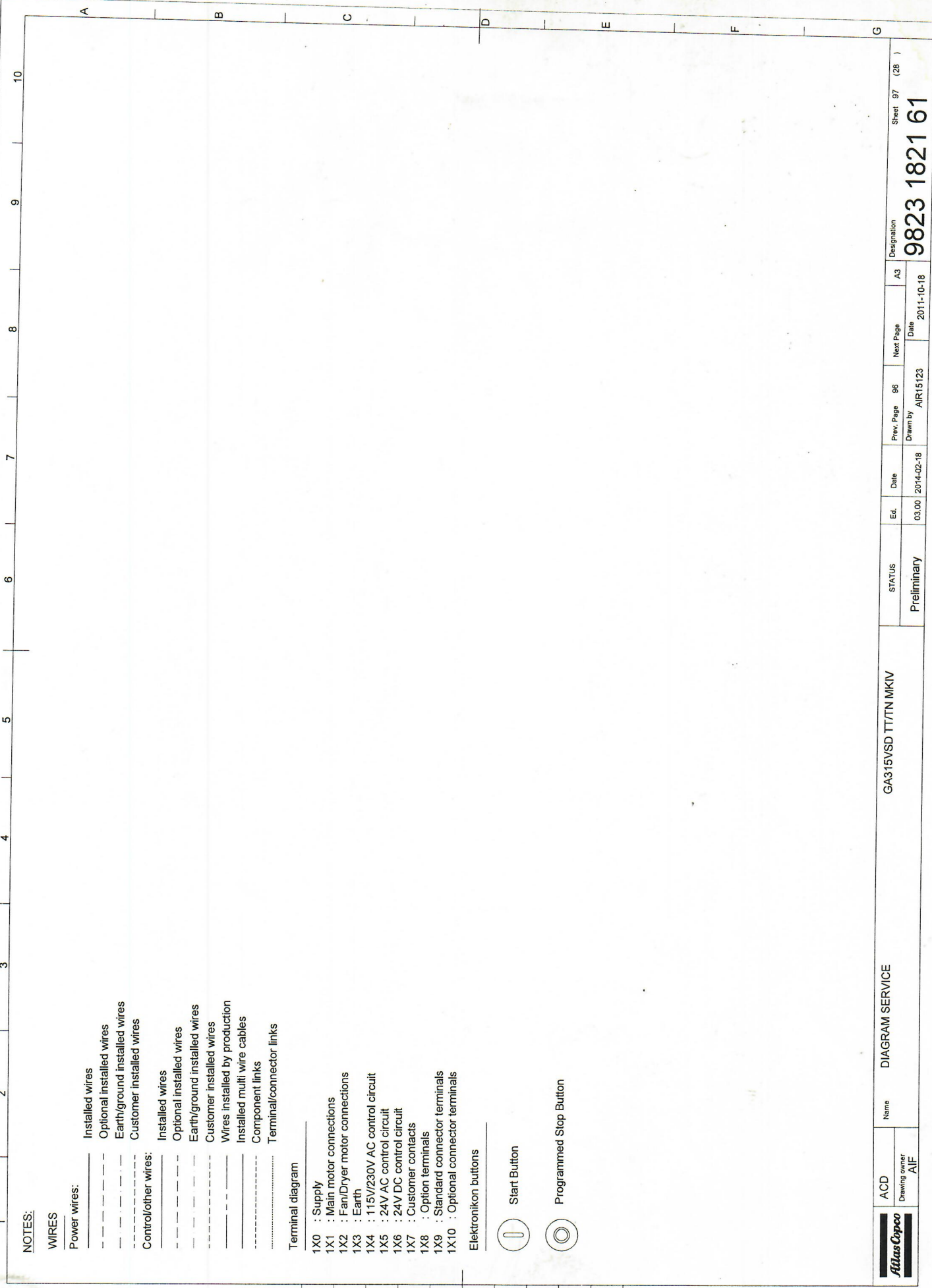
This document is our property and shall not be used for manufacturing or communication by any other person or company.



LEGEND	LOCATION	TAGNAME	PAGE	DESCRIPTION	FUNCTION
CANOPY		GND1	05	GROUND	M1 CABLE GLAND
CANOPY		GND10	06	GROUND	M26 CABLE GLAND
CANOPY		GND11	43	GROUND	COMPRESSOR OUTLET SCREEN
CANOPY		GND12	43	GROUND	DP OIL SEPERATOR SCREEN
CANOPY		GND13	43	GROUND	OIL INJECTION ELEMENT SCREEN
CANOPY		GND14	65	GROUND	COMPRESSOR OUTLET SCREEN
CANOPY		GND2	05	GROUND	M1 CABLE GLAND
CANOPY		GND3	05	GROUND	M1 CABLE GLAND
CANOPY		GND4	05	GROUND	M1 CABLE GLAND
CANOPY		GND5	05	GROUND	M1 CABLE GLAND
CANOPY		GND6	05	GROUND	EQUIPOTENTIAL EARTH
CANOPY		GND7	06	GROUND	M25 CABLE GLAND
CANOPY		GND8	06	GROUND	M25 CABLE GLAND
CANOPY		GND9	06	GROUND	M26 CABLE GLAND
CANOPY		LSHL17	44	CONDENSATE DRAIN	AC CONDENSATE DRAIN
CANOPY		LSHL47	61	CONDENSATE DRAIN	DRYER AUT. CONDENSATE DRAIN
CANOPY		M1	05	DRIVE MOTOR	MAIN MOTOR
CANOPY		M25	06	FANMOTOR	COOLER AIRCOOLED
CANOPY		M26	06	FANMOTOR	COOLER AIRCOOLED
CANOPY		M40	07	DRYER MOTOR	DRYER COMPRESSOR MOTOR
CANOPY		M41	07	FANMOTOR	DRYER CONDENSOR
CANOPY		M42	07	FANMOTOR	DRYER CONDENSOR
CANOPY		PDT02	43	PRESSURE TRANSDUCER	DP AIR FILTER
CANOPY		PDT03	64	PRESSURE TRANSDUCER	DP DD FILTER
CANOPY		PDT14	43	PRESSURE TRANSDUCER	DP OIL SEPARATOR
CANOPY		PDT53	64	PRESSURE TRANSDUCER	DP WATER IN/OUT
CANOPY		PT20	43	PRESSURE TRANSDUCER	COMPRESSOR OUTLET
CANOPY		PT42	43	PRESSURE TRANSDUCER	OIL INJECTION ELEMENT
CANOPY		S3	61	PRESSURE SWITCH	DRYER HIGH PRESSURE
CANOPY		SPM1	66	VIBRATION TRANSMITTER	MOTOR D-END
CANOPY		SPM2	66	VIBRATION TRANSMITTER	MOTOR ND-END
CANOPY		SPM3	66	VIBRATION TRANSMITTER	MALE D-END
CANOPY		SPM4	66	VIBRATION TRANSMITTER	MALE ND-END
CANOPY		SPM5	66	VIBRATION TRANSMITTER	FEMALE D-END
CANOPY		SPM6	66	VIBRATION TRANSMITTER	FEMALE ND-END
CANOPY		TSHH44	21	TEMPERATURE SWITCH	OIL SEPERATOR
CANOPY		TT11.1	43	TEMPERATURE SENSOR	ELEMENT OUTLET
CANOPY		TT19	43	TEMPERATURE SENSOR	COMPRESSOR OUTLET

	ACD	Name	DIAGRAM SERVICE		GA315VSD TT/7N MKIV		STATUS	Preliminary		Ed.	Date	Prev. Page	Next Page	Designation
	Drawing owner	AIF								03.00	2014-02-18	81	92	A3
Sheet 91 (28)														
9823 1821 61														
Date 2011-10-18														
Drawn by AIR15123														

This document is our property and shall not be used for manufacturing or construction by any other person or company.



**NOTES:**

**WIRES**

**Power wires:**

- Installed wires
- Optional installed wires
- Earth/ground installed wires
- Customer installed wires

**Control/other wires:**

- Installed wires
- Optional installed wires
- Earth/ground installed wires
- Customer installed wires
- Wires installed by production
- Installed multi wire cables
- Component links
- Terminal/connector links

**Terminal diagram**

- 1X0 : Supply
- 1X1 : Main motor connections
- 1X2 : Fan/Dryer motor connections
- 1X3 : Earth
- 1X4 : 115V/230V AC control circuit
- 1X5 : 24V AC control circuit
- 1X6 : 24V DC control circuit
- 1X7 : Customer contacts
- 1X8 : Option terminals
- 1X9 : Standard connector terminals
- 1X10 : Optional connector terminals

