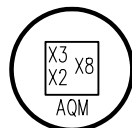


PRIME MOVER



CONNECTION BOX X108
WITH THE GRAVITY TANK



AQUAMASTER PROPULSION UNIT

WORK	SYMBOL	PCS	CODE	NAME	DRAWING	LOCATION	CASING TYPE	IP	NOTE
		2	BSU	BRIDGE SLIO UNIT	7357847-001	WH	BOX	IP44	X10
		1	ACP	CONTROL PANEL	7452258-005	WH	DU	IP44	
		1	ACP	CONTROL PANEL	7452258-010	WH	DU	IP44	
		2	TDI	THRUST DIRECTION INDICATOR	7352233-005	WH	DU	IP44	X90
		2	BCP	BACK-UP PANEL	7452656-004	WH	DU	IP44	X99
		2	AQP	AQUAPILOT	7356258-001	WH	DU	IP56	
		2	ACU	AQUAMASTER CONTROL UNIT	7356785-001	AR	BOX	IP44	X1
		2	MCH	MAINTENANCE CONTROLLER	7452044-002	AR	BOX	IP44	X13

CONSTRUCTION
DU DROP-IN UNIT
AB APPARATUS BOARD
BOX BOX

LOCATION
WH BRIDGE/WHEELHOUSE
ECR ENGINE CONTROL ROOM
ER ENGINE ROOM
AR AQUAMASTER ROOM

Languages:
U



Rolls-Royce

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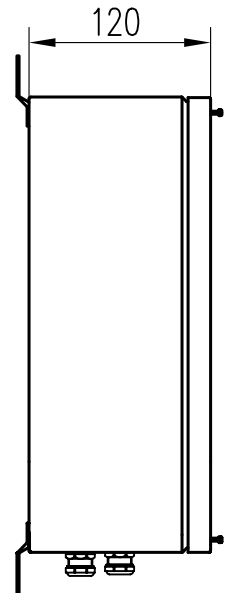
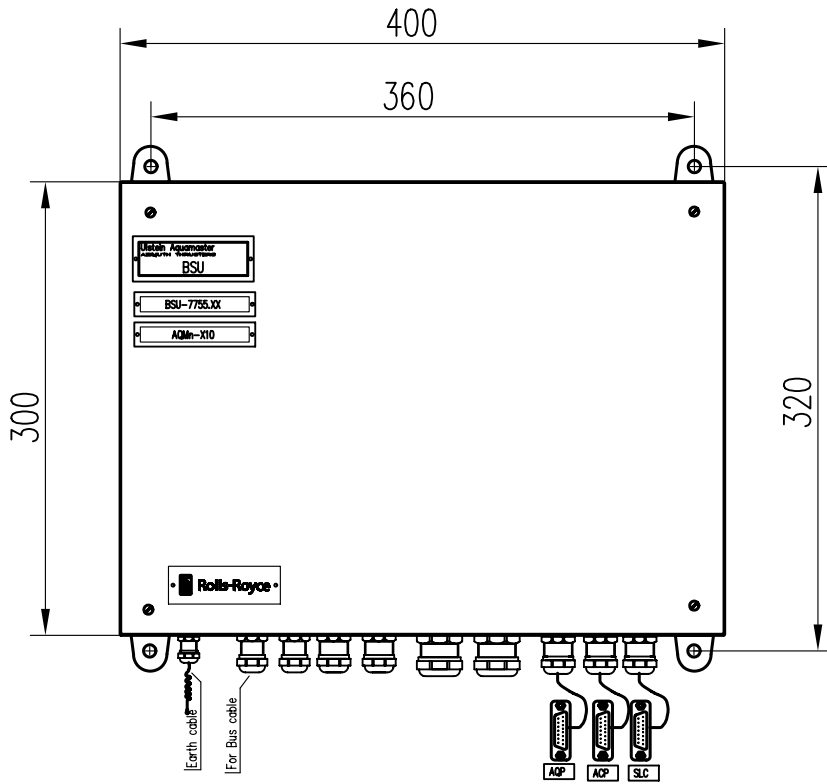
Approved
JAJA
Checked
ESKO

AQUAPILOT CONTROL SYSTEM
514-H659-340-02
Two AZT stern with one control station
General arrangement

US205

PL01DATE: 17.09.2008 E

Drawn	15.9.2008	TAOJ	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight		Scale	7360215 - A - 000			01	101	U		



As standard:
 KL 1508.210
 RAL 7032
 IP 44



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
 Bridge SLIO Unit
 BSUxxxx.xx (DBL)
 Dimension drawing

DBL

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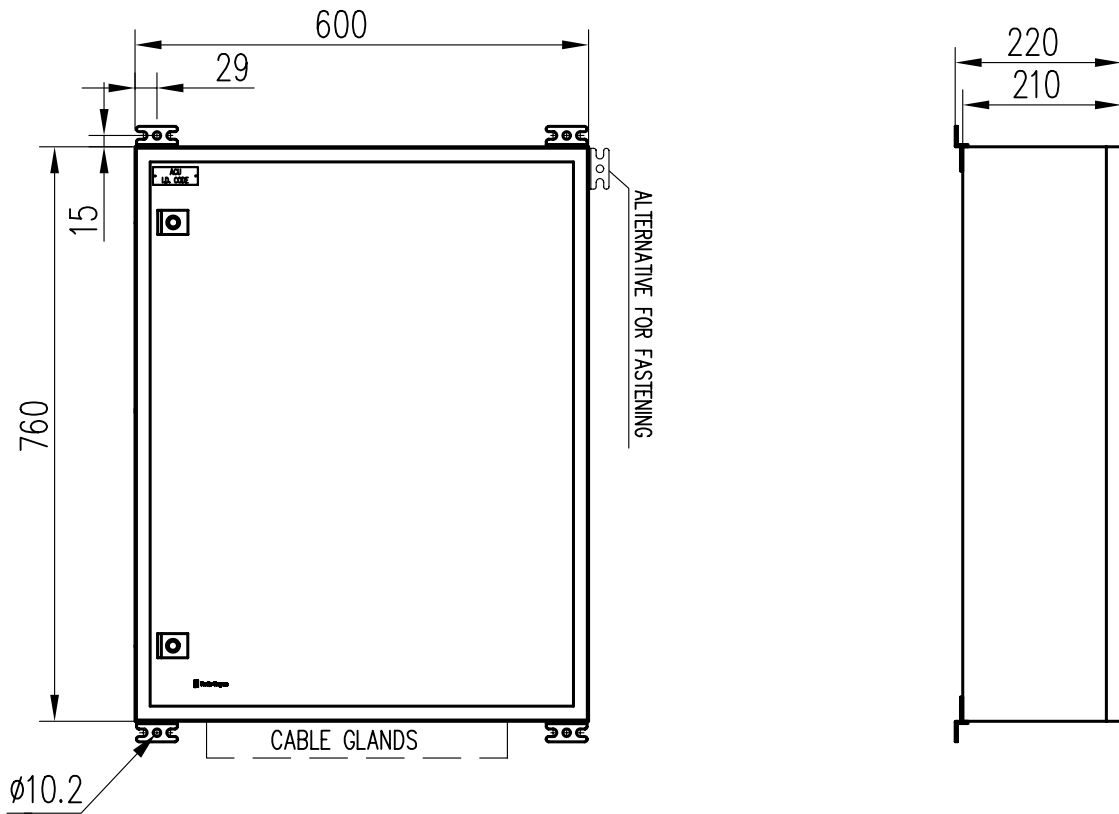
Approved
 JAJA
 Checked
 TATU

K

PLOTDATE: 13.10.2003 E

Drawn	28.8.2003	HAVA	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	kg	7	Scale	1:5	7452454	-0-	XXX	01	/01	U

ng
U



As standard
 1076.600
 IP56
 RAL7032

PLOTDATE: 15.02.2006 E

ng U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM

DBL

Aquamaster Control Unit
 ACUDBL; (FP,HTU,MPP,US,o-o/MCD)
 Dimension drawing

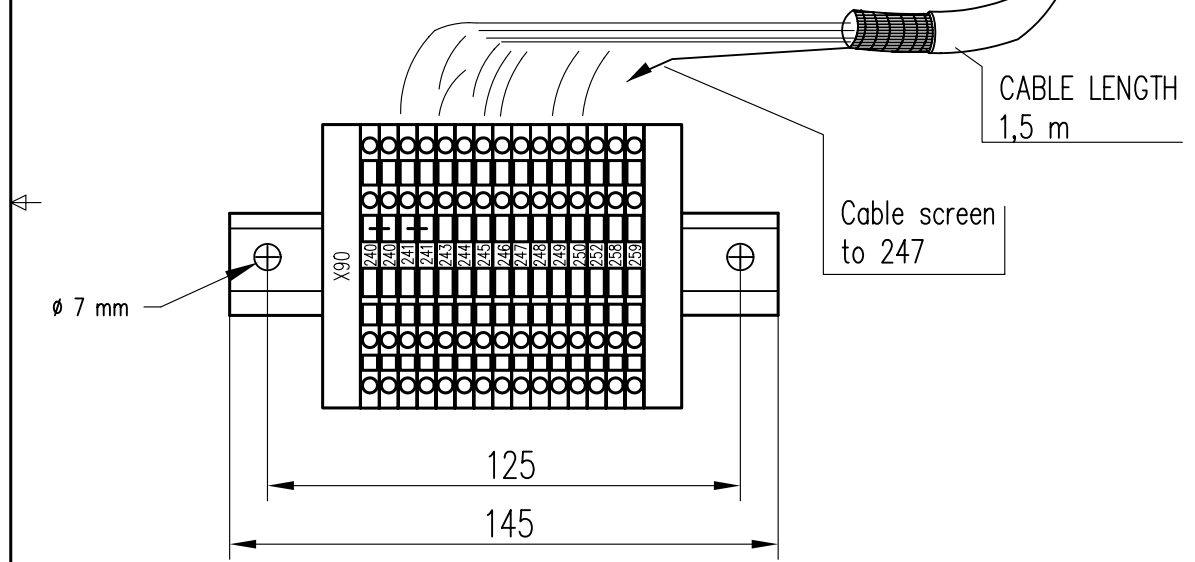
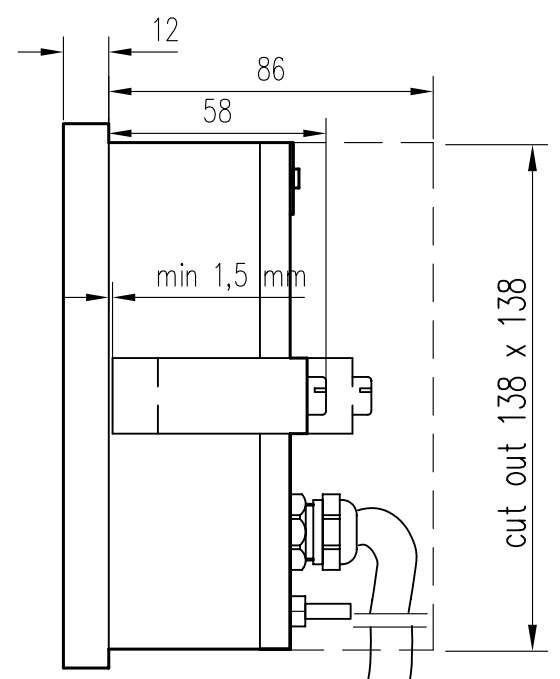
K

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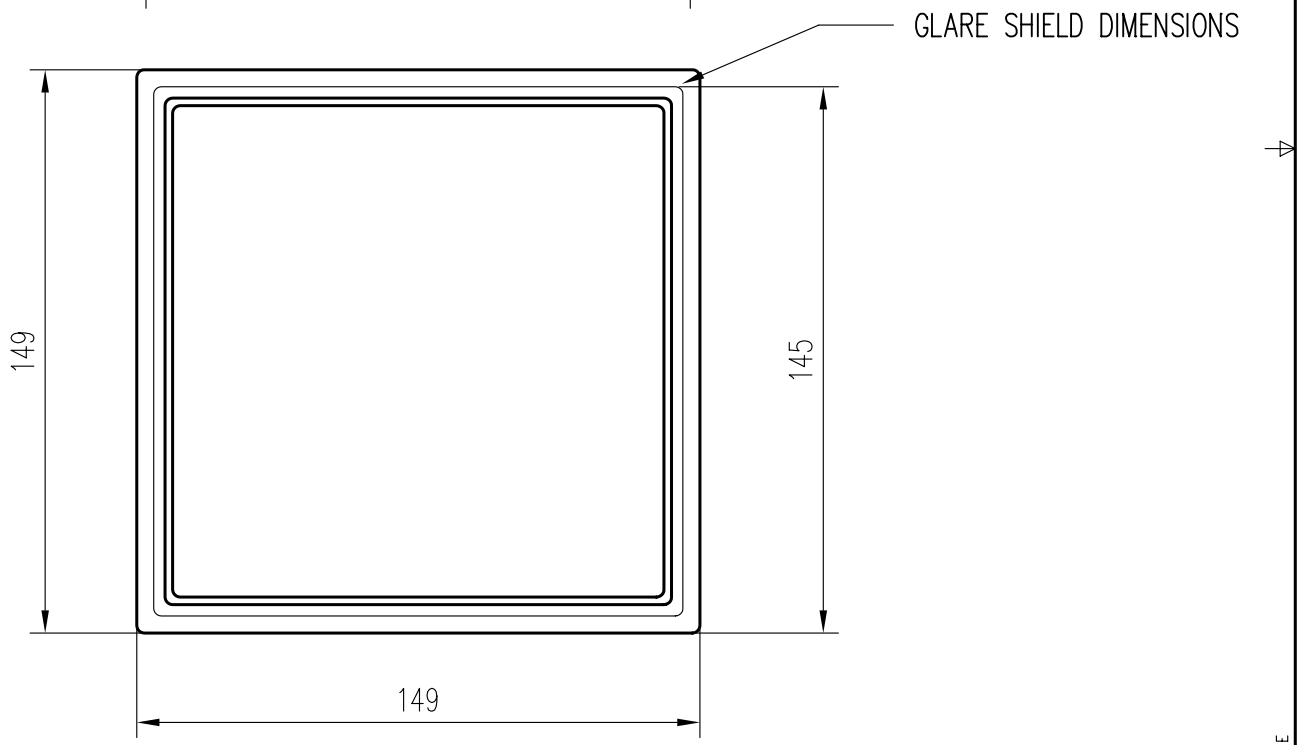
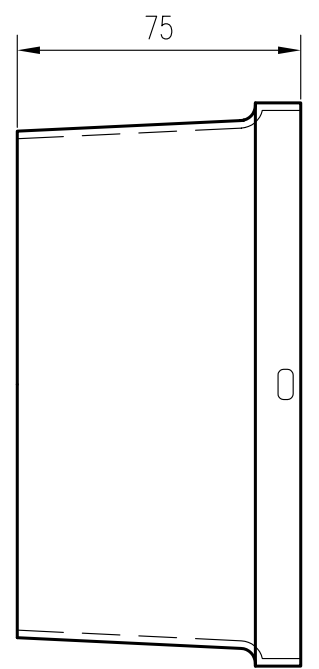
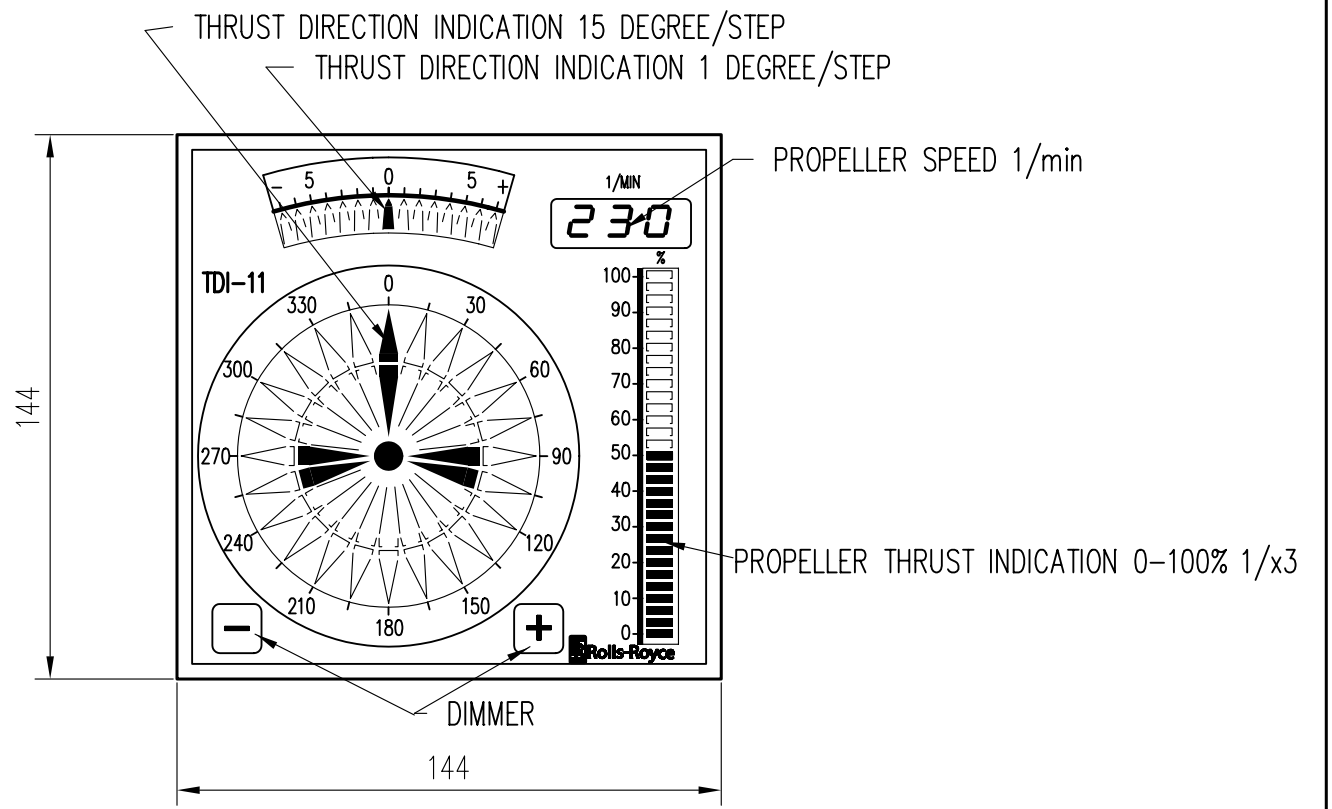