**Elektronikon buttons**



Start Button

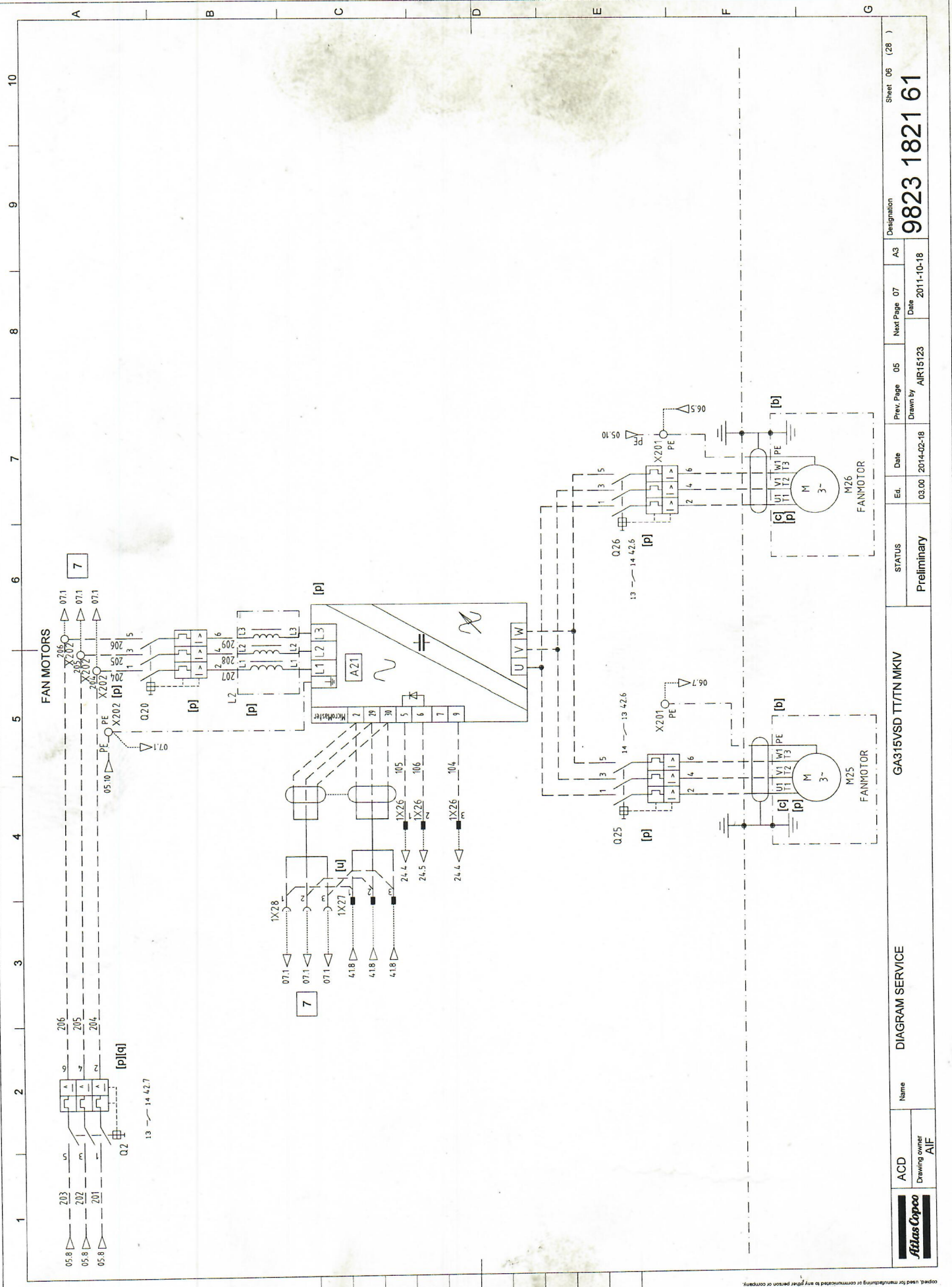


Programmed Stop Button

	ACD	Name	GA315VSD TT/TN MKIV		STATUS	Ed.	Date	Prev. Page	Next Page	Designation	Sheet
	Drawing owner	AIF	DIAGRAM SERVICE		Preliminary	03.00	2014-02-18	AIR15123		A3	97 (28)
											9823 1821 61
											Date
											2011-10-18

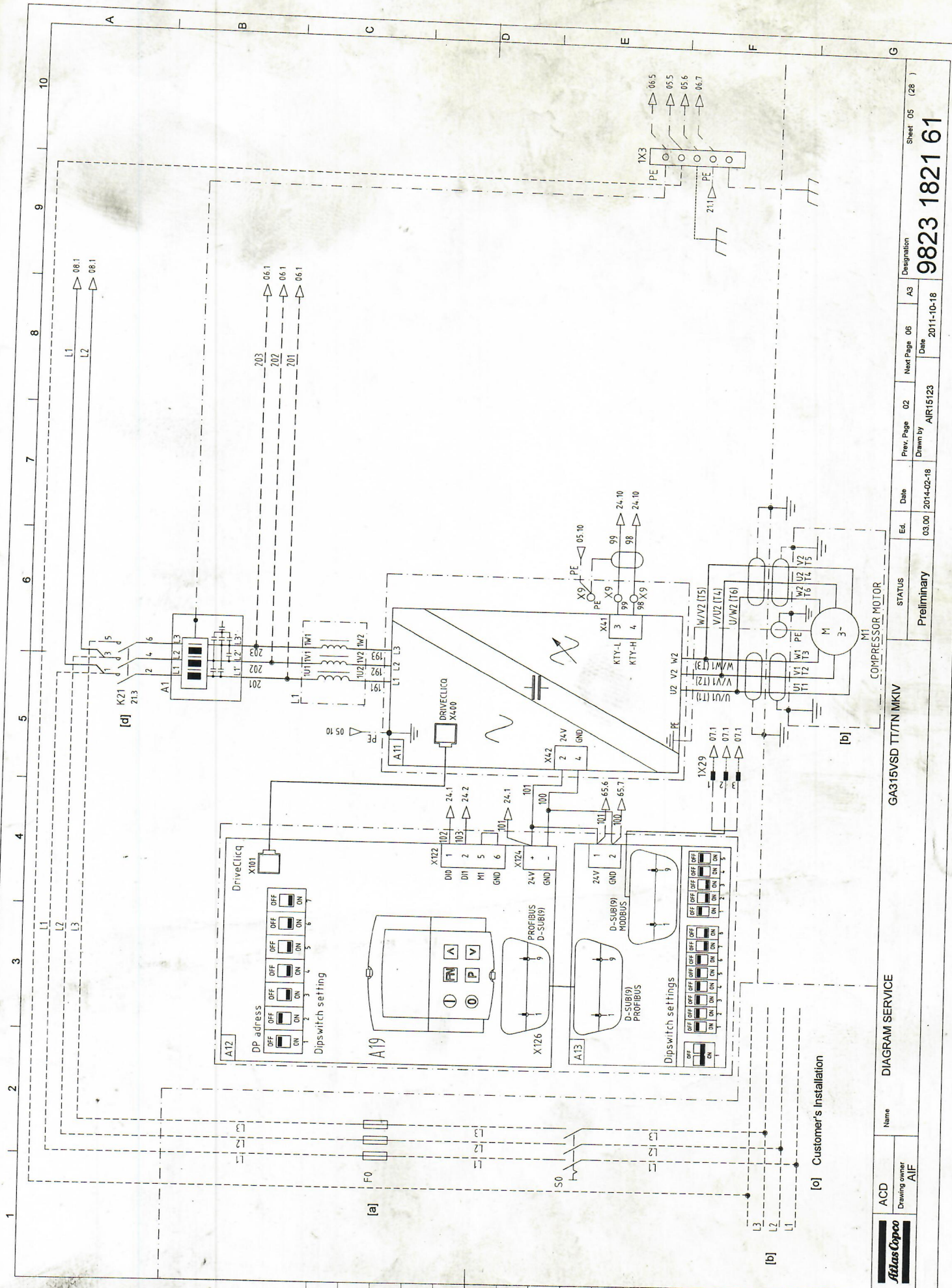
This document is the property of Atlas Copco and shall not be distributed to any other person or company. Copied, used for manufacturing or communicated to any other person or company.





	ACD	Name	DIAGRAM SERVICE	GA315VSD TT/TN MKIV	STATUS	Preliminary	Ed.	03.00	Date	2014-02-18	Prev. Page	05	Next Page	07	A3	Designation	9823 1821 61	Sheet	06	(28)
		Drawing owner	AIF								Drawn by	AIR15123	Date	2011-10-18						

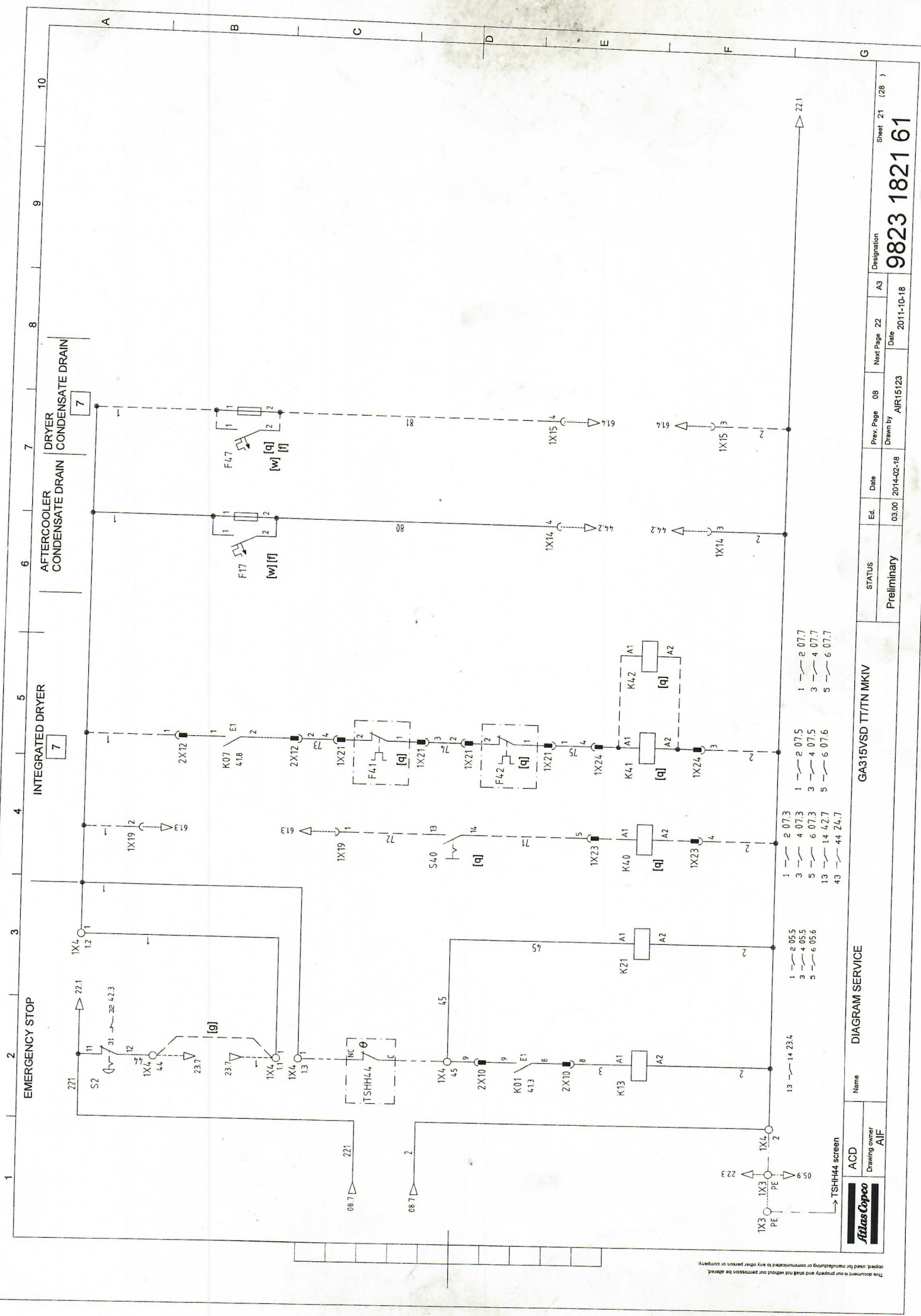
This document is our property and shall not without our permission be altered, copied, used for manufacturing or communicated to any other person or company.



This document is our property and shall not be distributed or communicated to any other person or company, without the prior written permission of the manufacturer.