Approved
ARAS
 Checked
TKH

Drawn	6.9.2001	HAVA	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight	kg	~40	Scale	1:10	7 4 5 2 3 1 7	-	A - XXX	01	/01	U



240	SUPPLY +24 VDC	(PINK)
241	SUPPLY INPUT 0 VDC	(BLACK)
243	+DATA DIRECTION	(BROWN)
244	-DATA DIRECTION	(WHITE)
245	DIMMER INPUT +	(RED)
246	DIMMER INPUT -	(BLUE)
247	CABLE SHIELD	
248	Not used	(GREEN)
249	Not used	(YELLOW)
250	RPM PULSE INPUT +	(VIOLET)
252	RPM PULSE INPUT -	(GREY)
258	RPM direction input +	(GREY-PINK)
259	RPM direction input -	(RED-BLUE)

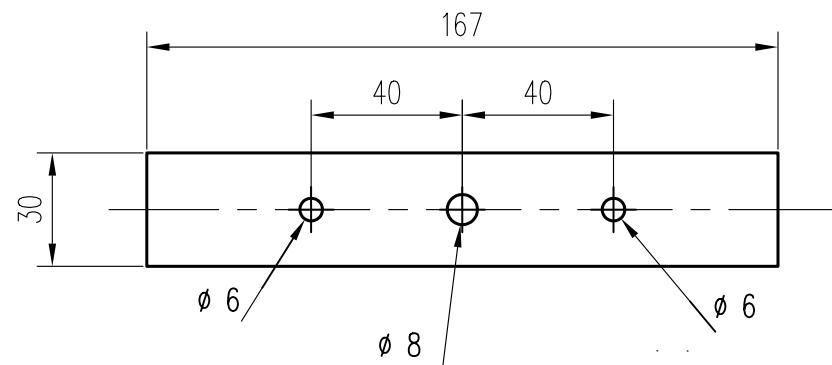


PROTECTION IP44 FROM THE FRONT OF THE PANEL
COLOUR BLACK

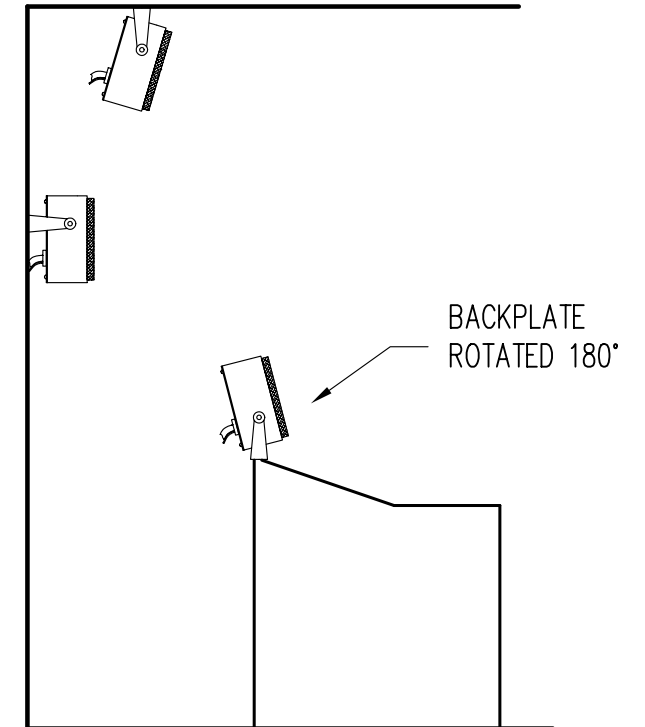
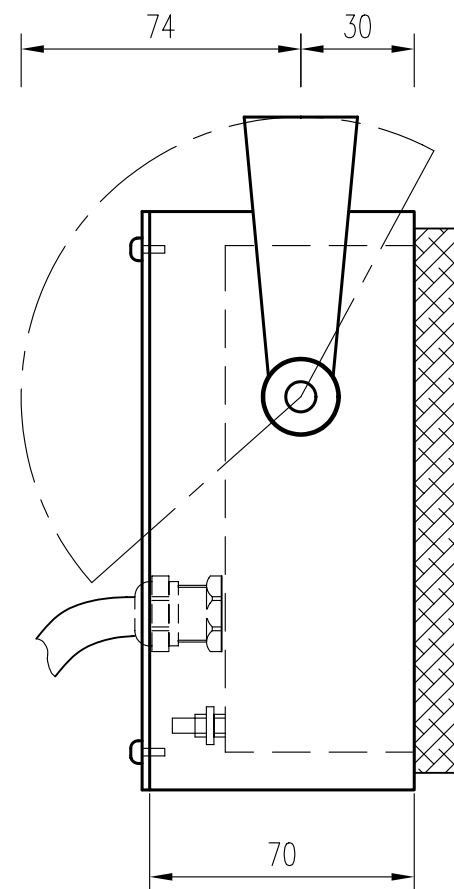
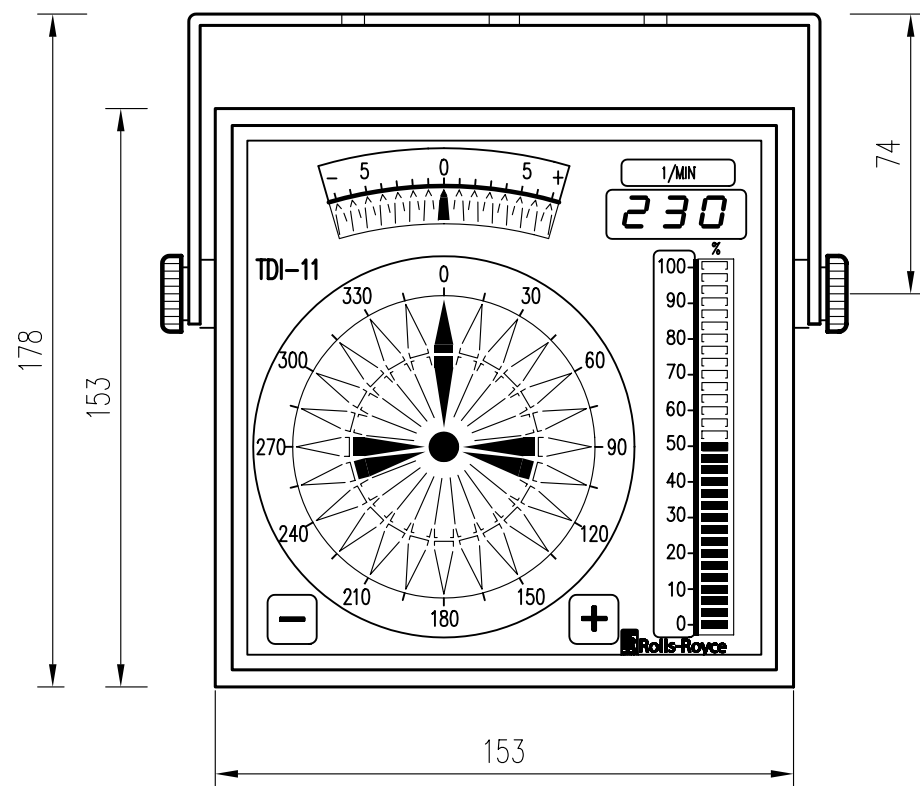
	Rolls-Royce		AQUAPILOT CONTROL SYSTEM				FP
	THIS DRAWING IS PROPERTY OF ROLLS-ROYCE (BY AB). IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE (BY AB).		Approved SSI	Thrust and Direction Indicator			
Drawn 31.8.2000 JAJA	Scale 1:2	Group Size Serial number 7 3 5 2 2 3 3	Checked ERNI	Rev - A - 0 0 5	Variant 0 1	Page / 0 2	Total pages U
Dimension drawing		K					

A	030204	HAVA	JAJA	SAKU	Updated to EMC compatibility
Rev	Date	Drawn	Approved	Checked	Revision text