	ACD	Name	DIAGRAM SERVICE			GA315VSD TT/TN MKIV STATUS Preliminary	Ed. 03.00, 2014-02-18 Date Drawn by AIR15123 Prev. Page 02 Next Page 06 A3 Designation Sheet 05 (28)
	Drawing owner AIF						

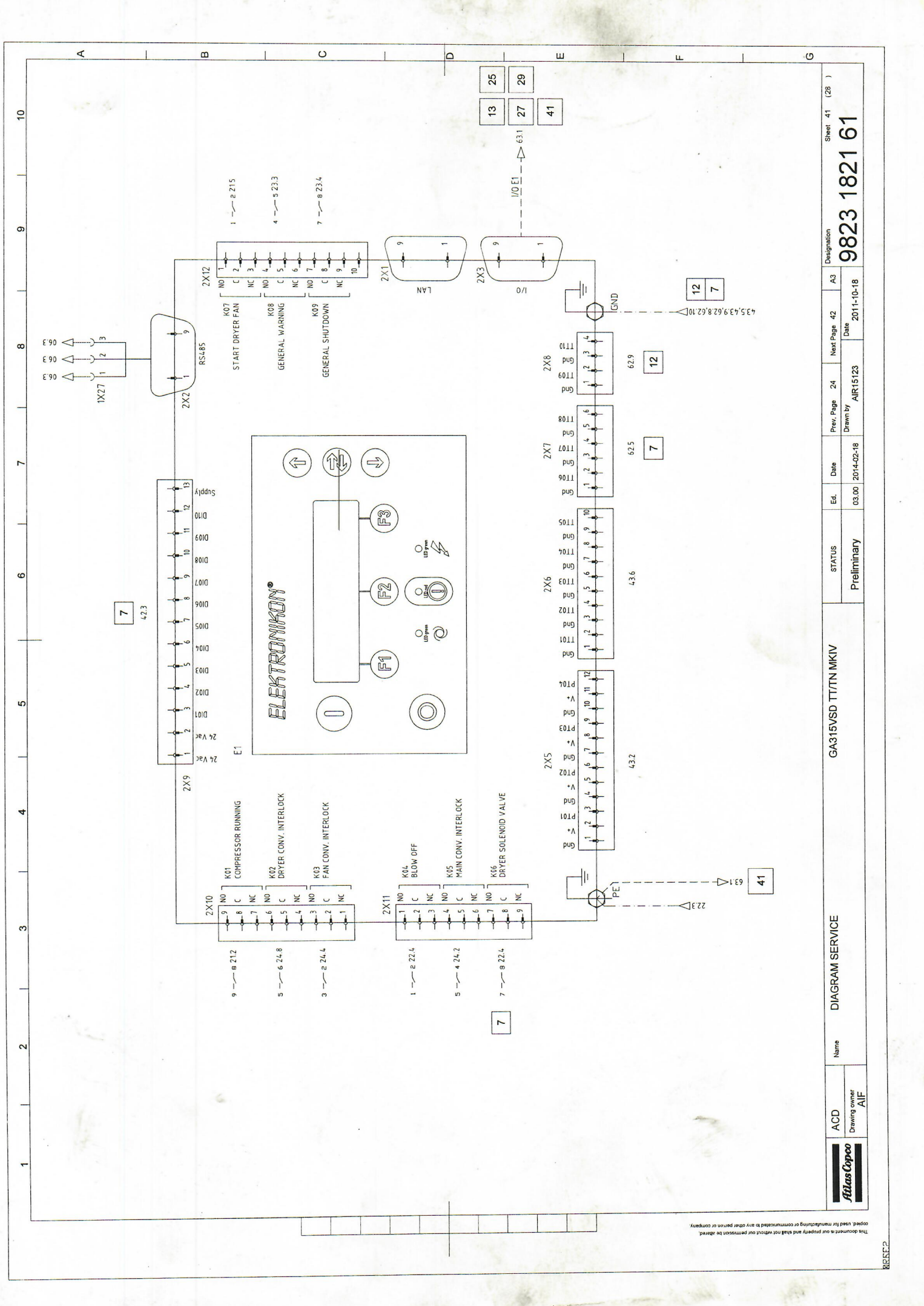




STATUS	Ed.	Date	Priv. Page	Next Page	A3	Designation	Sheet 21 (28)
Preliminary	03.00	2014-02-18	08	22		9823 1821 61	
			Drawn by	Date			
			ARI1523	2011-10-18			

GA315VSD TITN MKIV	
Name	DIAGRAM SERVICE
ACD	Drawing owner
AIF	

This document is our property and shall not be distributed to any other person or company.



7  
42.3

7

12  
7

7  
62.5

12  
62.9

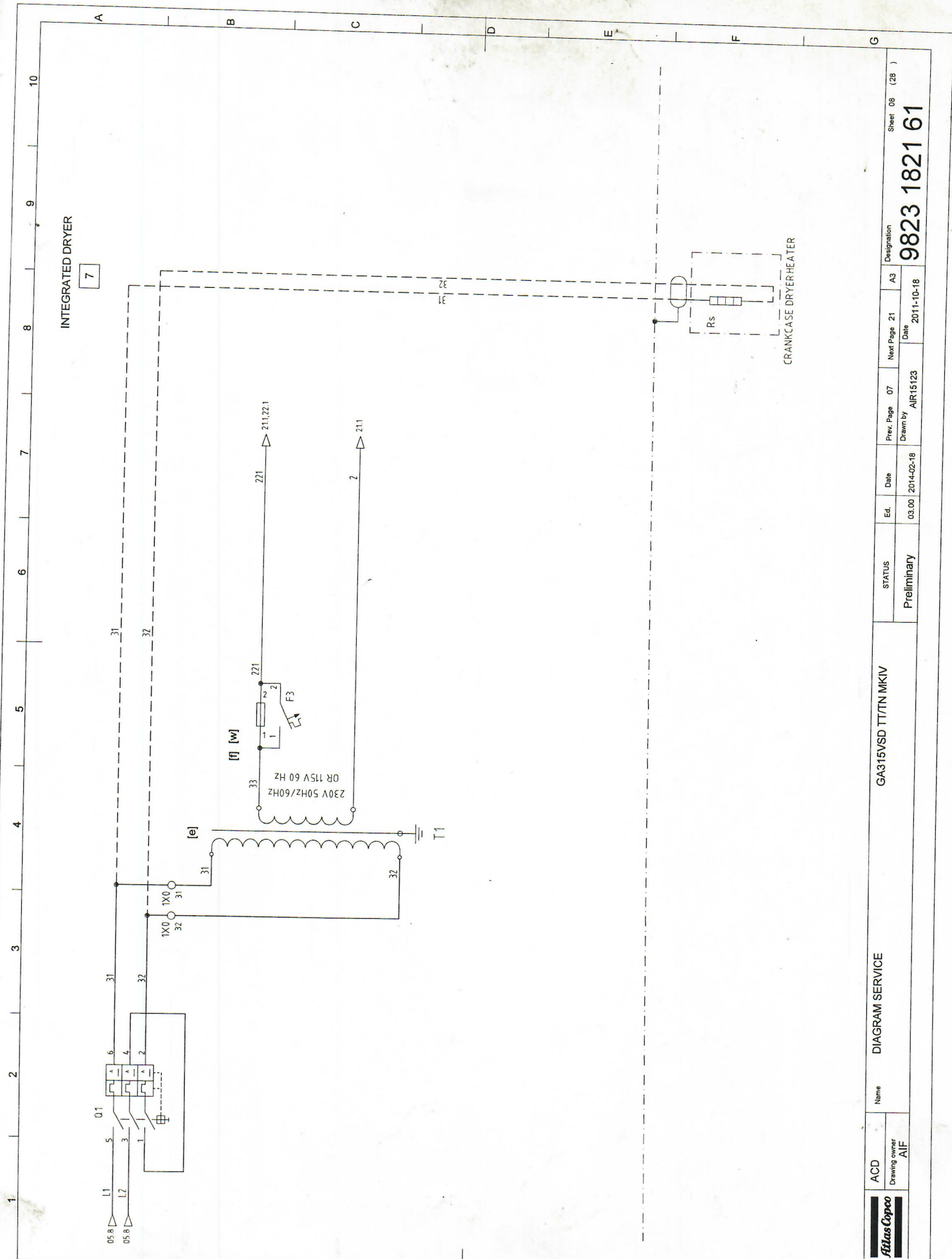
7  
43.2

41  
22.2

	ACD	Name	DIAGRAM SERVICE GA315VSD TT/TN MKIV	STATUS Preliminary	Ed.	Date	Prev. Page	Next Page	Designation <b>9823 1821 61</b>	Sheet 41 (28)
	Drawing owner	AIF			03.00	2014-02-18	24	42		

This document is our property and shall not be distributed or communicated to any other person in company, copied, used for manufacturing or construction in any other person or company.





INTEGRATED DRYER

7

CRANKCASE DRYER HEATER

	ACD	Name	DIAGRAM SERVICE		GA315VSD T1/TN MKIV		STATUS	Preliminary		Ed.	03.00	Date	2014-02-18	Drawn by	AIR15123	Prev. Page	07	Next Page	21	Designation	A3	Sheet	08	(28)
	Drawing owner	AIF																						9823 1821 61

This document is our property and shall not be reproduced or communicated to any other person or company without our prior written permission.





**NOTES:**

- [a] Max. Fuse with regard to short-circuit protection of starter. Cable section may impose a fuse of smaller value.
- [b] Power supply to be connected for clockwise rotation of compressor motor, dryer motor and fanmotor(-s) and dryer fanmotor(-s). Rotation to be observed while facing the drive end shaft of the motor.
- [c] For fan motor(-S) delivered with terminal box : Y- or -D-connection to be made inside the terminal box.
- [d] For CSAUL compressors. Special type of contactor (with DC relay) is used. See front cover of contactor
- [e] For connections of Transformer : see table on transformer :

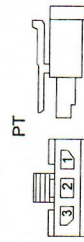
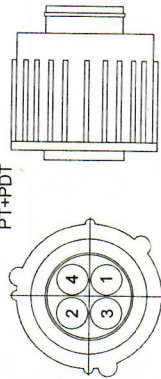
230V	115V	
50/60Hz	60Hz	
F3 (A)	F3 (A)	F-4/5 (A)
2	4	4
		0, 5

[f]

- [g] When remote stop button is installed, the bridges should be removed on the corresponding terminal of 1X4 & 1X6.

[i] Pressure transducer pin configuration

- 1 : Supply voltage
- 2 : Ground
- 3 : Output
- 4 : Not connected, open



- 1 : V+
- 2 : Signal
- 3 : Ground

service mode selection	0	normal use
	1	service

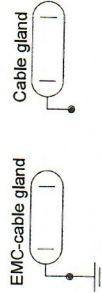
CAUTION : The Service switch S10 must always be in the 0 position and may only be used by qualified service personnel.

[m] Sensor only installed for water cooled units.

- [n] To avoid electro magnetic interference: screened cable shall be used and earthed.
- [o] For field wiring : USE COPPER WIRE ONLY tightening torque for bolts:  
 metric thread size M5: 2.7Nm (2 lbf)  
 metric thread size M6: 7Nm (5 lbf)  
 metric thread size M8: 12Nm (9 lbf)  
 metric thread size M10: 20Nm (12 lbf)  
 metric thread size M12: 30Nm (22.5 lbf)  
 F.P.C = Field Provided Components

- [p] Q2, L2, Q20, A21, M25, M26, Q25, Q26, X201, X202 only installed for aircooled versions.
- [q] Q2, L3, S40, M40, K40, A31, X202, F47, LSHL47, Y3, S3 only installed for option dryer.
- [r] Bridges to be (or will be) removed if options are installed.
- [s] Short circuit breaking capacity min 30kVA for TT/TN/IT networks.
- [t] Cooling air in for aircooled, water outlet for watercooled units.
- [u] Bridges only installed for watercooled units.
- [w] For CSAUL a fuse is used in a circuit breaker.

**TYPE OF GLANDS**



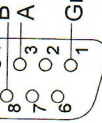
**CONNECTION OF RS485**

Modbus cable wiring colour:

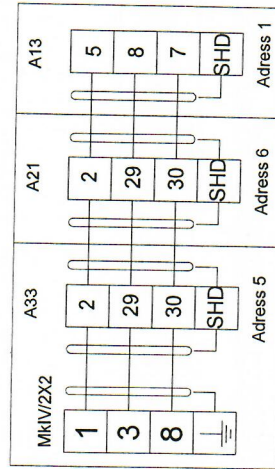
A: red

B: black

Gnd: transparent



2X2 (RS485) on E1(see page 41)



Dryer converter Fan converter Main drive

Name : DIAGRAM SERVICE

ACD Drawing owner AIF

GA315VSD TT/ITN MKIV

STATUS Preliminary

Ed. 03.00 Date 2014-02-18

Prev. Page 95 Next Page 97

Designation A3

Date 2011-10-18

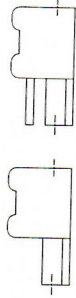
Drawn by AIR15123

Sheet 96 (28)

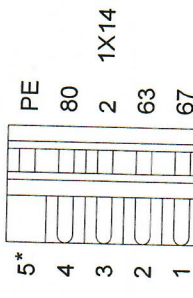
9823 1821 61

**PLUG IN KEY TABLE & CONNECTORS**

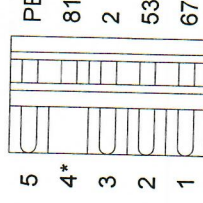
Pin numbers to be removed at the female connector as shown on this drawing. On the opposite connector, coding key 1088 0031 01 has to be installed at the same place



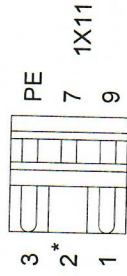
\* Removed key(s)



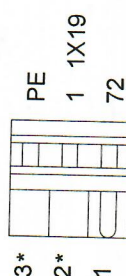
1088 0031 05[S]



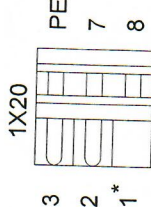
1088 0031 05[S]



1088 0031 03[S]

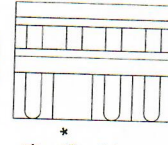


1088 0031 03[S]



1088 0031 03[S]

1X22



1088 0031 04[S]

CONNECTORS Male Female

1088 0031 62[S] 1X18 1088 0031 02[S]  
 1X11/1X19/1X20/1X26-31

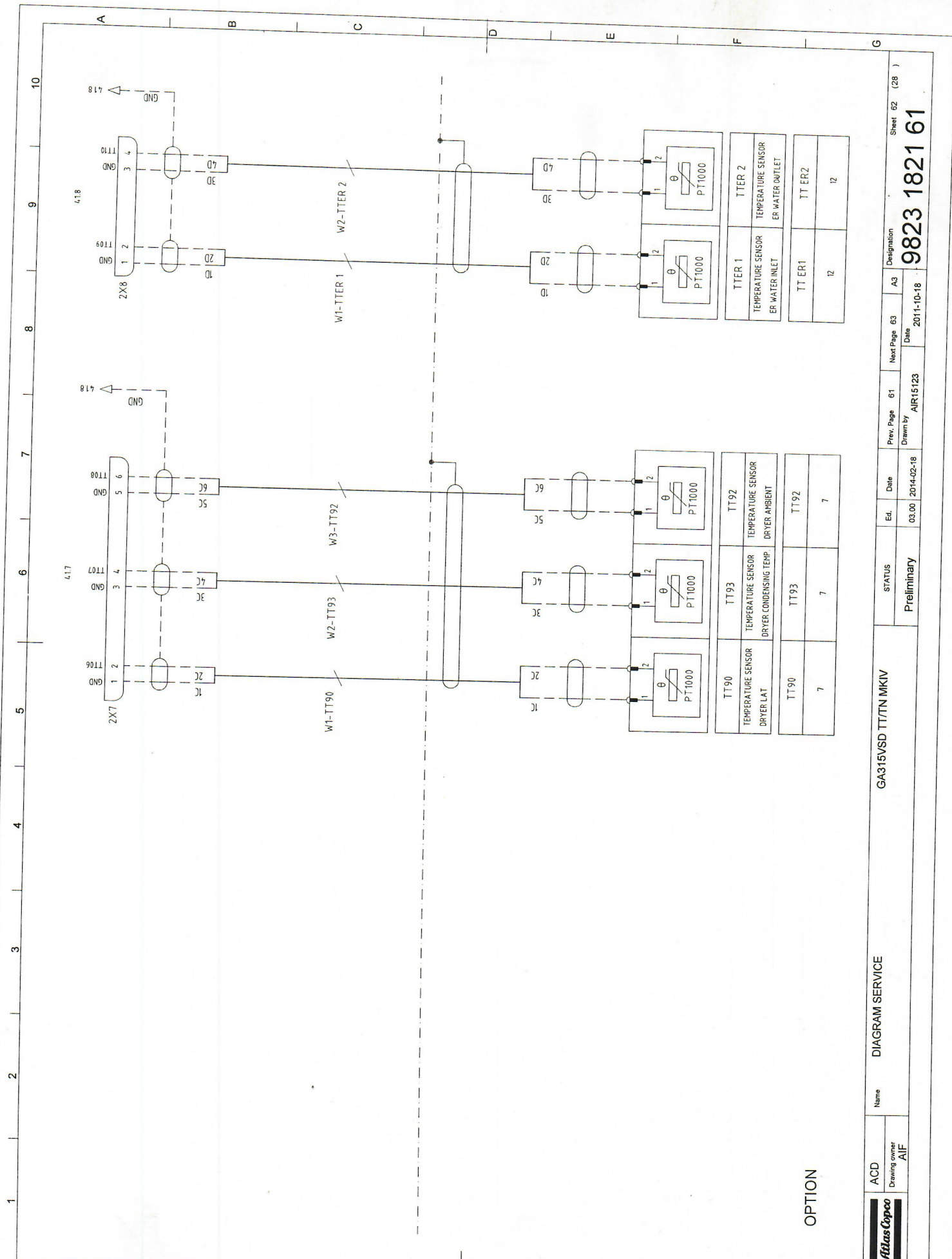
1088 0031 63[S] 1088 0031 03[S]

1088 0031 64[S] 1X21 1088 0031 04[S]  
 1X22/1X24

1088 0031 84[S] 1088 0031 24[S]  
 1X14/1X15

1088 0031 65[S] 1088 0031 05[S]

1088 0031 89[S] 1X23 1088 0031 29[S]

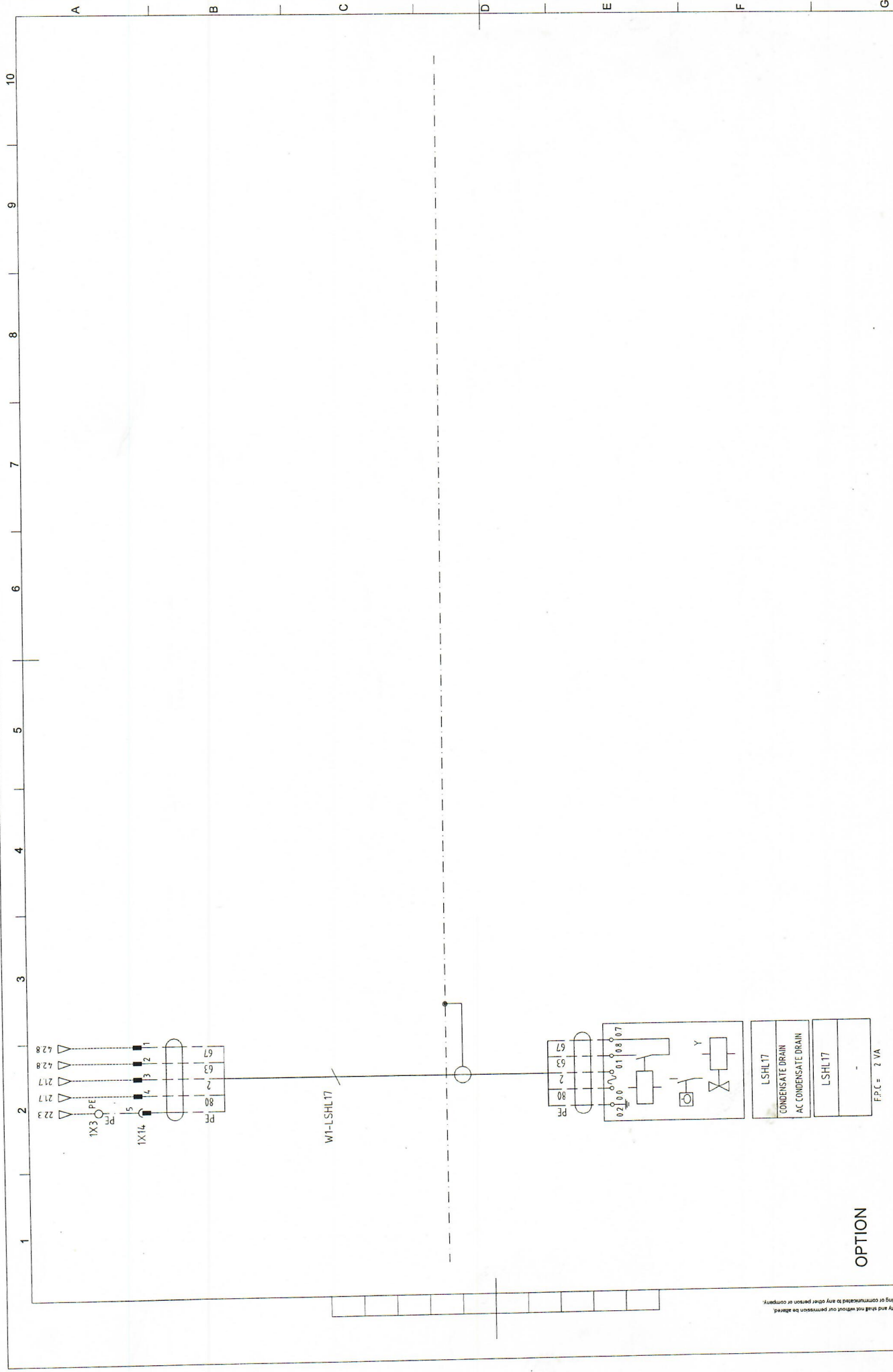


OPTION

	ACD	Name	STATUS	Ed	Date	Prev. Page	Next Page	A3	Designation	Sheet 62 (28 )
	Drawing owner									
GA315VSD TT/TN MKIV										
DIAGRAM SERVICE										
Preliminary										

This document is our property and shall not without our permission be altered, copied, used for manufacturing or communicated to any other person or company.