PLOTDATE: 25/03/2003 E



MOUNTING BRACKET

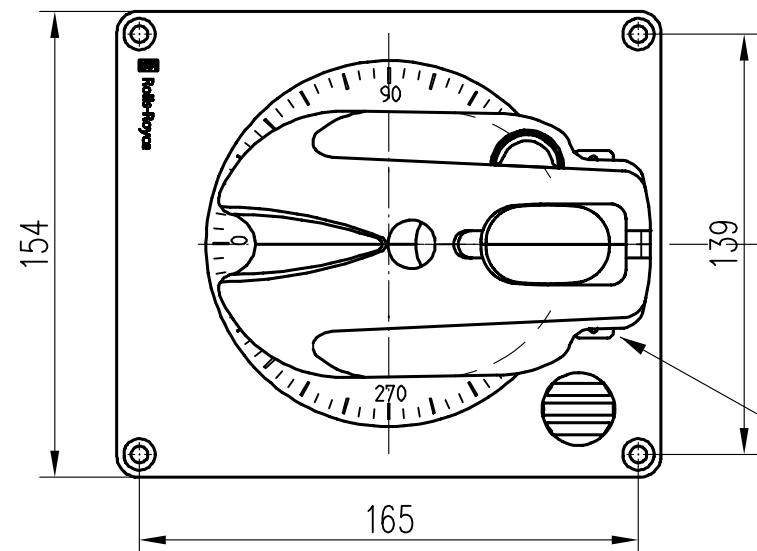
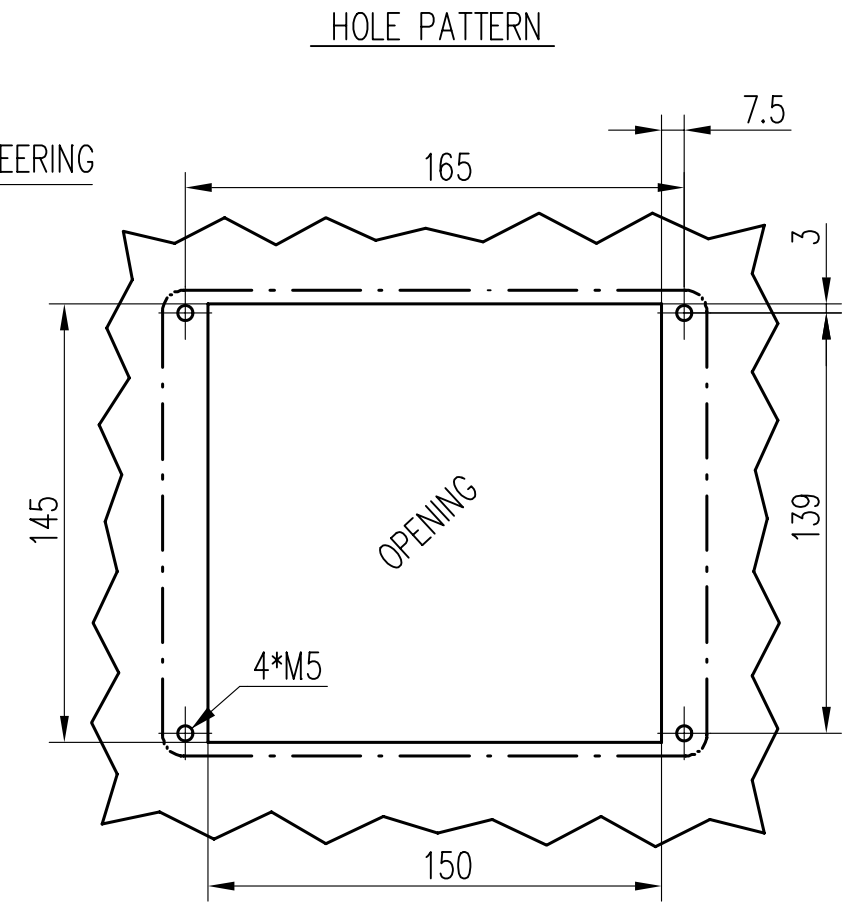
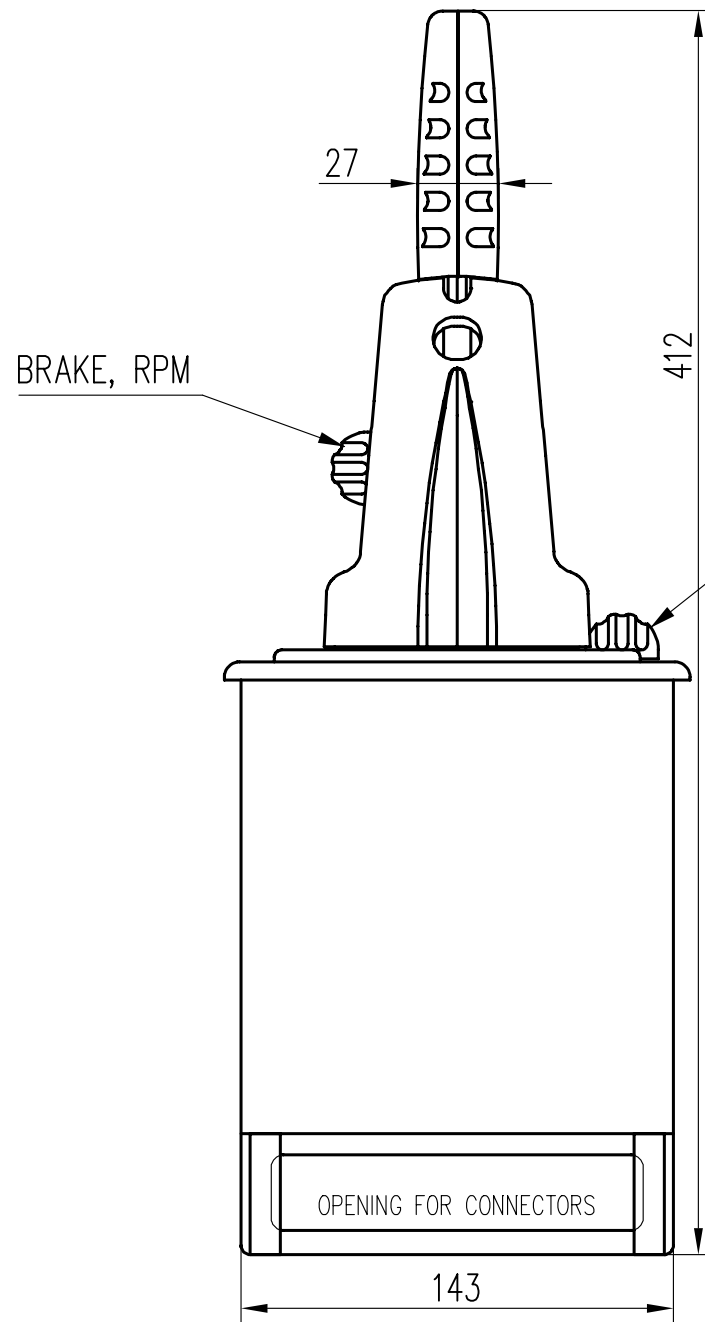
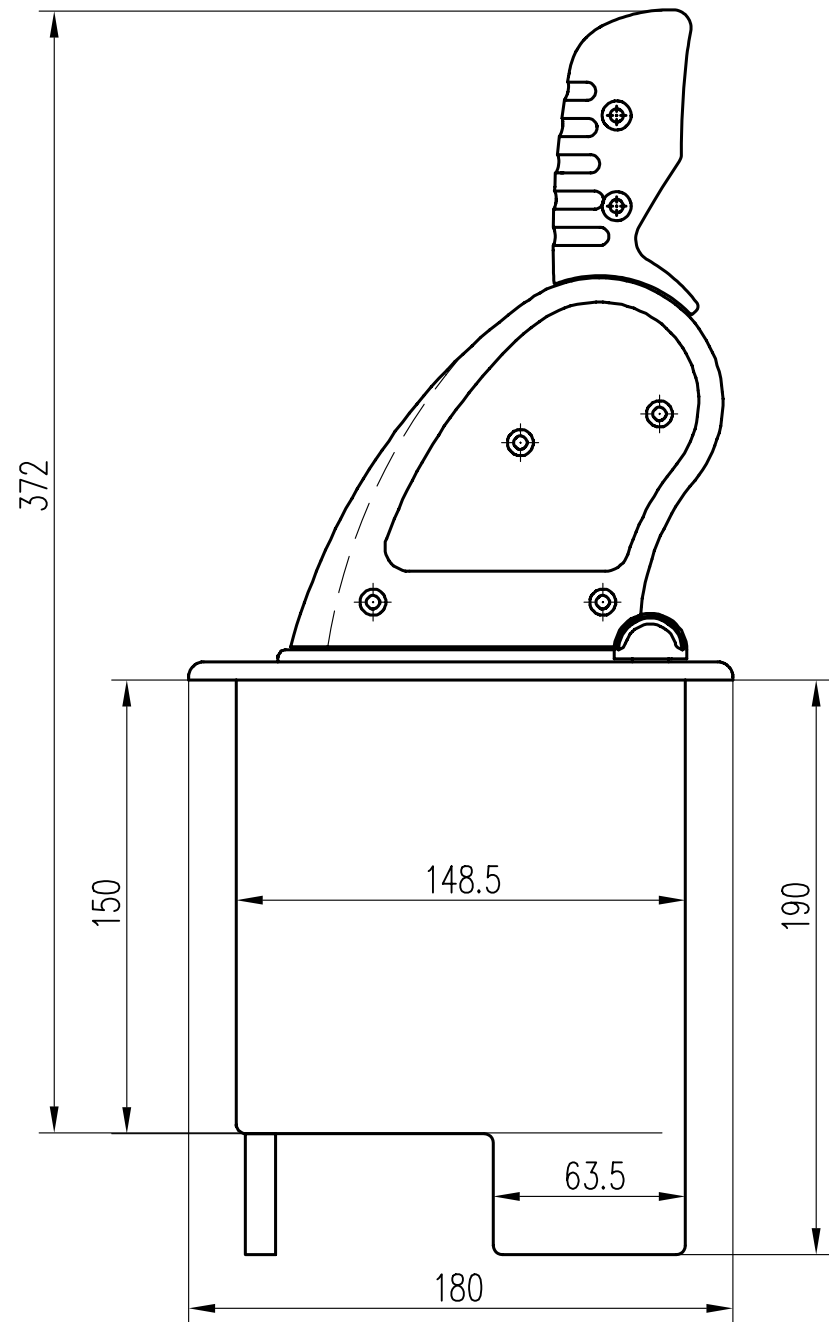


INSTALLATION EXAMPLES

Lang

		AQUAPILOT CONTROL SYSTEM Thrust and Direction Indicator TDI-11 Dimension drawing				FP
<small>THIS DRAWING IS PROPERTY OF ROLLS-ROYCE. IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE. BY AB.</small>		 <small>Approved SSI</small> <small>Checked ERNI</small>	<small>Group</small> Size Serial number Rev Variant Page Total pages Lang			
<small>Drawn</small> 31.8.2000 JAJA	<small>Scale</small> 1:2	7 3 5 2 2 3 3		- A - 0 0 5		0 2 / 0 2 U

PLOTDATE: 25.03.2003 E



RADIUS WHEN TILTED ~180 mm.

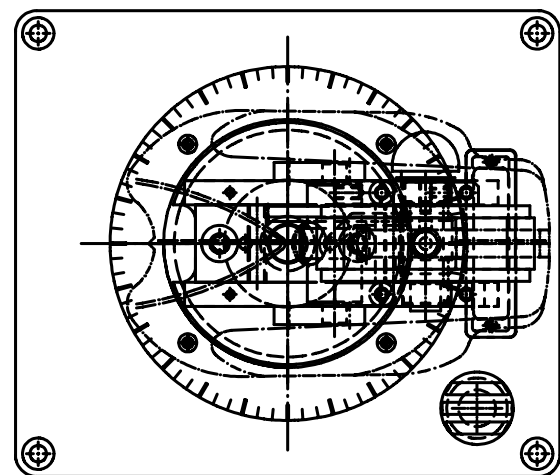
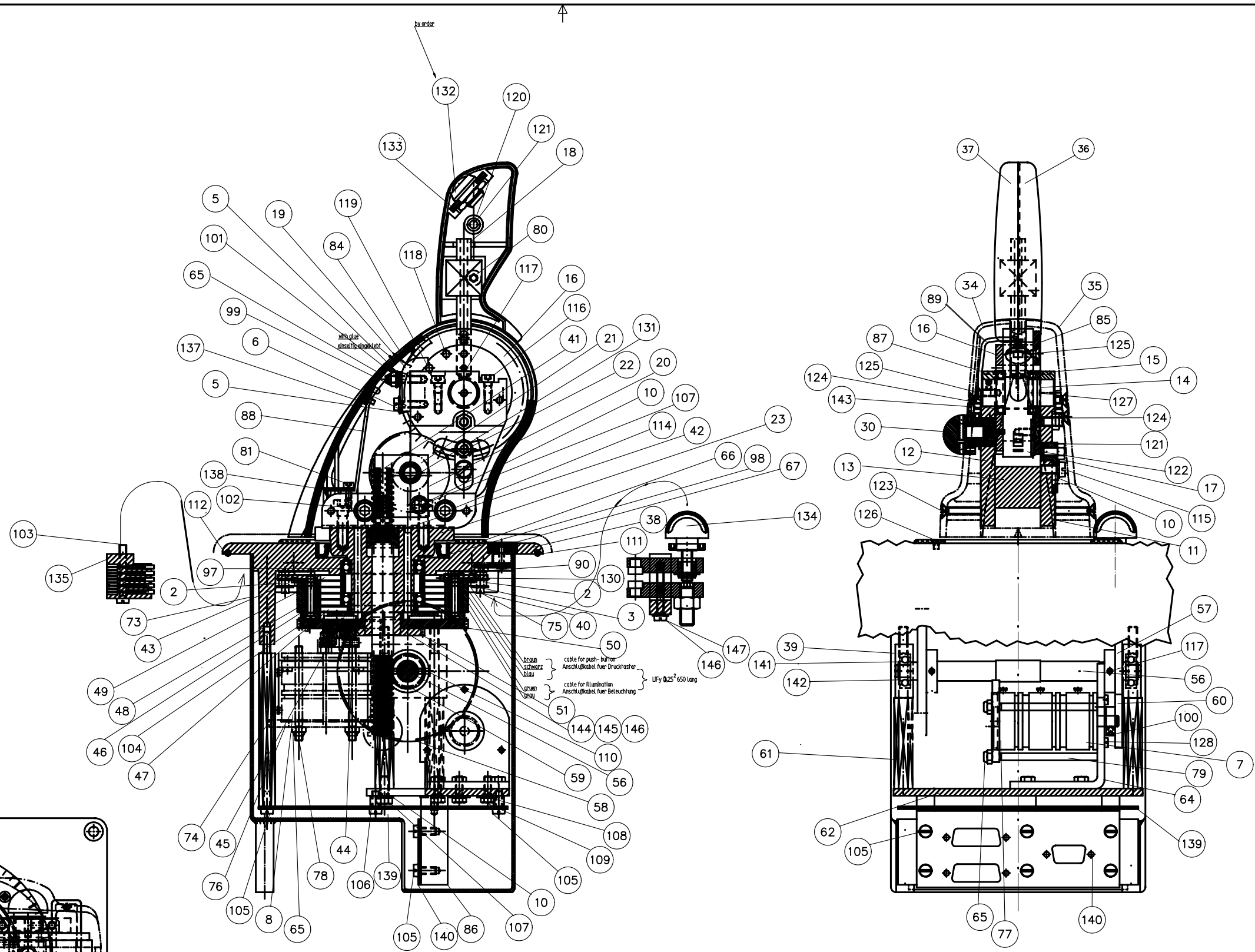
WARNING
 MASTER SLAVE
 YELLOW LEDS

A	040318	HAVA	JAJA	TKH	Revised RR's logo
Rev	Date	Drawn	Approved	Checked	Revision text

Lang
U

		AQUAPILOT CONTROL SYSTEM Aquapilot control head AQP-DB Dimension drawing		K	
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Drawn 30.5.2000 HMH		7 3 5 6 2 5 8 - A - 0 0 1		0 1 / 0 1 U	
Weight kg Scale 1:2,5					

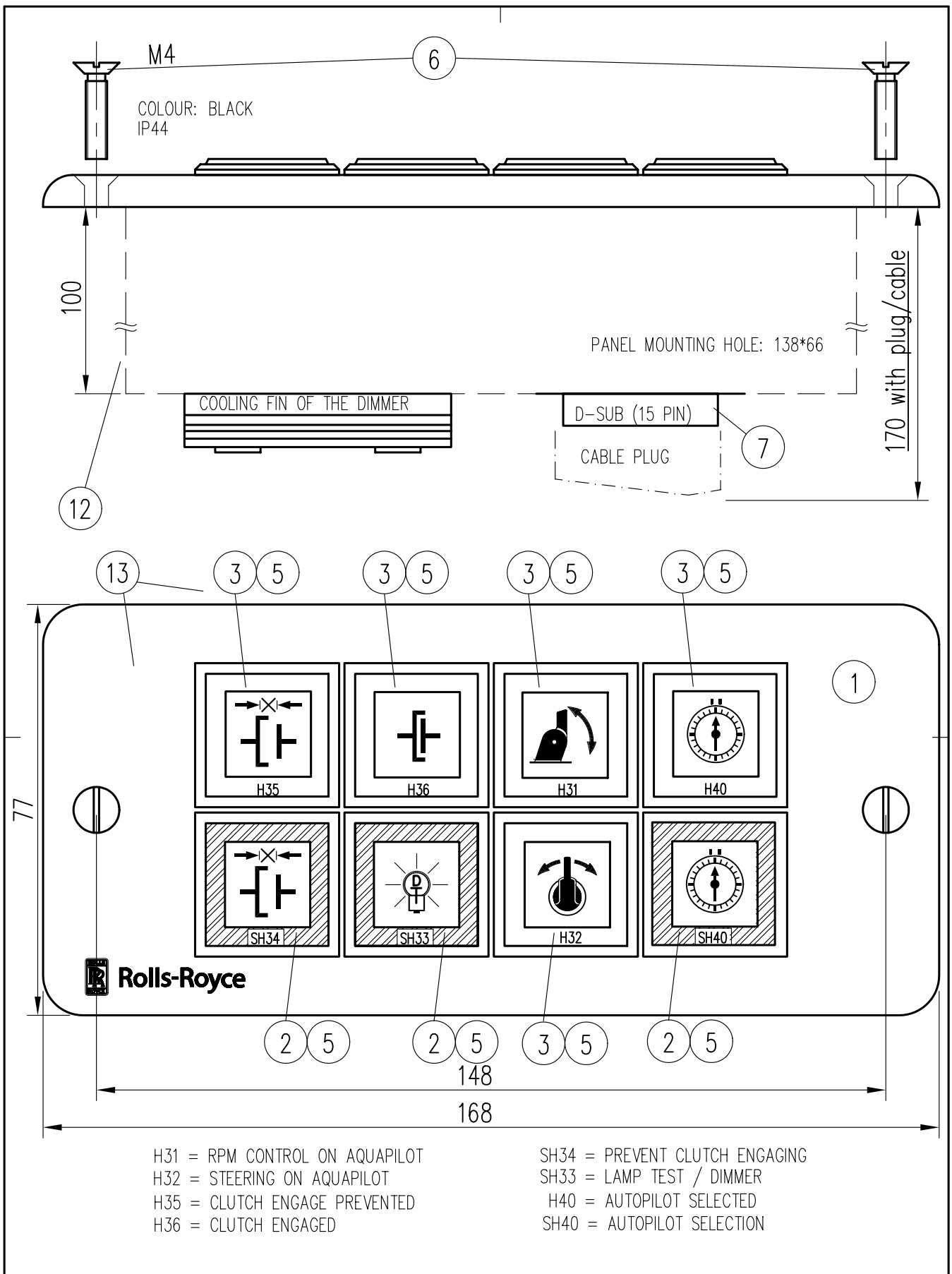
PL01DATE: 18.03.2004 E



Lang

		AQUAPILOT CONTROL SYSTEM Aquapilot control head AQP-DB Assembly drawing			KXE/271 GB K						
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Drawn 5.6.2003 SSI	Scale 1:2,5	7357723		-0-001	01	/01	U				