OPTION

ACD  
Drawing owner  
AIF



Name  
DIAGRAM SERVICE

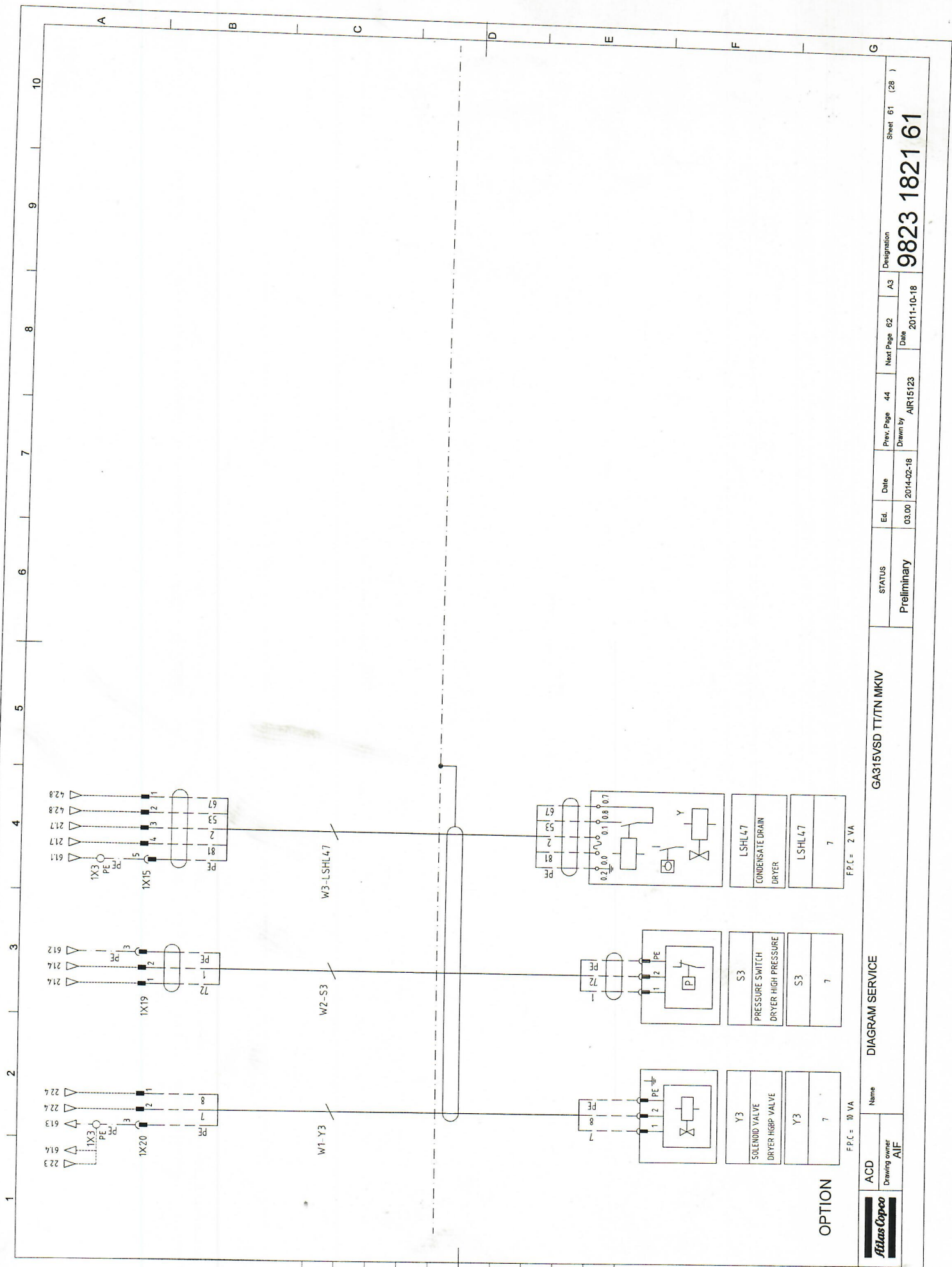
GA315VSD TT/TN MKIV

STATUS  
Preliminary

Ed.	Date	Prev. Page	Next Page	A3	Designation
03.00	2014-02-18	43	61	A3	9823 1821 61
		Drawn by	Date		
		AIR15123	2011-10-18		

Sheet 44 (28)

This document is our property and shall not be distributed or communicated to any other person or company, copied, used for manufacturing or construction without our permission be allowed.



OPTION

F.P.C. = 10 VA

F.P.C. = 2 VA

GA315VSD TT/7N MKIV

DIAGRAM SERVICE

ACD  
Drawing owner  
AIF

STATUS  
Preliminary

Ed. 03.00  
Date 2014-02-18

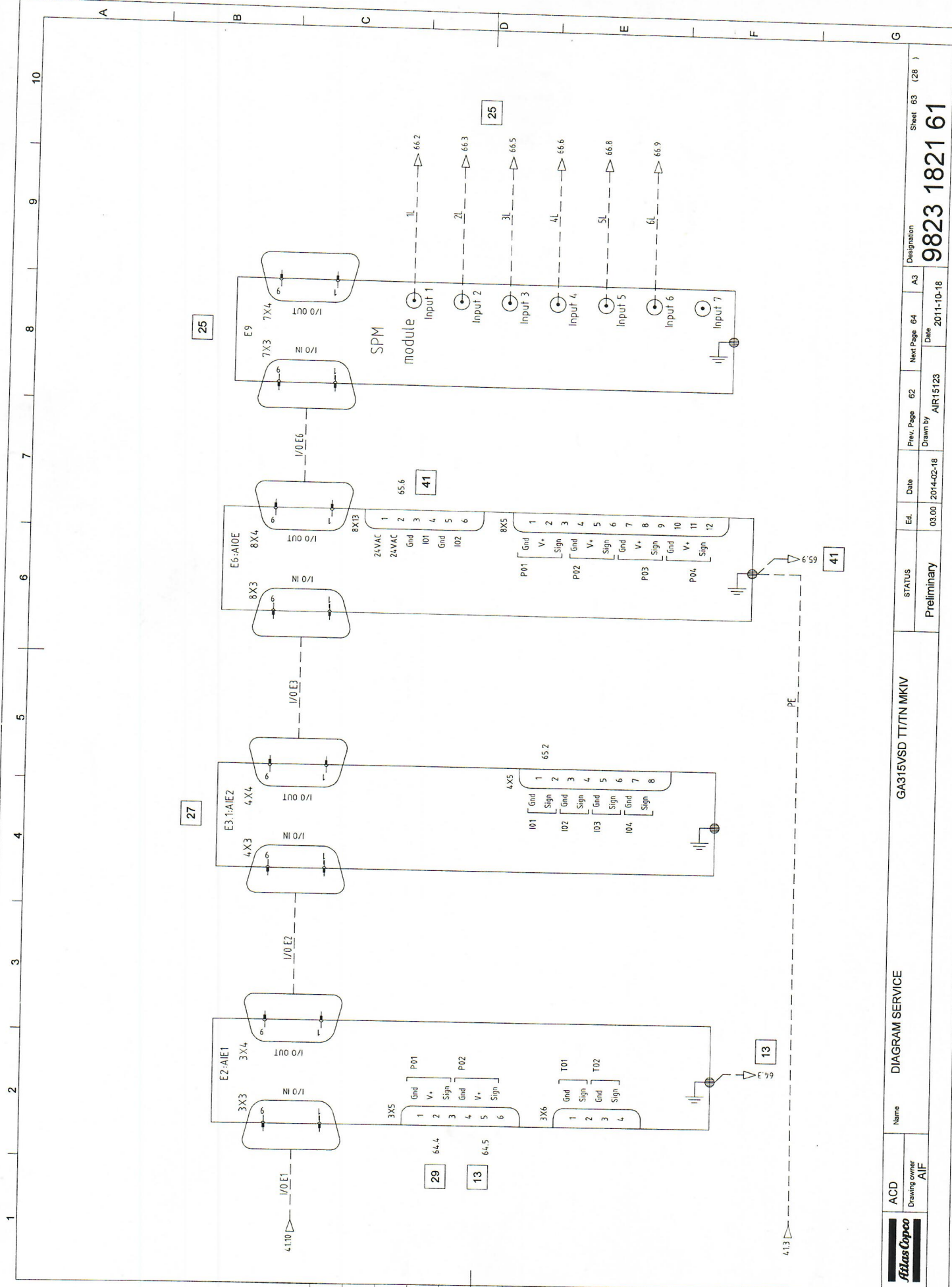
Prev. Page 44  
Drawn by AIR15123

Next Page 62  
Date 2011-10-18

Designation  
A3

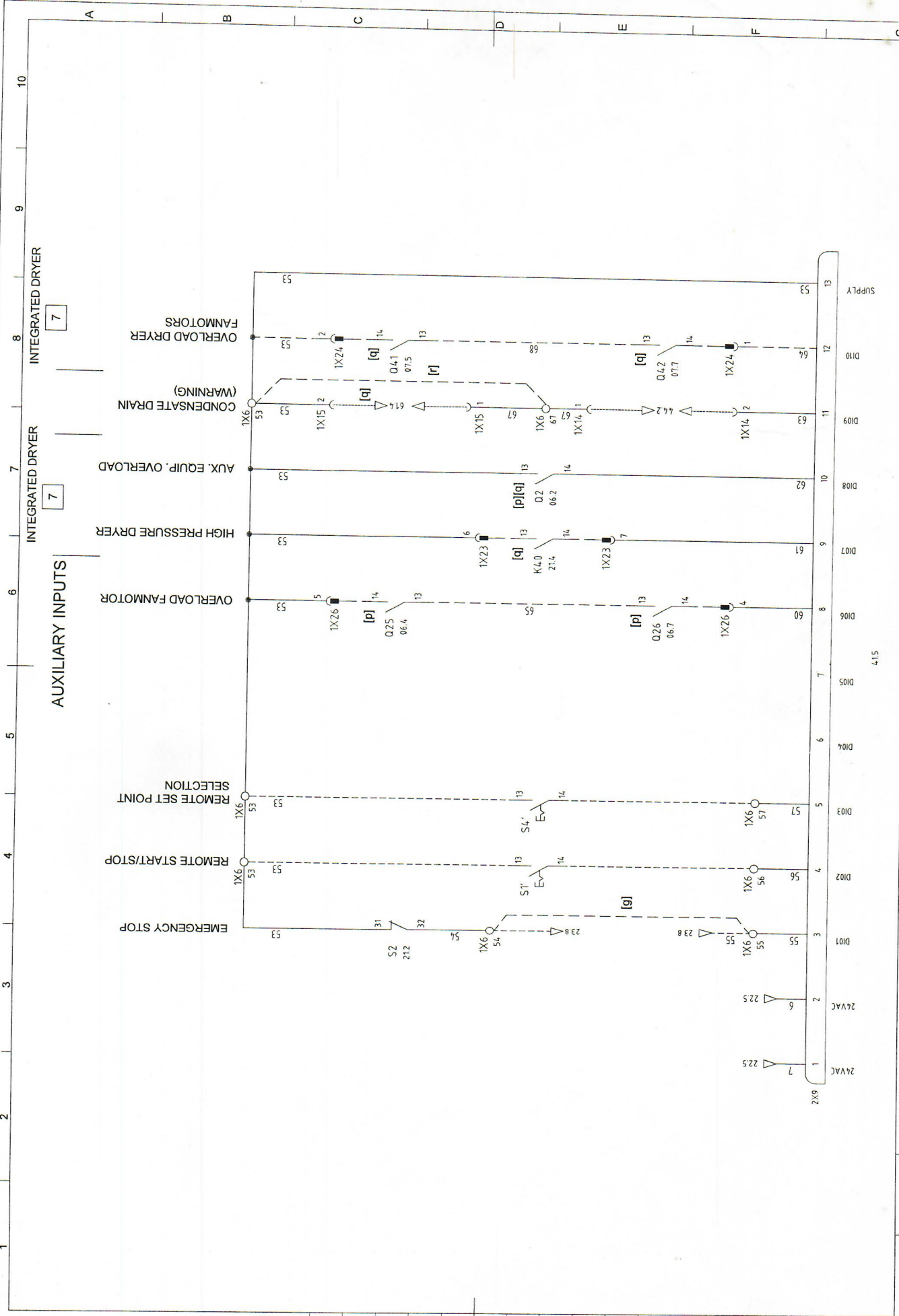
Sheet 61 (28 )  
9823 1821 61





	ACD	Name	DIAGRAM SERVICE		STATUS	Ed.	Date	Prev. Page	Next Page	A3	Designation	Sheet 63 (28)
	Drawing owner		AIF	Preliminary								03.00

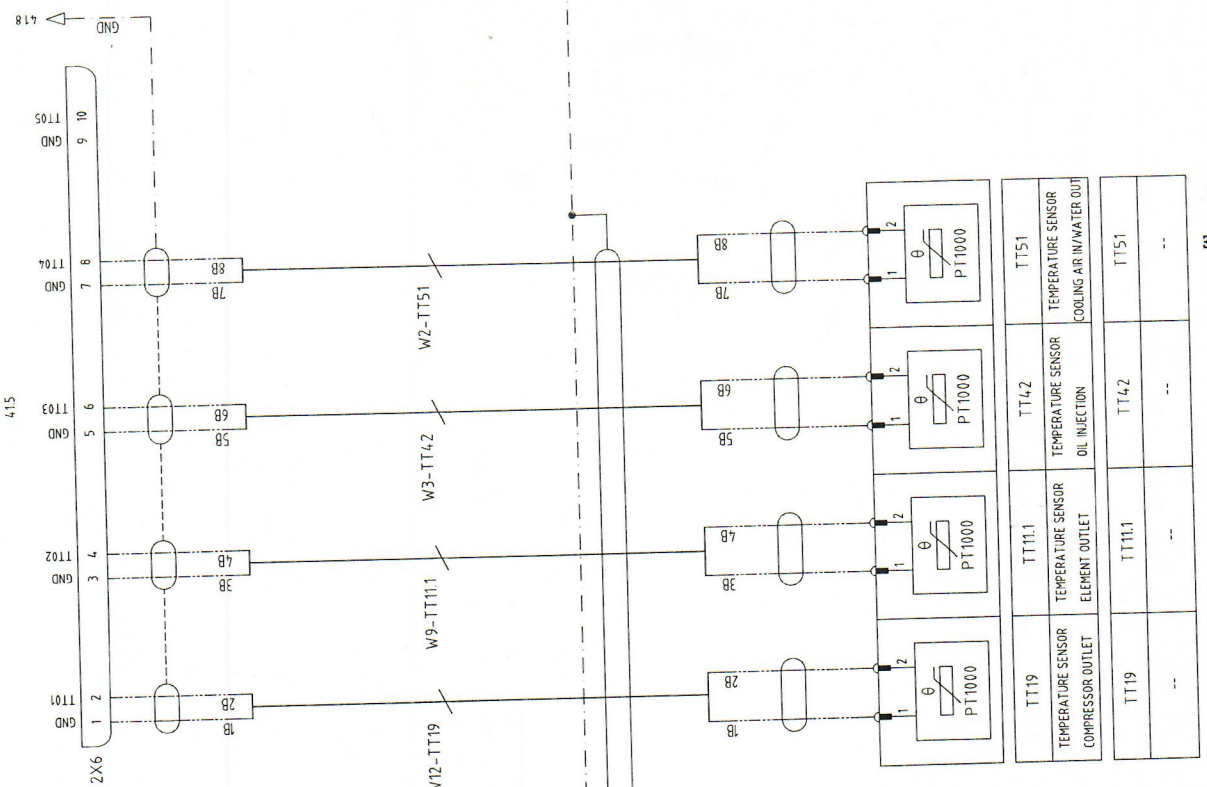
This document is our property and shall not be distributed or communicated to any other person or company without our prior written permission.



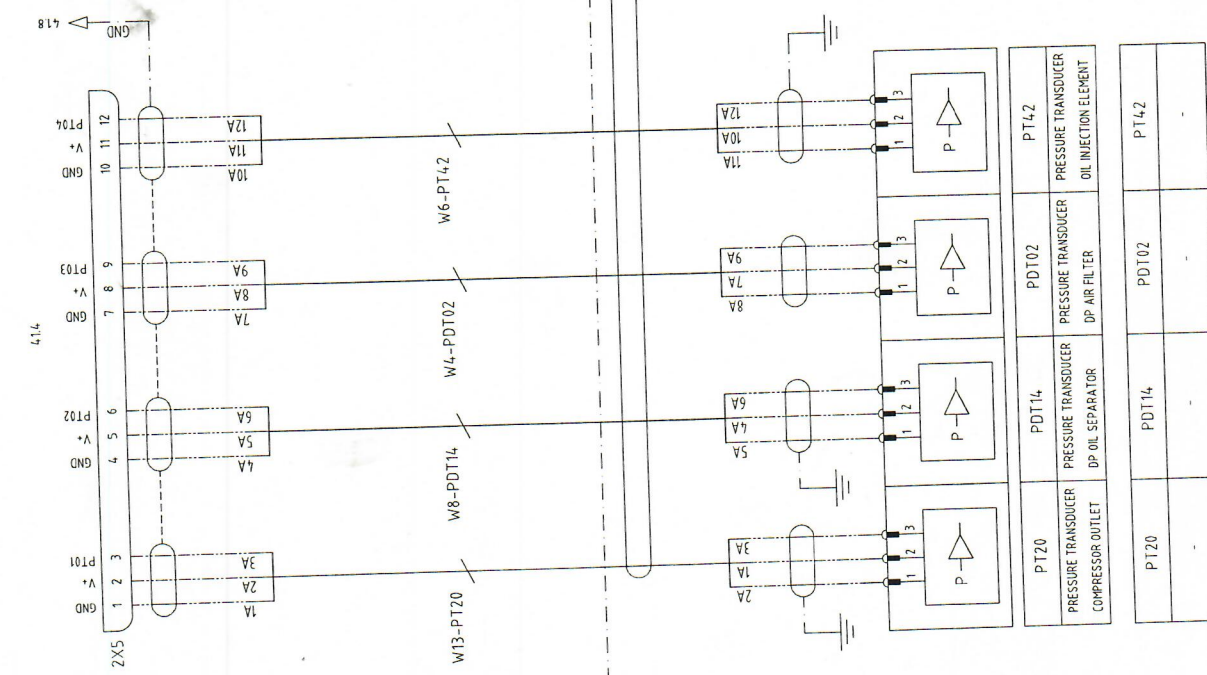
	ACD	Name	DIAGRAM SERVICE		GA315VSD TT/TN MKIV		STATUS	Ed.	Date	Prev. Page	Next Page	Designation	Sheet 42 ( 28 )
	Drawing owner	AIF	Preliminary	03.00	2014-02-18	AIR15123							Date

This document is our property and shall not be reproduced or transmitted in any form or by any means without our prior written permission.





TT19	TEMPERATURE SENSOR COMPRESSOR OUTLET	TT111	TEMPERATURE SENSOR ELEMENT OUTLET	TT42	TEMPERATURE SENSOR OIL INJECTION	TT51	TEMPERATURE SENSOR COOLING AIR IN/WATER OUT
TT19	--	TT111	--	TT42	--	TT51	--