PLOTDATE: 02.06.2004 E



ng U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
 Aquamaster Control Panel
 ACP05L
 Dimension drawing

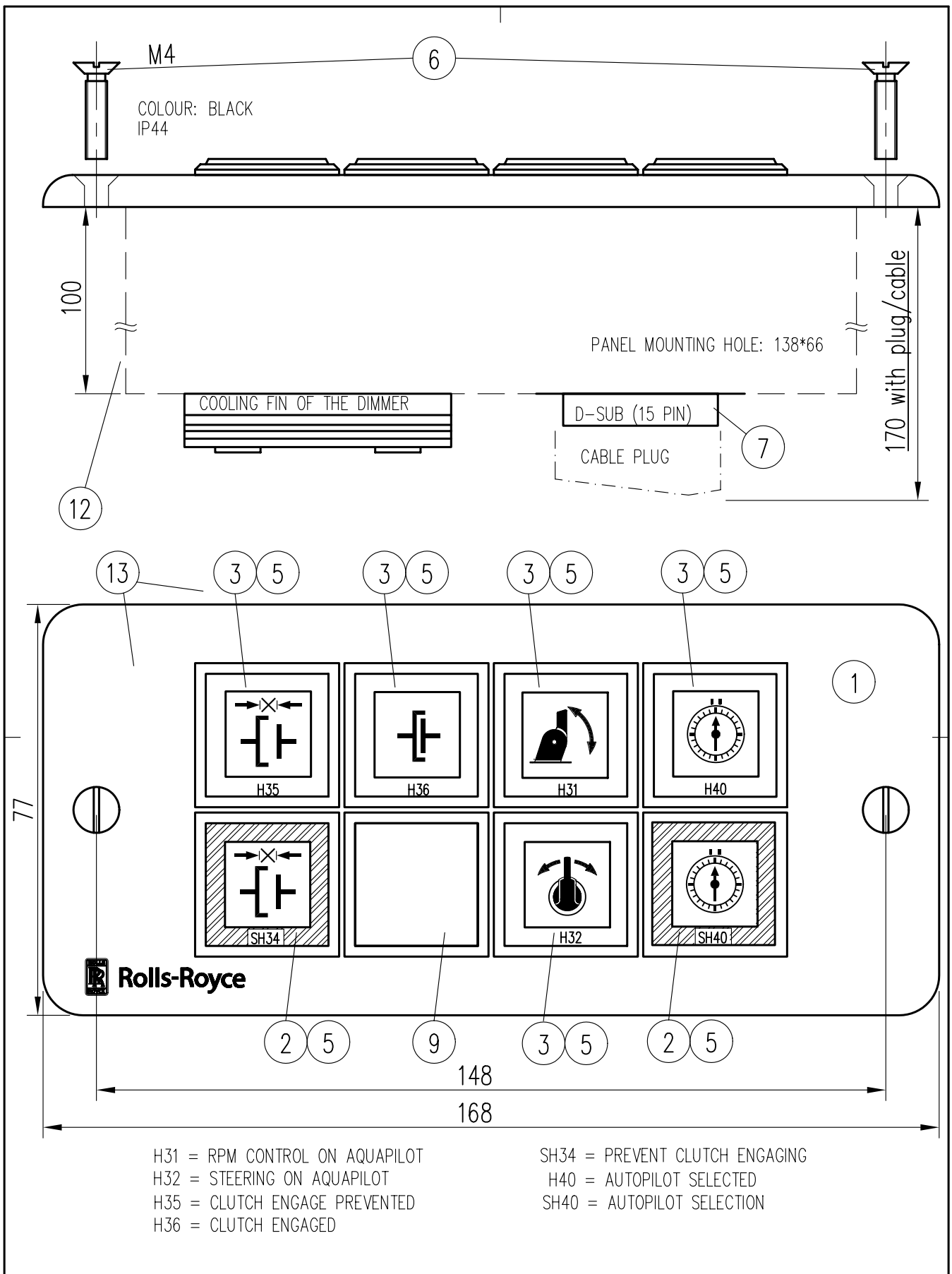
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Approved SSI
 Checked SAKU

K

PLOTDATE: 16.10.2001 E

Drawn	12.10.2001	TKH	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight kg	Scale	1:1	7 4 5 2 2 5 8			- 0 - 0 0 5	0 1	/ 0 1	U	



ng U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
Aquamaster Control Panel
ACP10L
Dimension drawing

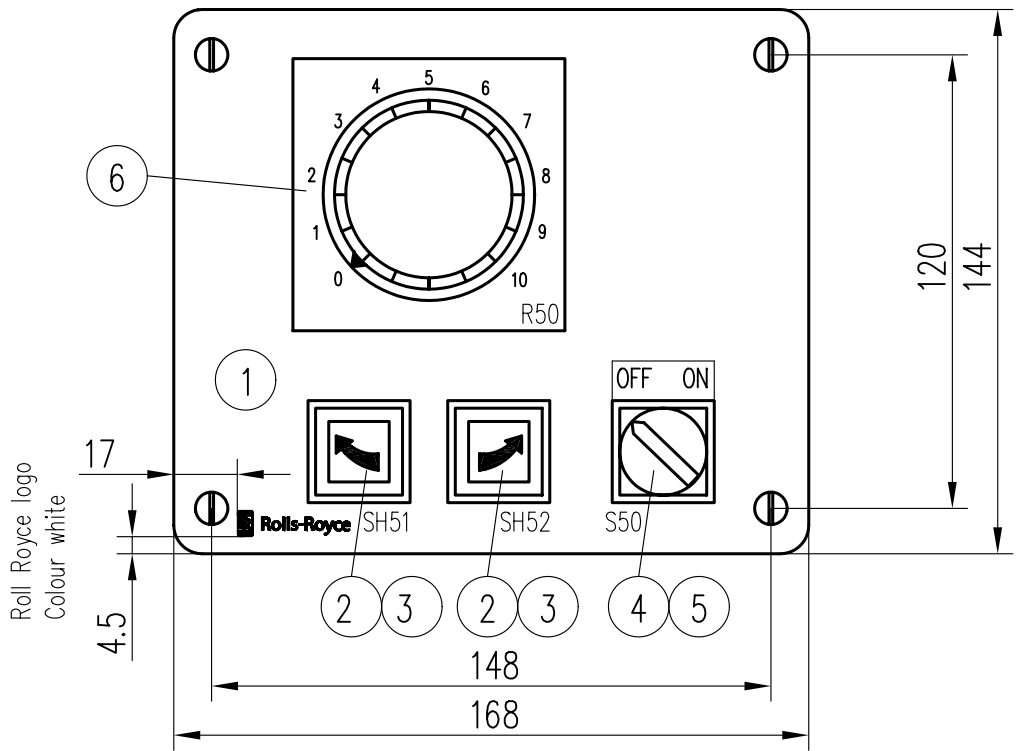
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Approved SSI
Checked TATU

K

PLOT DATE: 13.11.2001 E

Drawn	11.11.2001	TKH	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight kg	Scale	1:1	7 4 5 2 2 5 8			- 0 - 0 1 0	0 1	/ 0 1	U	



PANEL MOUNTING HOLE: 138 * 138
 COLOUR: BLACK
 IP44

S50 = SELECTION SWITCH OF BACK-UP CONTROL
 SH51 = TURNING CW
 SH52 = TURNING CCW
 R50 = SETTING OF RPM WITH ZERO POS. LIM. SWITCH



AQUAPILOT CONTROL SYSTEM
 Back-up Control Panel
 BCP004
 Dimension drawing

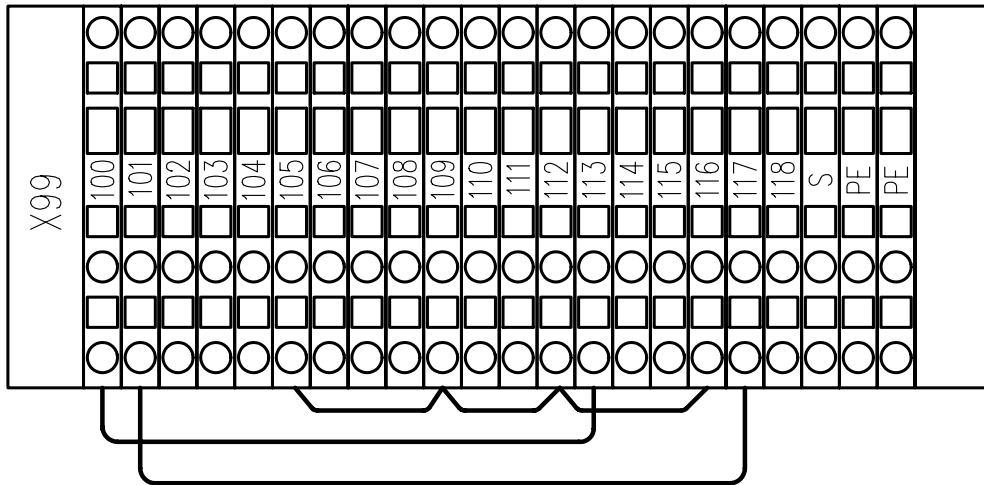
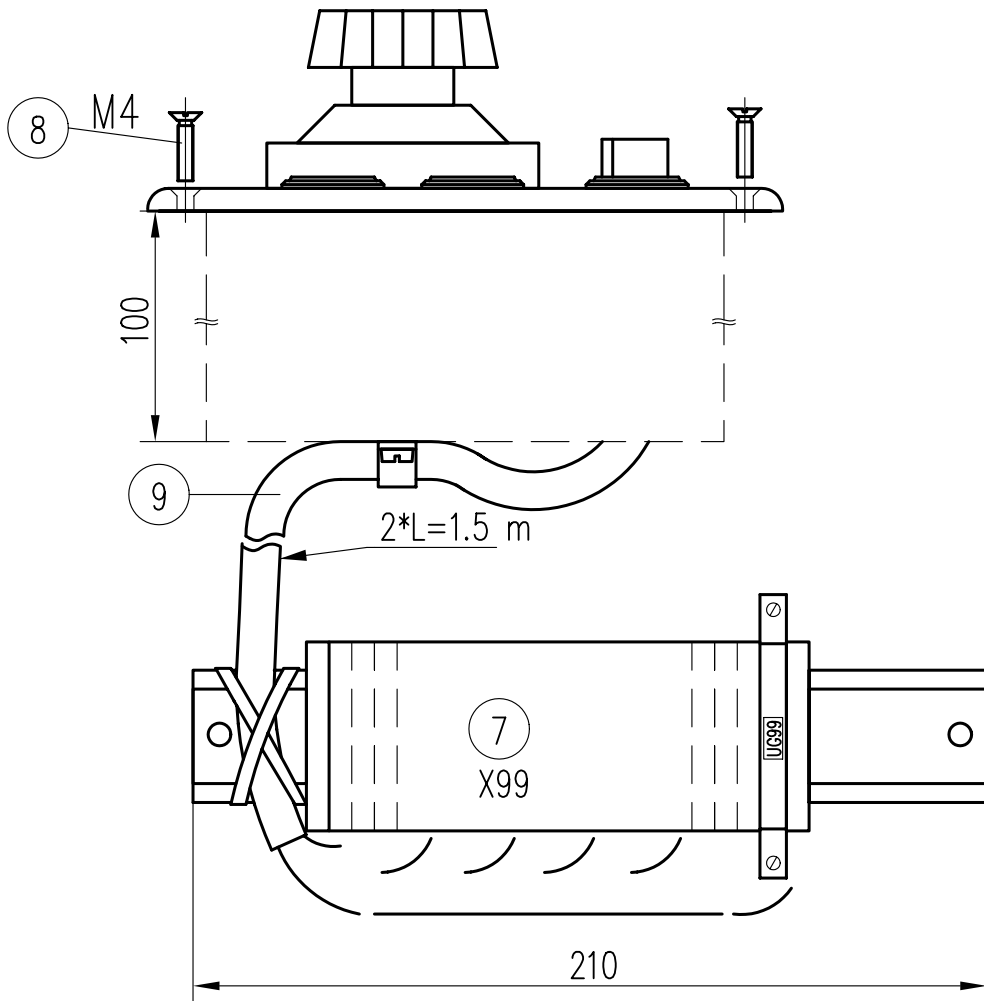
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Approved
 AKHA
 Checked
 TUPE

K

PLOT DATE: 06.03.2008 E

Drawn	3.3.2008	III	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight	kg	Scale	7 4 5 2 6 5 6			- A - 0 0 4		0 1	/ 0 2	U
		1:2								



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
 Back-up Control Panel
 BCP004
 Dimension drawing