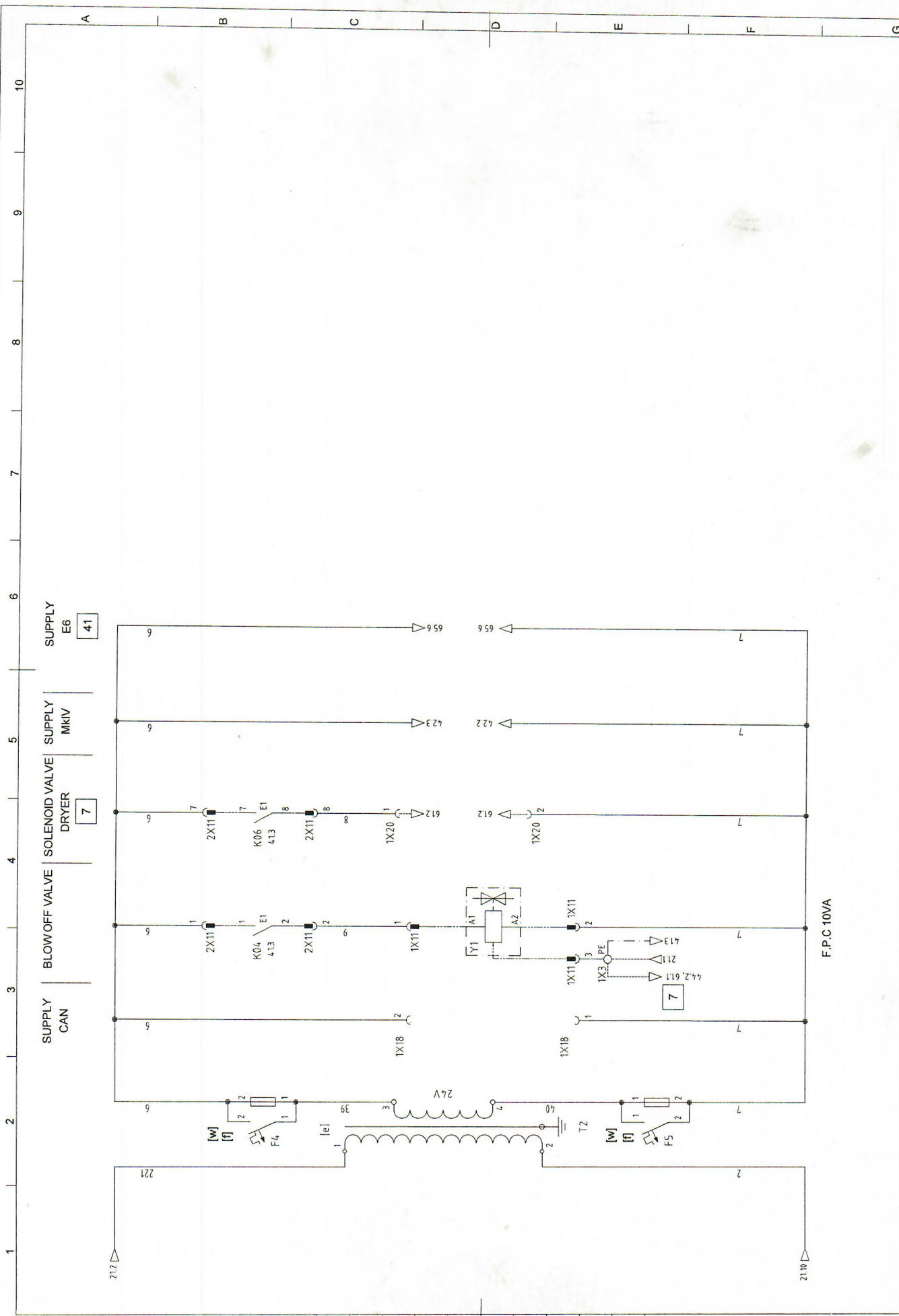


PT20	PRESSURE TRANSDUCER COMPRESSOR OUTLET	PDT14	PRESSURE TRANSDUCER DP OIL SEPARATOR	PT42	PRESSURE TRANSDUCER OIL INJECTION ELEMENT
PT20	--	PDT14	--	PT42	--

OPTION

[ ] [ ] [ ] [ ] [ ] [ ]

This document is our property and shall not without our permission be altered, copied, used for manufacturing or constructed by any other person or company.

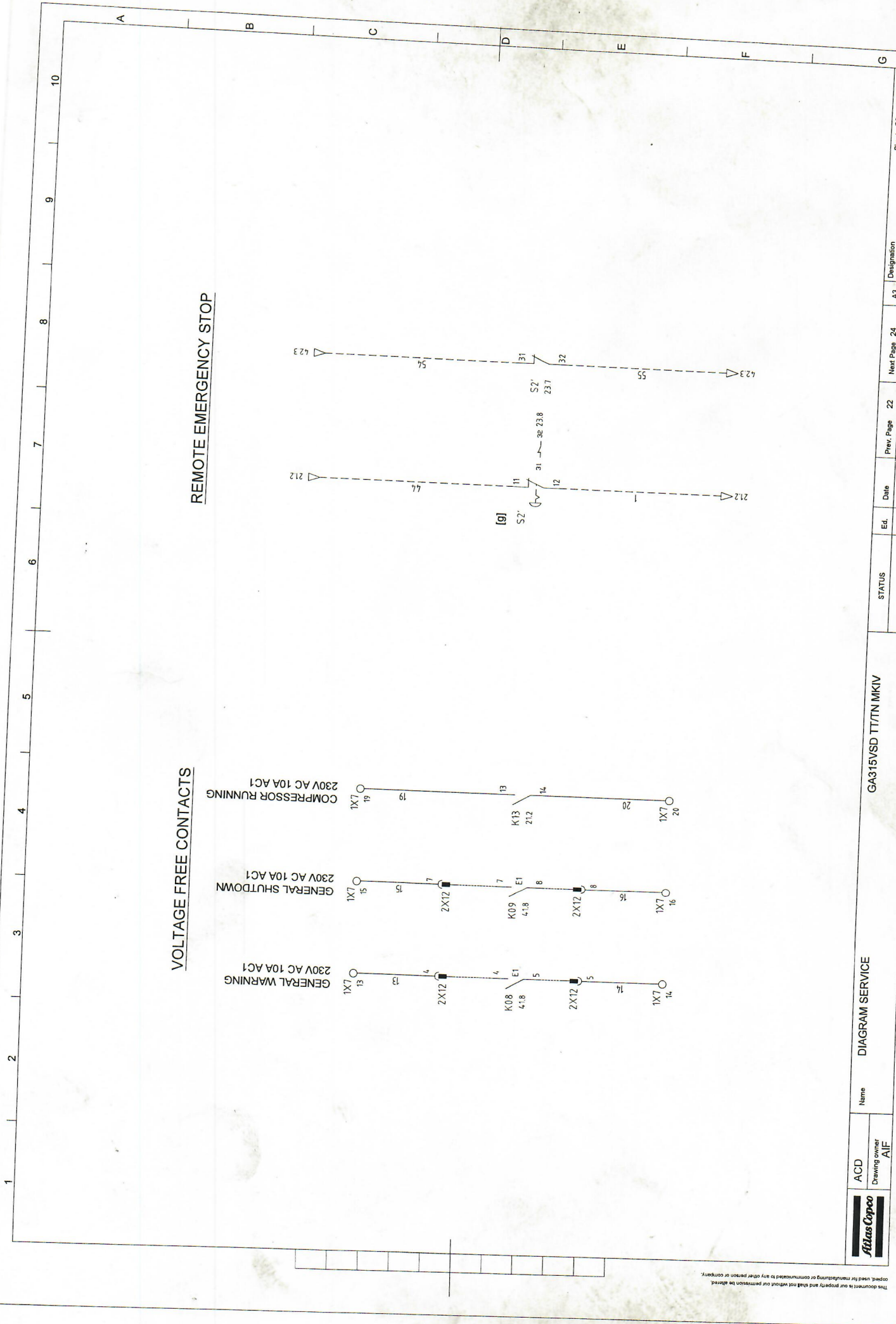


F.P.C 10VA

	ACD	Name	DIAGRAM SERVICE		GA315VSD TT/TN MKIV		STATUS	Date	Ed.	Date	Prev. Page	Next Page	Designation	Sheet
	Drawing owner	AIF					Preliminary	03.00	2014-02-18	AIR15123	21	23	A3	9823 1821 61

This document is our property and shall not be lent, copied, reproduced, or communicated to any other person or company, without the prior written permission of the owner.





VOLTAGE FREE CONTACTS

REMOTE EMERGENCY STOP



ACD  
Drawing owner  
AIF

DIAGRAM SERVICE

GA315VSD TT/TN MKIV

STATUS  
Preliminary

Edt. 03.00  
Date 2014-02-18

Prev. Page 22  
Drawn by AIR15123

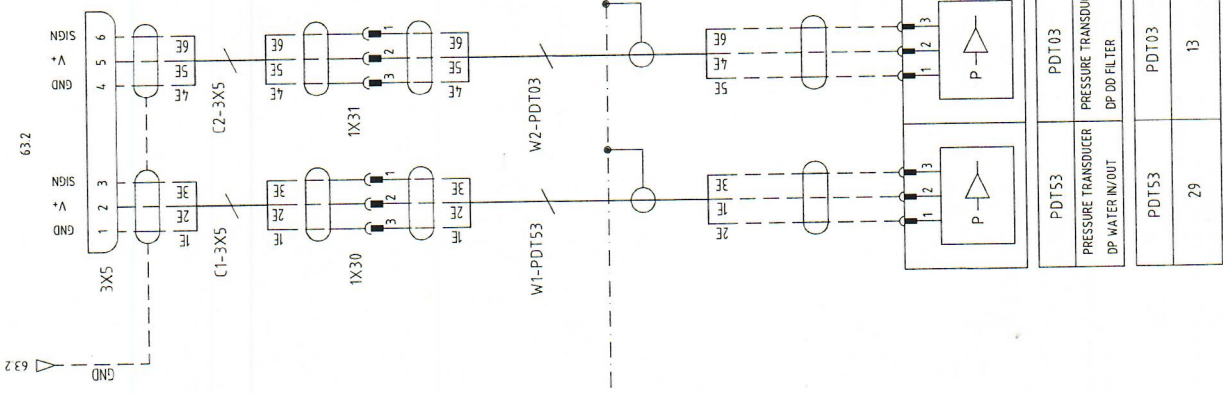
Next Page 24  
Date 2011-10-18

Designation  
9823 1821 61  
Sheet 23 (28)

This document is our property and shall not without our permission be altered, copied, used for manufacturing or communicated to any other person or company.

10 9 8 7 6 5 4 3 2 1

A B C D E F G



OPTION

[i] (m) [i]