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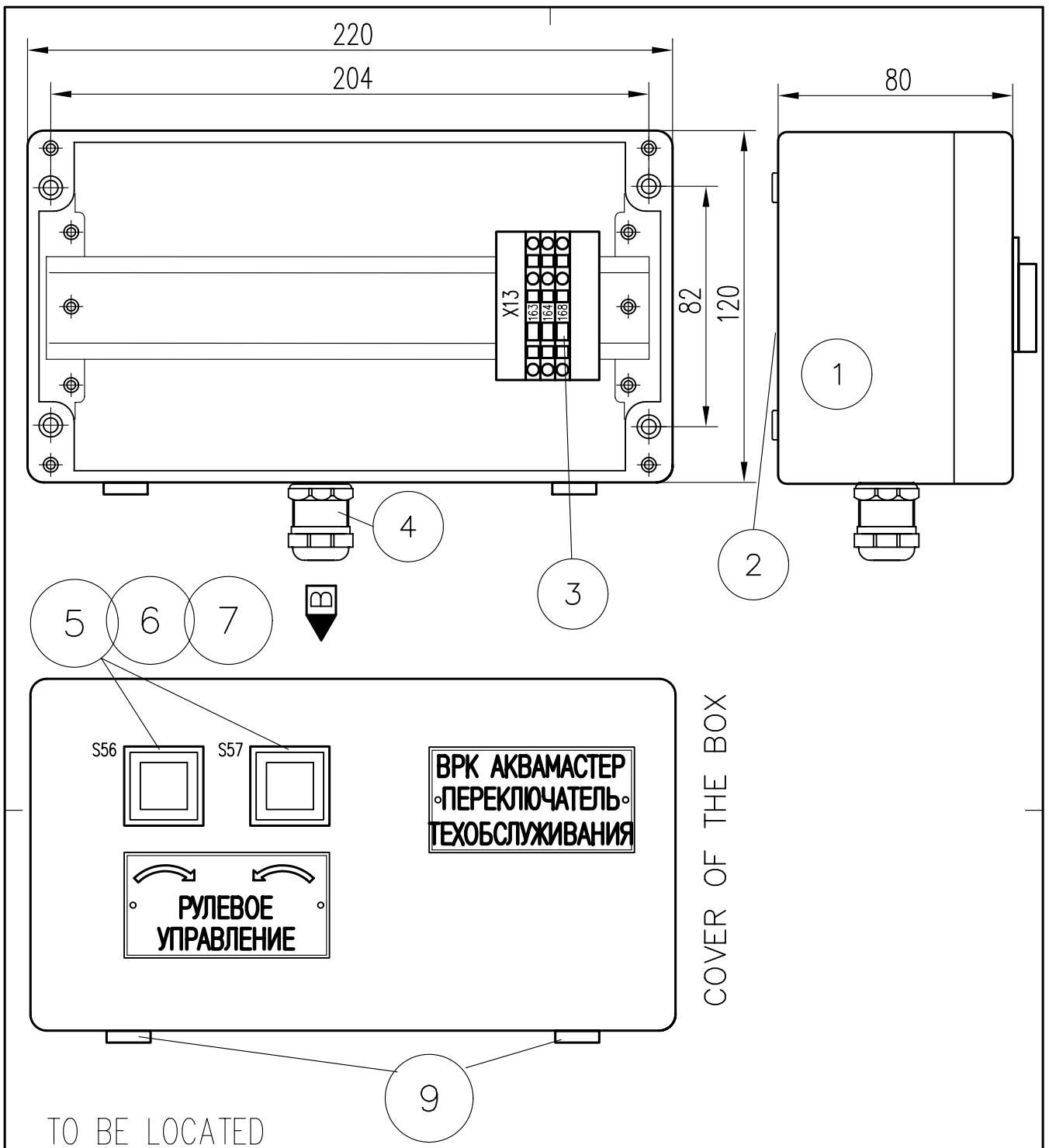
Approved
 AKHA
 Checked
 TUPE

K

PLOT DATE: 06.03.2008 E

Drawn	3.3.2008	III	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight	kg	Scale	7 4 5 2 6 5 6			- A - 004		02 / 02		U
		1:2								

ng
U



TO BE LOCATED
 CLOSE THE AQUAMASTER'S TRANSMITTER BOX X2
 THRUST DIR. INDICATOR
 VISIBLE OF THE MCH'S OPERATOR

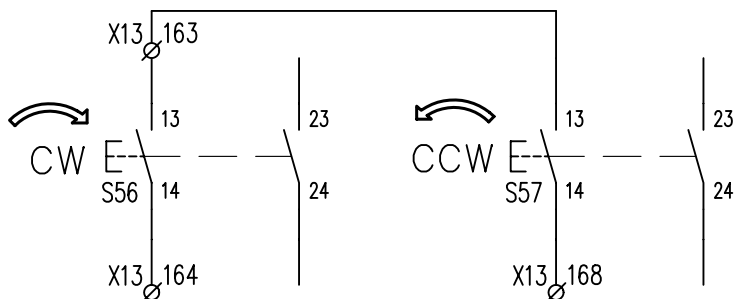
Rev	Date	Drawn	Approved	Checked	Revision text
B	050804	AASU	JAJA	TKH	Changed push buttons and Russian labels

		AQUAPILOT CONTROL SYSTEM Local controller			PLOT DATE: 16.02.2006 E					
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Drawn	31.7.2001	TATU	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight	Scale		7 4 5 2 0 4 4			- B - 0 0 2		0 1 / 0 2	U	

WIRING

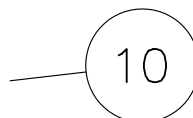
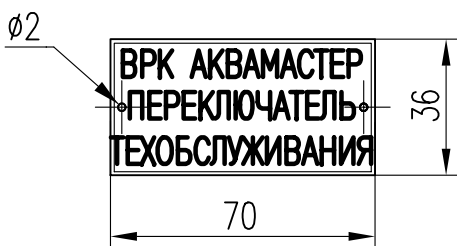


X13
163
164
168



LABELS

MATERIAL: GRAVOPLY, OR OTHER
ENGRAVINGABLE PLASTIC.
COLOUR: WHITE GROUND AND BLACK TEXT.
TEXT HEIGHT: 7 mm



ng
U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
Local controller

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Approved
JAJA
Checked
TKH

Assembly drawing

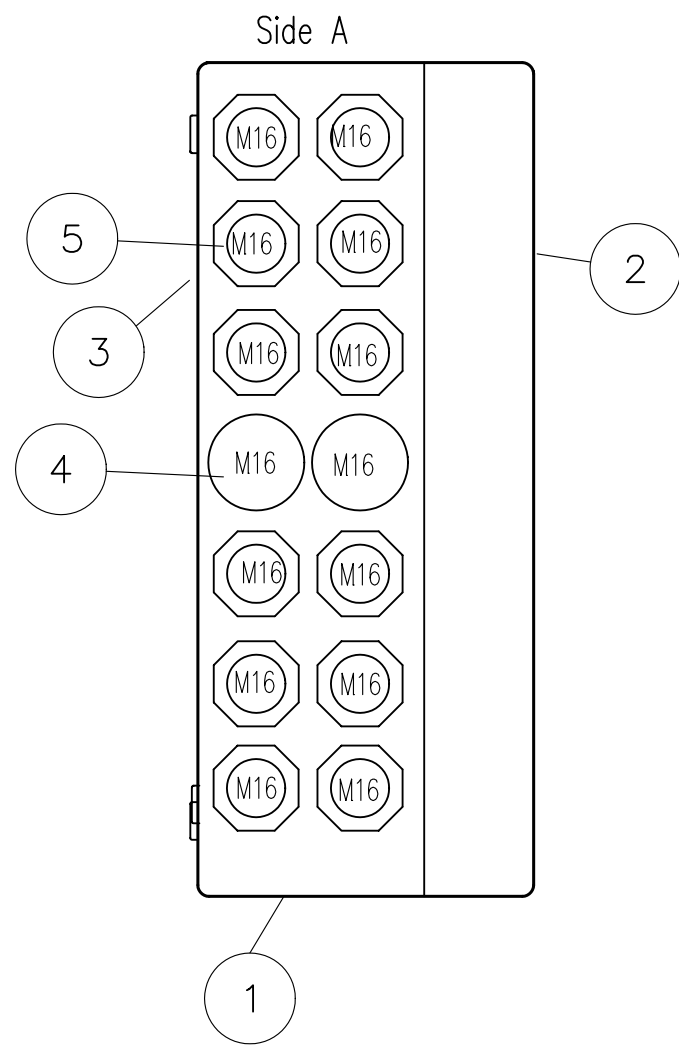
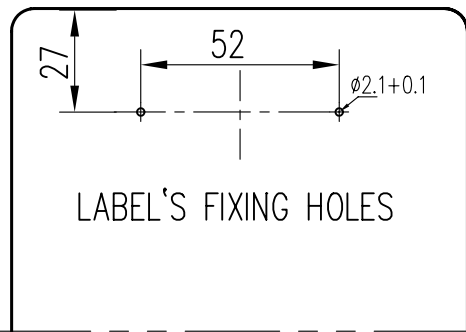
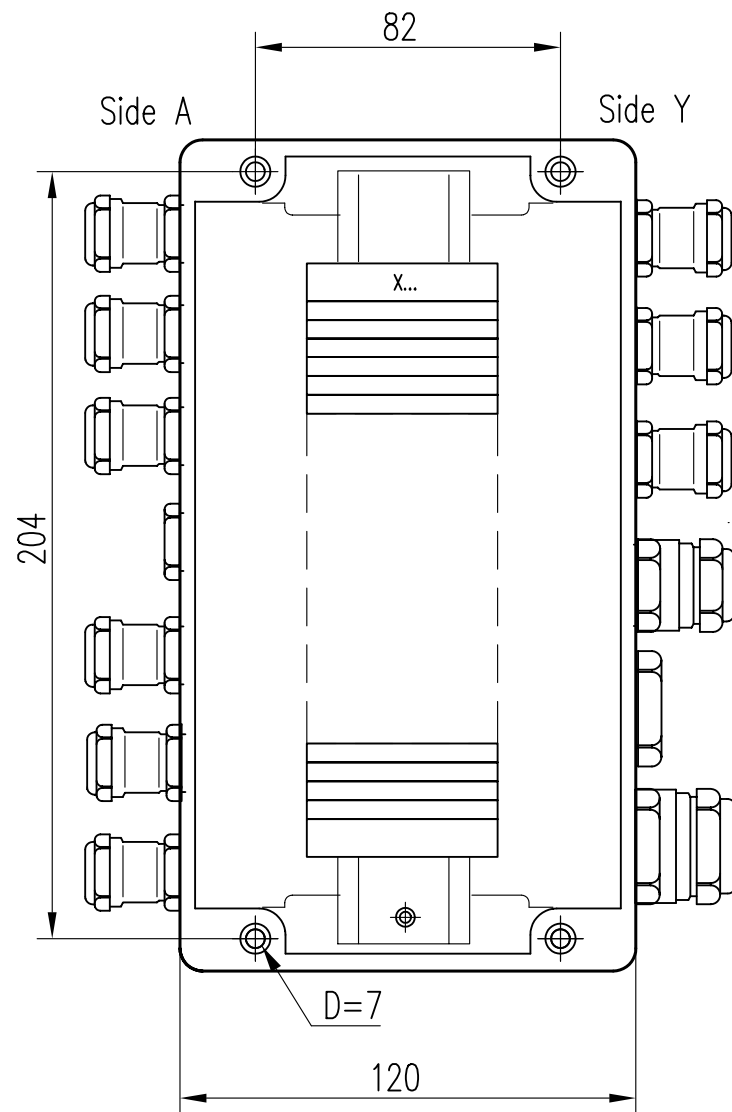
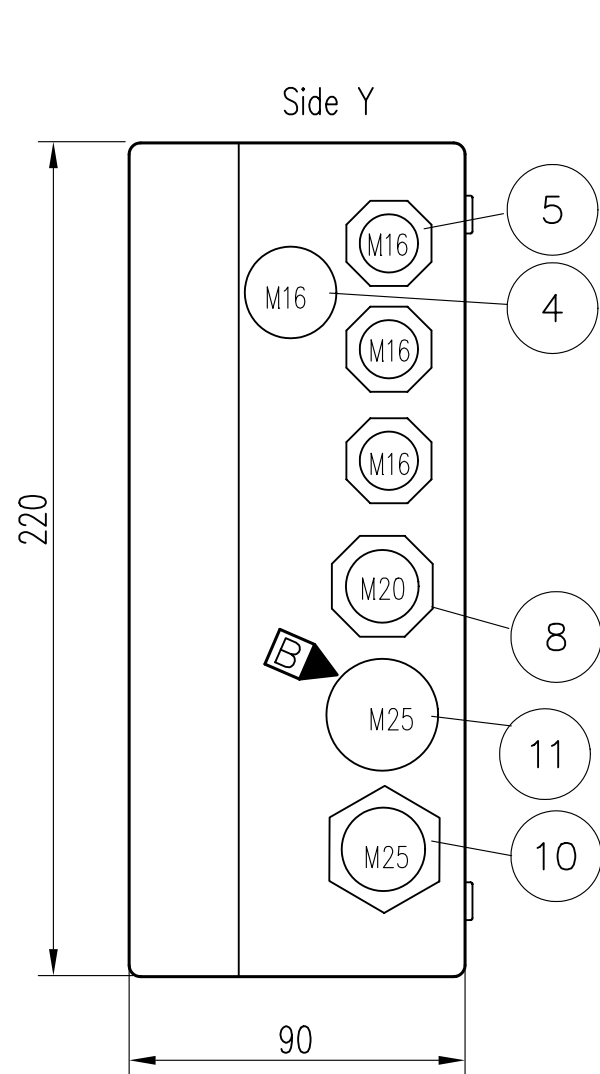
K

PLOT DATE: 16.02.2006 E

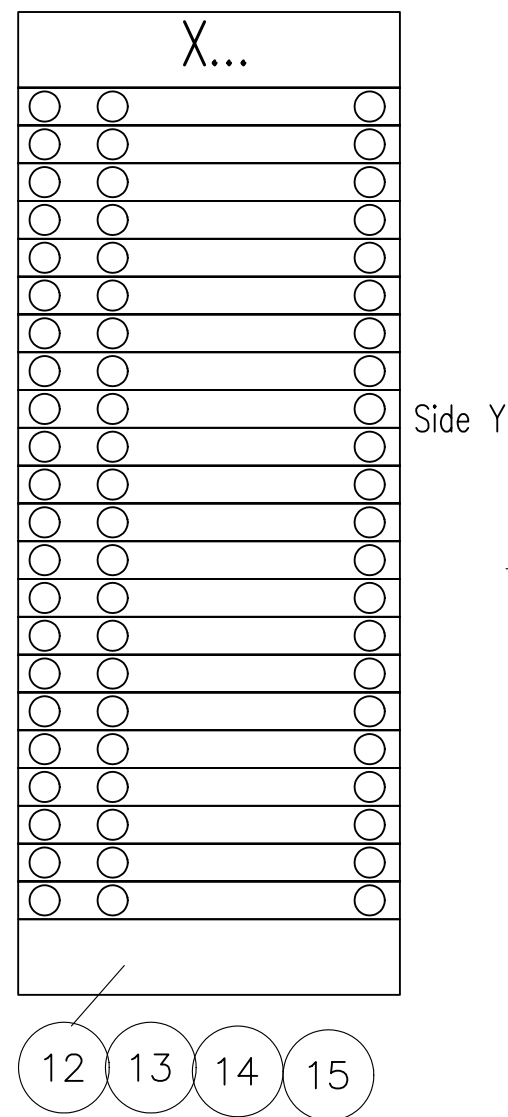
Drawn	31.7.2001	TATU	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	kg	Scale	7 4 5 2 0 4 4			- B - 0 0 2		0 2 / 0 2		U