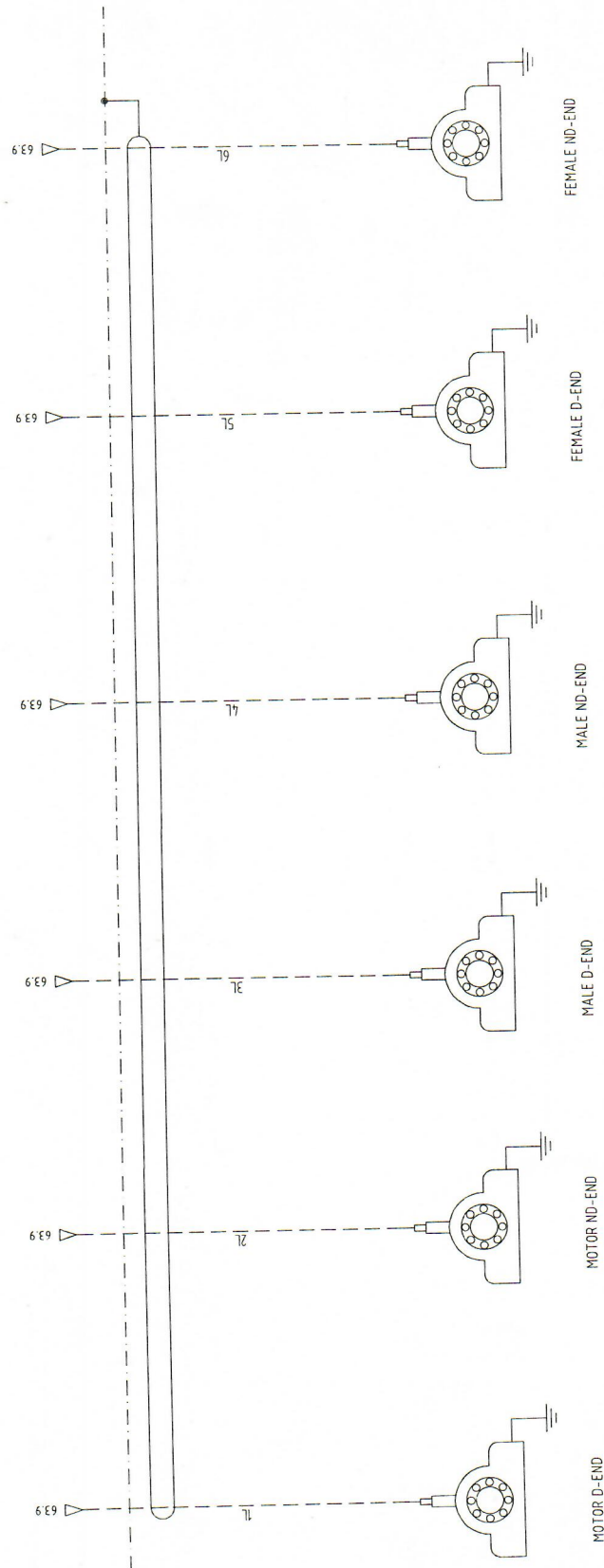
	ACD	Name	DIAGRAM SERVICE	GA315VSD TT/TN MKIV STATUS Preliminary	Ed.	Date	Prev. Page	Next Page	Designation <b>9823 1821 61</b>	Sheet 64 (28 )
	Drawing owner	AIF			03.00	2014-02-18	AIR15123	65		

This document is our property and shall not be used for manufacturing or construction without our permission. It is intended for use as a reference only.



10  
9  
8  
7  
6  
5  
4  
3  
2  
1

SPM  
25



ACD  
Drawing owner

Name

DIAGRAM SERVICE

GA315VSD TT/TN MKIV

STATUS  
Preliminary

Ed. 03.00  
Date 2014-02-18

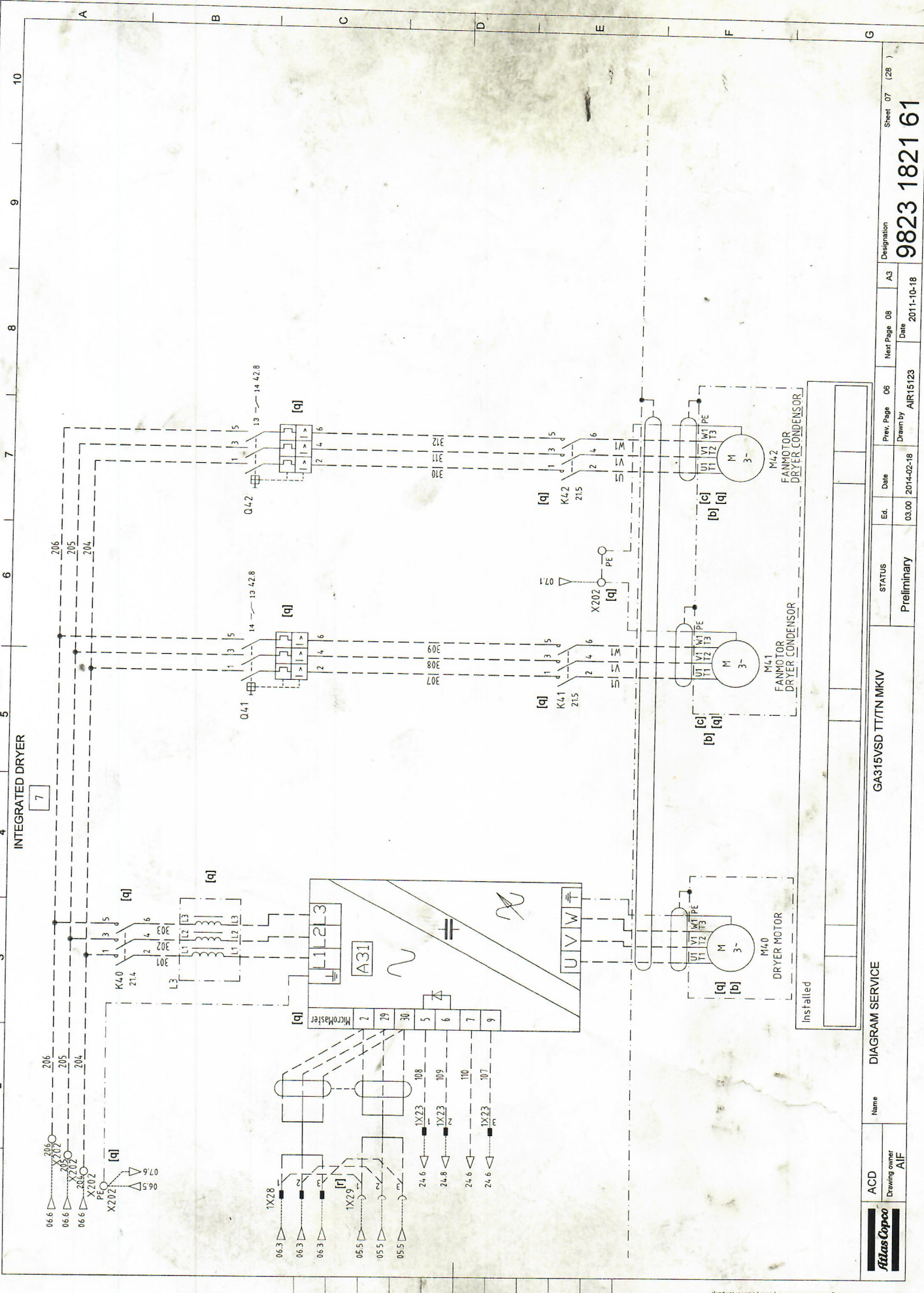
Prev. Page 65  
Drawn by AIR15123

Next Page 81  
Date 2011-10-18

Designation

9823 1821 61

Sheet 66 (28 )



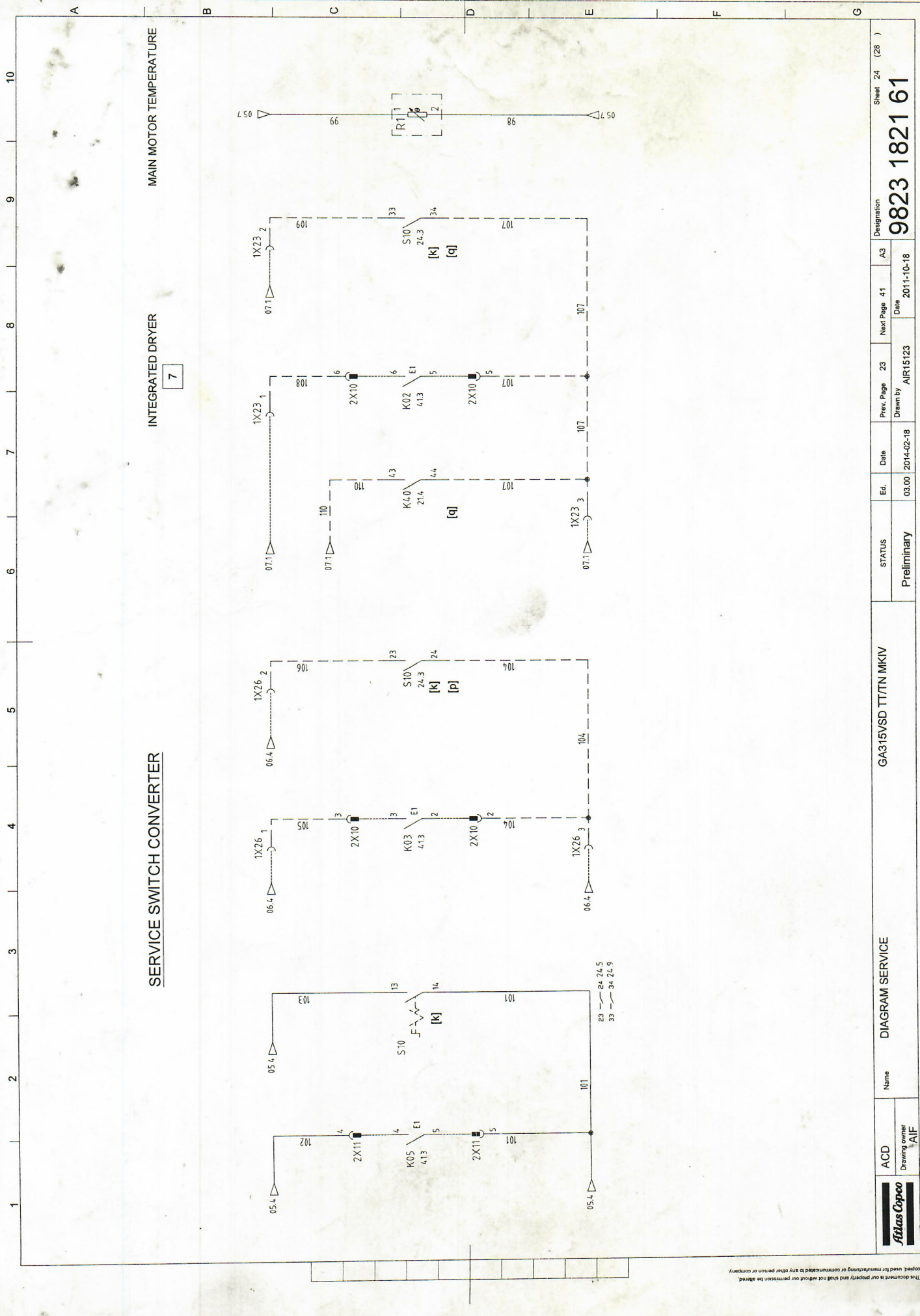
INTEGRATED DRYER

7

	ACD	Name	GA315VSD TT/TN MKIV		STATUS	Preliminary		Ed.	03.00	Date	2014-02-18	Drawn by	AR/15123	Next Page	06	A3	Designation	Sheet 07 (28)
	Drawing owner	AIF															9823 1821 61	

This document is our property and shall not be used for any other purpose or communicated to any other person or company.





 ACD Drawing owner	Name	DIAGRAM SERVICE	GA315VSD TT/TN MKIV	STATUS	Preliminary	Ed.	03.00	Date	2014-02-18	Prev. Page	23	Next Page	41	A3	Designation	8823 1821 61	Sheet	24 (28)
	Drawing owner	TAIF																

This document is our property and shall not be distributed to any other person or company. Copying, used for manufacturing or communication to any other person or company, is prohibited.