(M16) Cable gland
size informed in the center

(M16) Cap plug
size informed in the center



Row terminal assembly



B	010830	HAVA	SSI	TKH	Part 9 changed to 11
A	010517	HAVA	JAJA	ERNI	Added holes for label fixing
Rev	Date	Drawn	Approved	Checked	Revision text

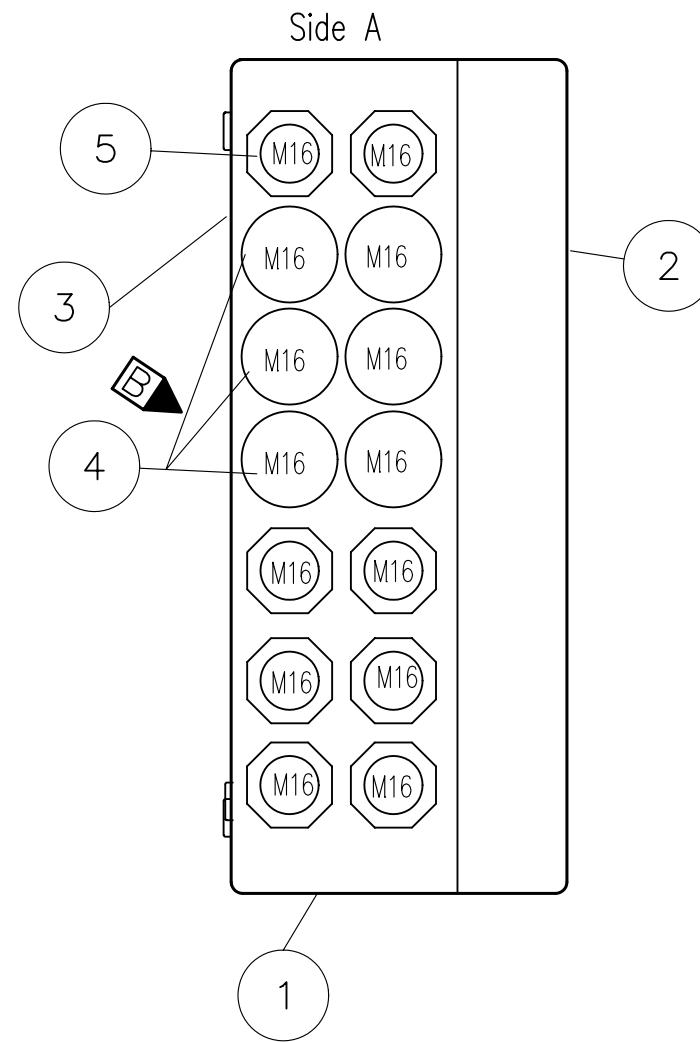
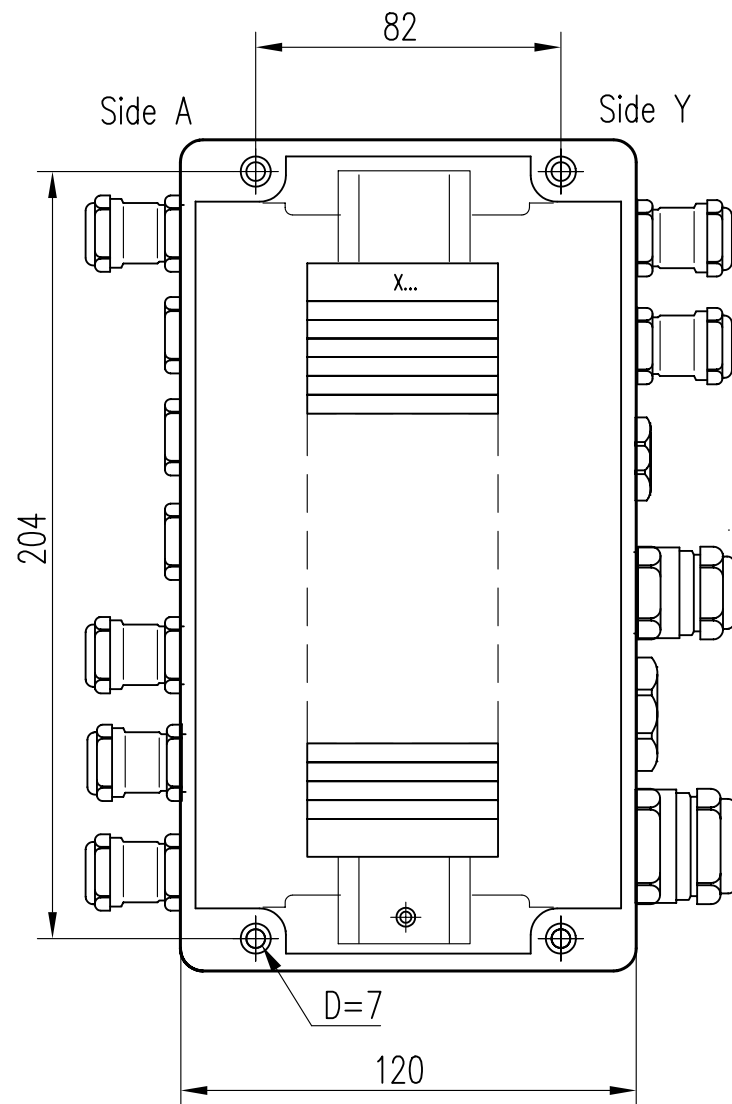
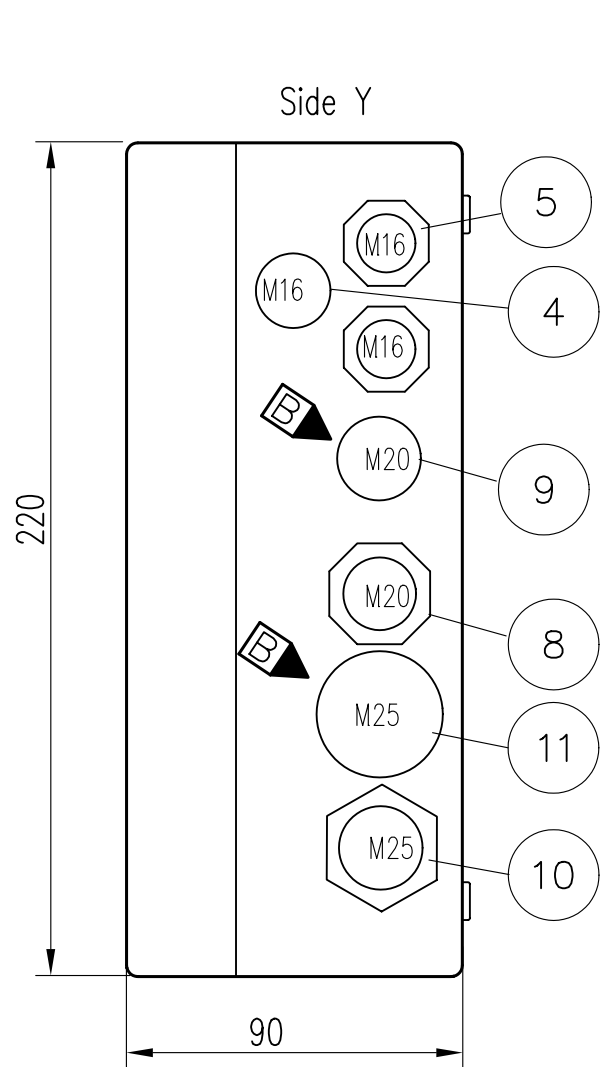
Lang
U

		AQUAPILOT CONTROL SYSTEM Connection box Type: h120b220d90-001 Assembly drawing				DB
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Drawn 22.3.2001 HAVA	Scale 1:2	7 3 5 6 7 3 7 - B - 001		01 / 01	U	

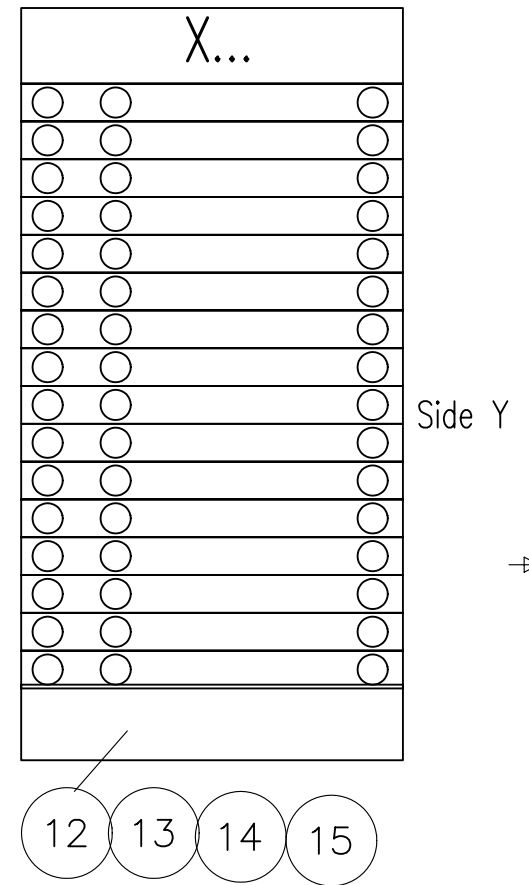
PLOTDATE: 30.08.2001 E

 Cable gland size informed in the center

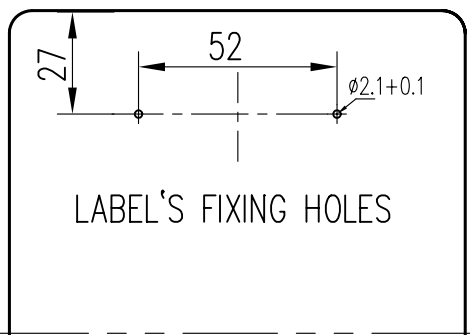
 Cap plug size informed in the center



Row terminal assembly




 DRILLING AND THREADS EQUAL WITH 7356737---001

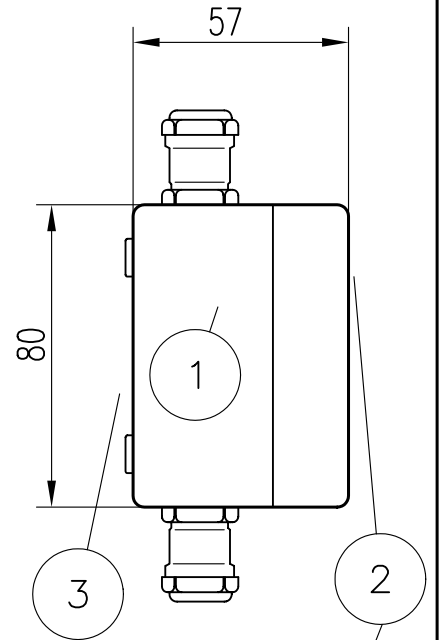
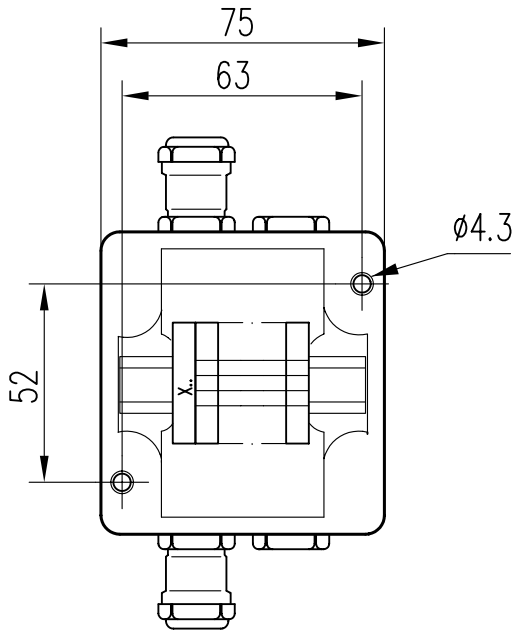


B	010830	HAVA	SSI	TKH	Changed M20->M25/ added holes
A	010517	HAVA	JAJA	ERNI	Added fixing holes for label
Rev	Date	Drawn	Approved	Checked	Revision text

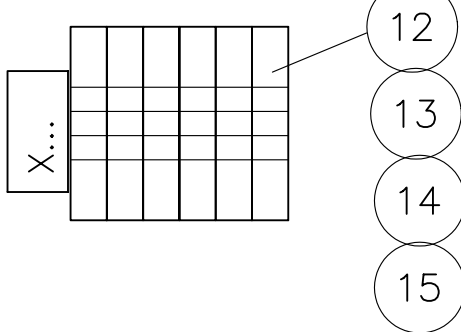
Lang U

 Rolls-Royce		AQUAPILOT CONTROL SYSTEM			DB
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Type: h120b220d90-002		Assembly drawing		K	
Drawn	22.3.2001	HAVA	Group	Size	Serial number
Weight	kg	Scale	1:2		7356737 -B-002
Rev		Variant	Page	Total pages	Lang
			01	/01	U

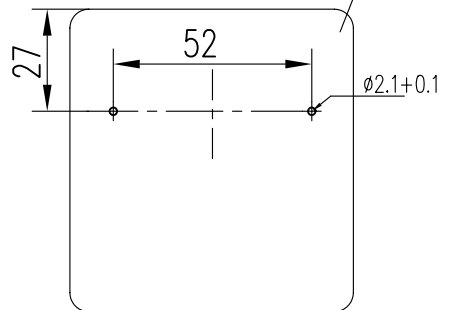
PLOTDATE: 30.08.2001 E



ROW TERMINAL ASSEMBLY



LABEL'S FIXING HOLES



B	010827	HAVA	SSI	TKH	Added top/bottom views.
Rev	Date	Drawn	Approved	Checked	Revision text
A	010517	HAVA	JAJA	ERNI	Added label's fix

PLOTDATE: 27.08.2001 E



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
 Connection box
 Type: h80b75d57-001
 Assembly drawing

DB

K

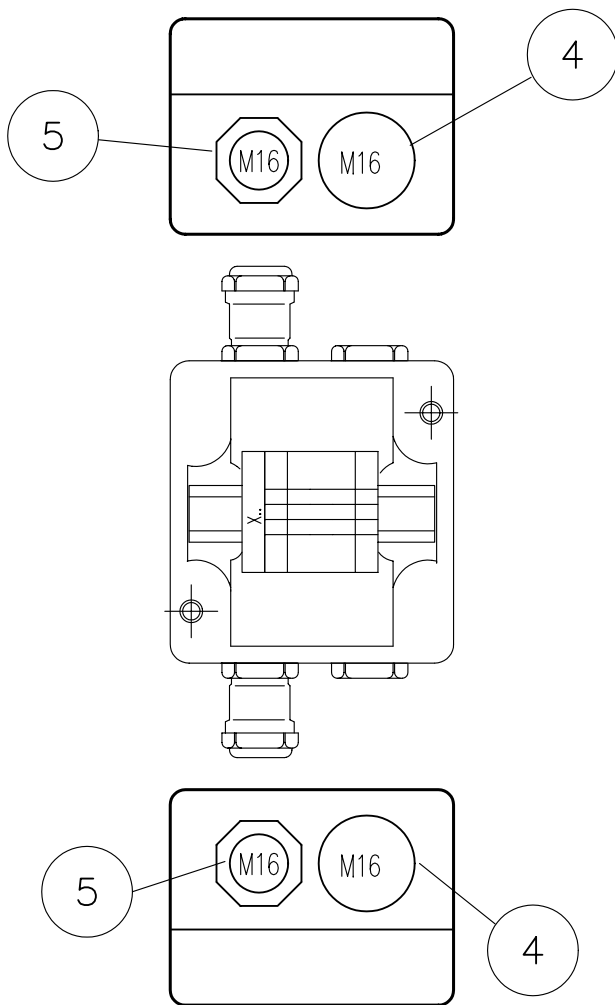
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Approved SSI
 Checked SAKU

Drawn	22.3.2001	HAVA	Group	Size	Serial number	Rev	Variant	Page	Total pages	Long
Weight	kg	Scale	7 4 5 2 1 9 7			- B - 0 0 1		0 1 / 0 2	U	
		1:2								

ng U

L



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
 Connection box
 Type: h80b75d57-001
 Assembly drawing

DE

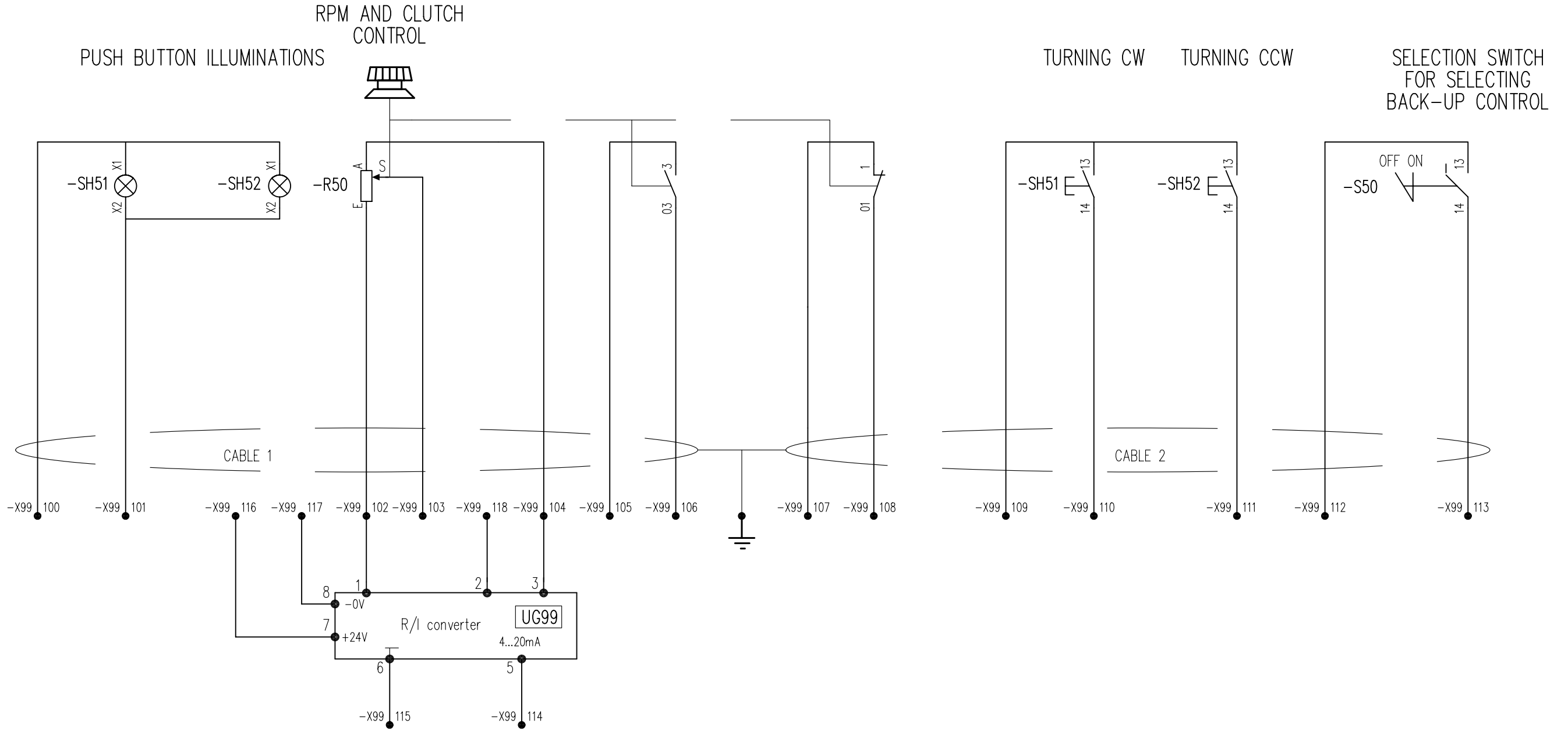
PLTDATE: 27.08.2001

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Approved
 Checked

K

Drawn	22.3.2001	HAVA	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight kg	Scale 1:2	7 4 5 2 1 9 7			- B - 0 0 1		0 2 / 0 2		U	

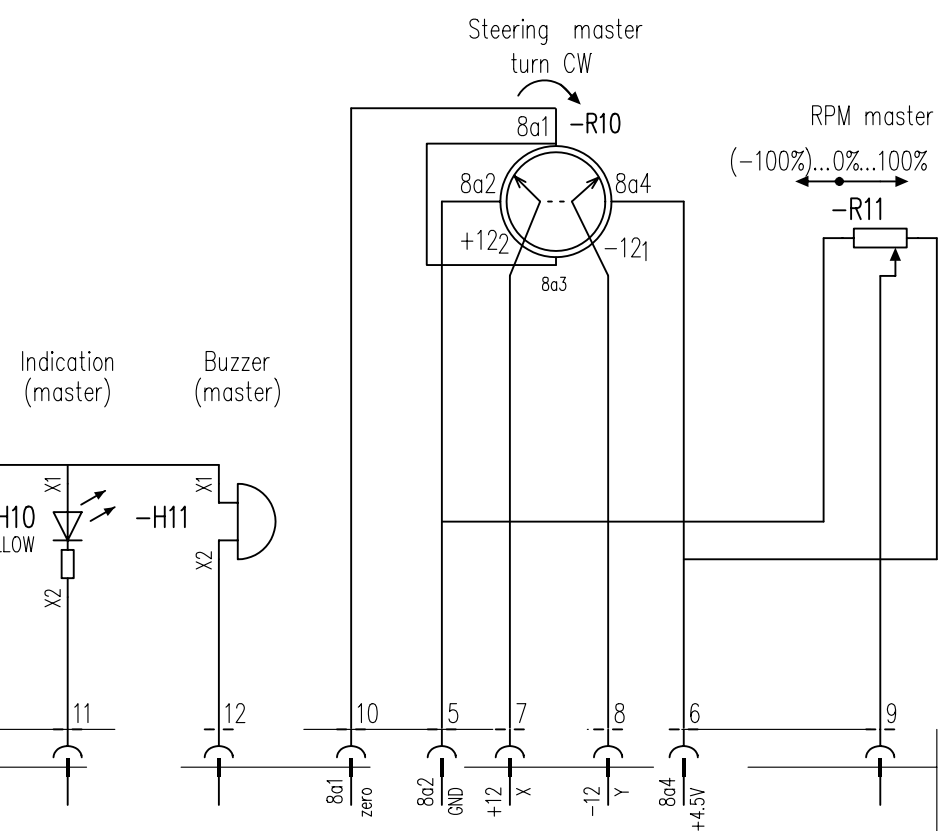
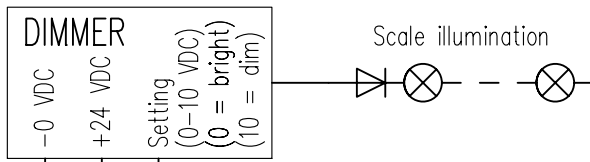


Lang U

Rolls-Royce		AQUAPILOT CONTROL SYSTEM Back-up Control Panel BCP004 Unit wiring diagram		W
THIS DRAWING IS PROPERTY OF ROLLS-ROYCE. IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE.		Approved AKHA Checked TUPE		
Drawn 3.3.2008 ILLI	Group Size Serial number	Rev Variant	Page Total pages	Lang
Weight kg	Scale	7359995-A-004 01 / 01 U		

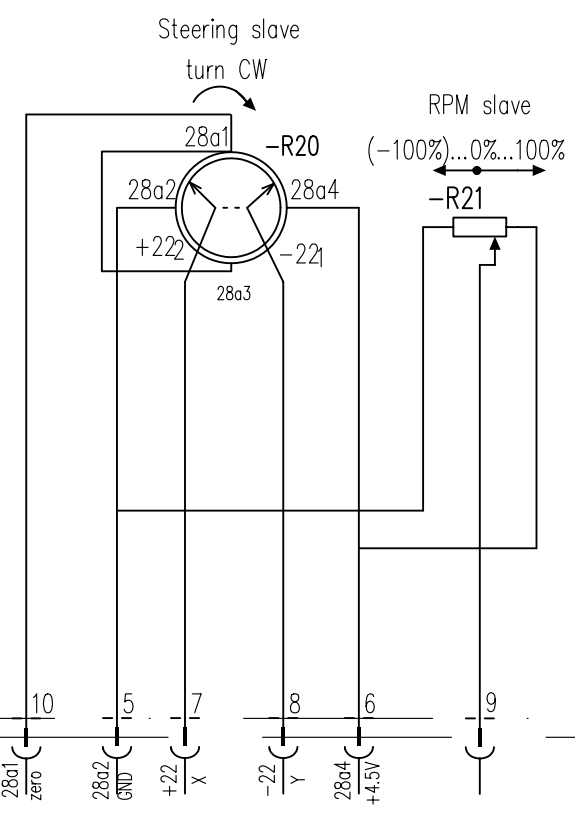
PLOTDATE: 06.03.2008 E

AQUAPILOT



D-SUB CONNECTOR (15 PIN)

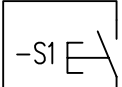
MALE, NOT PART OF AQUAPILOT
FEMALE, PART OF AQUAPILOT



D-SUB CONNECTOR (15 PIN)

MALE, PART OF AQUAPILOT
FEMALE, NOT PART OF AQUAPILOT

OPTIONAL SPECIAL ORDER



Lang U



AQUAPILOT CONTROL SYSTEM
Aquapilot control head
AQP-DB (Without motors)
Unit wiring diagram

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Approved SSI
Checked JAJA

Drawn	8.4.2002	HAVA	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	Scale		7357344-0-001			01 / 02		U		

PLD/DATE: 10052007 E

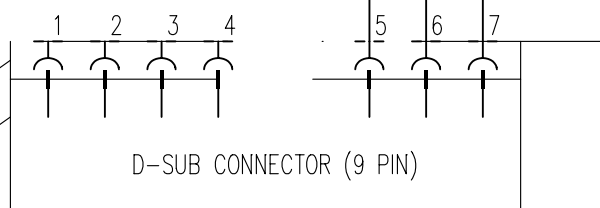
AQUAPILOT

RPM
for external use
(-100%)...0%...100%


-R31

FEMALE, PART OF AQUAPILOT

MALE, NOT PART OF AQUAPILOT

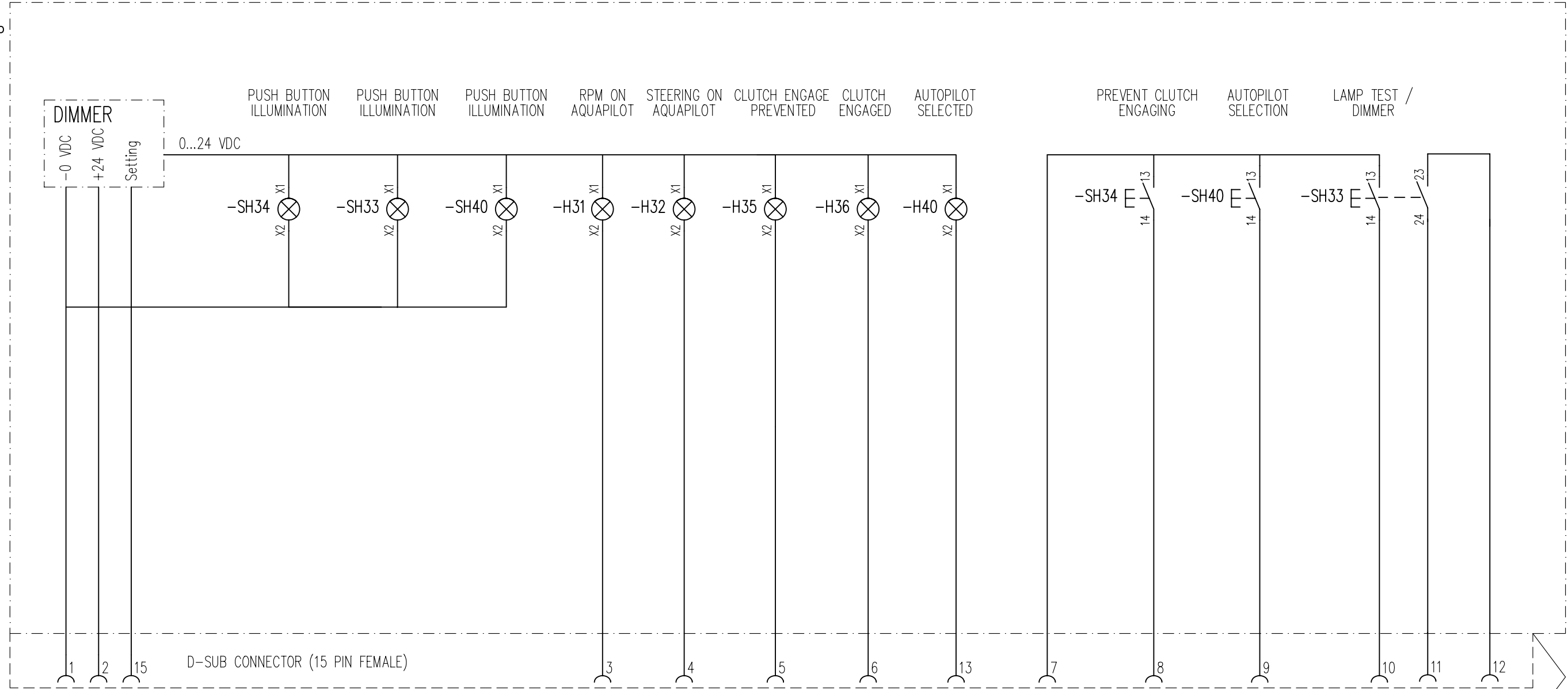


Lang
U

 Rolls-Royce		AQUAPILOT CONTROL SYSTEM Aquapilot control head AQP-DB (Without motors) Unit wiring diagram		THIS DRAWING IS PROPERTY OF ROLLS-ROYCE. IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE.		Approved SSI Checked JAJA		Group Size Serial number 7357344-0-001		Rev Variant Page Total pages Lang 02/02 U	
Drawn 8.4.2002 HAVA		Scale		Weight kg		02/02		02/02		U	

PLOTDATE: 10.05.2007 E

ACP



DIMMER
-0 VDC
+24 VDC
Setting

0...24 VDC

SET FOR DIMMER
0...10 VDC, MAX 10 mA
0 VDC IS BRIGHT

D-SUB CONNECTOR (15 PIN FEMALE)

NOTE! GALVANIC CONNECTION
BETWEEN GROUNDS OF PANEL
AND CONNECTOR.

Languages:
U

		AQUAPILOT CONTROL SYSTEM	
		Aquamaster Control Panel	
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		Checked SAKU	Unit wiring diagram
Drawn	12.10.2001 TKH	Group	Size
Weight	kg	Scale	
Serial number		Rev	Variant
Page		Total pages	Lang
7356891 - 0 - 005		01 / 01	U

PLD/DIATE: 16.10.2001 E

ACP

DIMMER
-0 VDC
+24 VDC
Setting

0...24 VDC

PUSH BUTTON ILLUMINATION

PUSH BUTTON ILLUMINATION

RPM ON AQUAPILOT

STEERING ON AQUAPILOT

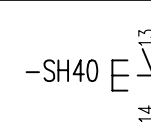
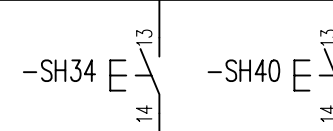
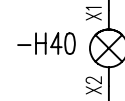
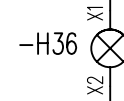
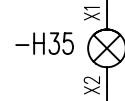
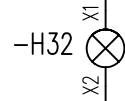
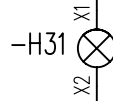
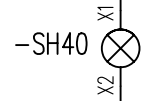
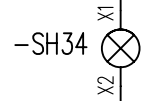
CLUTCH ENGAGE PREVENTED

CLUTCH ENGAGED

AUTOPILOT SELECTED

PREVENT CLUTCH ENGAGING

AUTOPILOT SELECTION



D-SUB CONNECTOR (15 PIN FEMALE)

1 2 15

3

4

5

6

13

7

8


9

-0 VDC
+24 VDC
SET FOR DIMMER
0...10 VDC, MAX 10 mA
0 VDC IS BRIGHT

SLIO'S GND

NOTE! GALVANIC CONNECTION BETWEEN GROUNDS OF PANEL AND CONNECTOR.

Languages: U

 Rolls-Royce		AQUAPILOT CONTROL SYSTEM							
		Aquamaster Control Panel							
<small>THIS DRAWING IS PROPERTY OF ROLLS-ROYCE. IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE. BY AB.</small>		Approved SSI	ACP10L						
		Checked TATU	Unit wiring diagram						
Drawn	11.11.2001 TKH	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight kg	Scale	7356891 - 0 - 010			01 / 01		U		

PLD/DIATE: 13.11.2001 E

Rolls-Royce azimuth thrusters

Rolls-Royce Oy Ab, Rauma, Finland

Work numbers: 514-H472/H473/H658/H659

Aquamaster 1, 2

Overview drawing: 7360121-A-000

MEANING OF CABLE FLAG CODE: (ab-c-def)			ALL CABLES P < 10 W, IF NO OTHER IS MENTIONED				
a	from		c	type of cable	d	supply of cable	ef
b	to						
0	common or external system		C	Control	0	not part of delivery of Rolls-Royce	sequence number
1	Aquamaster 1		D	Data cable	1	part of delivery of Rolls-Royce	
2	Aquamaster 2		I	Alarm			
3	Aquamaster 3		P	DC Power			
4	Aquamaster 4		E	AC Power			
			A	A Bus			
			B	B Bus			
			M	S-Bus Master			
			S	S-Bus Slave			

Rev.	Date	Drawn	Checked	Approv.	Change	Description
A	26.6.2008	TAOJ	ESKO	JAJA		

CABLE	FROM/END1	TO/END2	CABLE TYPE	CABLE CORES	NOTES	DRAWING
A-BUS						
12-A-001	ACU/AQM1	ACU/AQM2	BUS	2x(2+1) CORES	nom. imp. 120 ohm, max capac. 70 nF/km, max. loop resist. 160 ohm./km	7357970-005
B-BUS						
21-B-001	ACU/AQM1	ACU/AQM2	BUS	2x(2+1) CORES	nom. imp. 120 ohm, max capac. 70 nF/km, max. loop resist. 160 ohm./km	7357970-005
S-BUS						
11-S-001	ACU/AQM1	BSU/AQM1	BUS	2x(2+1) CORES	nom. imp. 120 ohm, max capac. 70 nF/km, max. loop resist. 160 ohm./km	7357970-005
22-S-001	ACU/AQM2	BSU/AQM2	BUS	2x(2+1) CORES	nom. imp. 120 ohm, max capac. 70 nF/km, max. loop resist. 160 ohm./km	7357970-005

Rolls-Royce azimuth thrusters

Rolls-Royce Oy Ab, Rauma, Finland

CABLE	FROM/END1	TO/END2	CABLE TYPE	CABLE CORES	NOTES	DRAWING
CONTROL CABLES						
10-C-001	ACU	PM's CONTROL UNIT	CONTROL	1x4+1 CORES	PM's start up allowed / speed setting	7357974-001
11-C-002	X3	ACU	CONTROL	1x12+1 CORES	Aqm turning / clutch valves control, P~35W	7357974-001
11-C-003	X2	ACU	CONTROL	1x3+1 CORES	PM rpm feedback	7357974-001
11-C-004	MCH	ACU	CONTROL	1x3+1 CORES	Maintenance controller	7357974-001
11-C-005	BCP004	ACU	CONTROL	1x12+1 CORES	Back-up steering	7357974-001
10-C-007	X3	PM's CONTROL UNIT	CONTROL	1x2+1 CORES	Slow down signal AQM's temperature	7357974-001
01-C-006	BSU	Autopilot	CONTROL	1x4+1 CORES	Autopilot control/autopilot on/off	7357974-001
20-C-001	ACU	PM's CONTROL UNIT	CONTROL	1x4+1 CORES	PM's start up allowed / speed setting	7357974-002
22-C-002	X3	ACU	CONTROL	1x12+1 CORES	Aqm turning / clutch valves control, P~35W	7357974-002
22-C-003	X2	ACU	CONTROL	1x3+1 CORES	PM rpm feedback	7357974-002
22-C-004	MCH	ACU	CONTROL	1x3+1 CORES	Maintenance controller	7357974-002
22-C-005	BCP004	ACU	CONTROL	1x12+1 CORES	Back-up steering	7357974-002
20-C-007	X3	PM's CONTROL UNIT	CONTROL	1x2+1 CORES	Slow down signal AQM's temperature	7357974-002
02-C-006	BSU	Autopilot	CONTROL	1x4+1 CORES	Autopilot control/autopilot on/off	7357974-002
DATA CABLES						
11-D-001	X2	ACU	DATA	4x(2+1)+1 CORES	Thrust direction indication	7357970-005
11-D-002	X2	ACU	DATA	2x(2+1)+1 CORES	Thrust direction feedback	7357970-005
11-D-003	ACU	TDI	DATA	4x(2+1)+1 CORES	Thrust direction indication	7357970-005
11-D-005	ACU	BSU	DATA	2x(2+1)+1 CORES	HHT Data line	7357970-005
22-D-001	X2	ACU	DATA	4x(2+1)+1 CORES	Thrust direction indication	7357970-005
22-D-002	X2	ACU	DATA	2x(2+1)+1 CORES	Thrust direction feedback	7357970-005
22-D-003	ACU	TDI	DATA	4x(2+1)+1 CORES	Thrust direction indication	7357970-005
22-D-005	ACU	BSU	DATA	2x(2+1)+1 CORES	HHT Data line	7357970-005

Rolls-Royce azimuth thrusters

Rolls-Royce Oy Ab, Rauma, Finland

CABLE	FROM/END1	TO/END2	CABLE TYPE	CABLE CORES	NOTES	DRAWING
ALARM CABLES						
11-I-001	ACU	Alarm system	ALARM	1x4+1 CORES	ACU warning / failure	7357103-003
11-I-002	X3	Alarm system	ALARM	1x10+1 CORES	AQM cooling oil alarms	7357103-003
11-I-003	X8	Alarm system	ALARM	1x10+1 CORES	Hydraulic oil alarms	7357103-003
11-I-004	X108	Alarm system	ALARM	1x2+1 CORES	Gravity tank oil level low	7357103-003
22-I-001	ACU	Alarm system	ALARM	1x4+1 CORES	ACU warning / failure	7357103-004
22-I-002	X3	Alarm system	ALARM	1x10+1 CORES	AQM cooling oil alarms	7357103-004
22-I-003	X8	Alarm system	ALARM	1x10+1 CORES	Hydraulic oil alarms	7357103-004
22-I-004	X108	Alarm system	ALARM	1x2+1 CORES	Gravity tank oil level low	7357103-004
POWER CABLES						
11-P-001	SUPPLY	ACU	POWER	1x2+1 CORES	24V / 300 W	7357113-006
11-P-002	ACU	BSU	POWER	1x2+1 CORES	24V / 150 W	7357113-006
22-P-001	SUPPLY	ACU	POWER	1x2+1 CORES	24V / 300 W	7357113-006
22-P-002	ACU	BSU	POWER	1x2+1 CORES	24V / 150 W	7357113-006
READY ASSEMBLED CONTROL CABLES FOR PANELS AND AQP's ON THE BSU						
AQP	BSU/AQM1	AQP	CONTROL	16x1 CORES	Cable with connector for panels	7357974-001
ACP	BSU/AQM1	ACP05L	CONTROL	16x1 CORES	Cable with connector for panels	7357974-001
AQP	BSU/AQM2	AQP	CONTROL	16x1 CORES	Cable with connector for panels	7357974-002
ACP	BSU/AQM2	ACP10L	CONTROL	16x1 CORES	Cable with connector for panels	7357974-002

REV

REV

REV

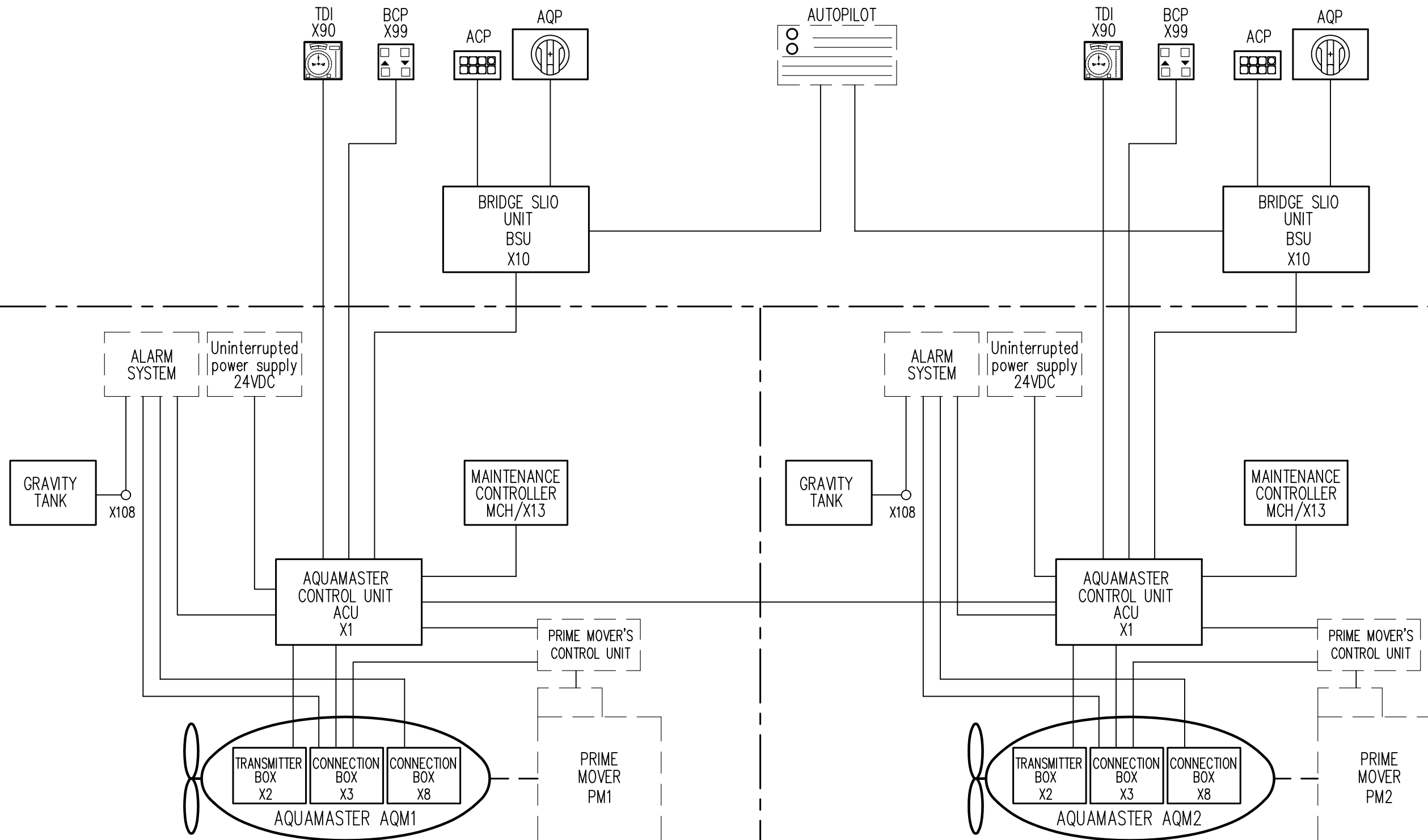
AQUAMASTER 1 , port unit

AQUAMASTER 2 , stbd unit

CONTROL STATION

BRIDGE

AQUAMASTER / ENGINE ROOM



PART OF DELIVERY OF ROLLS-ROYCE

NOT PART OF DELIVERY OF ROLLS-ROYCE

LIST OF CABLES, SEE 6461027-000
CABLING INSTRUCTION, SEE 6451995-002

Lang U



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Approved JAJA
Checked ESKO

AQUAPILOT CONTROL SYSTEM
514-H472/H473/H658/H659-340-02
One AQP control station
Overview diagram

US

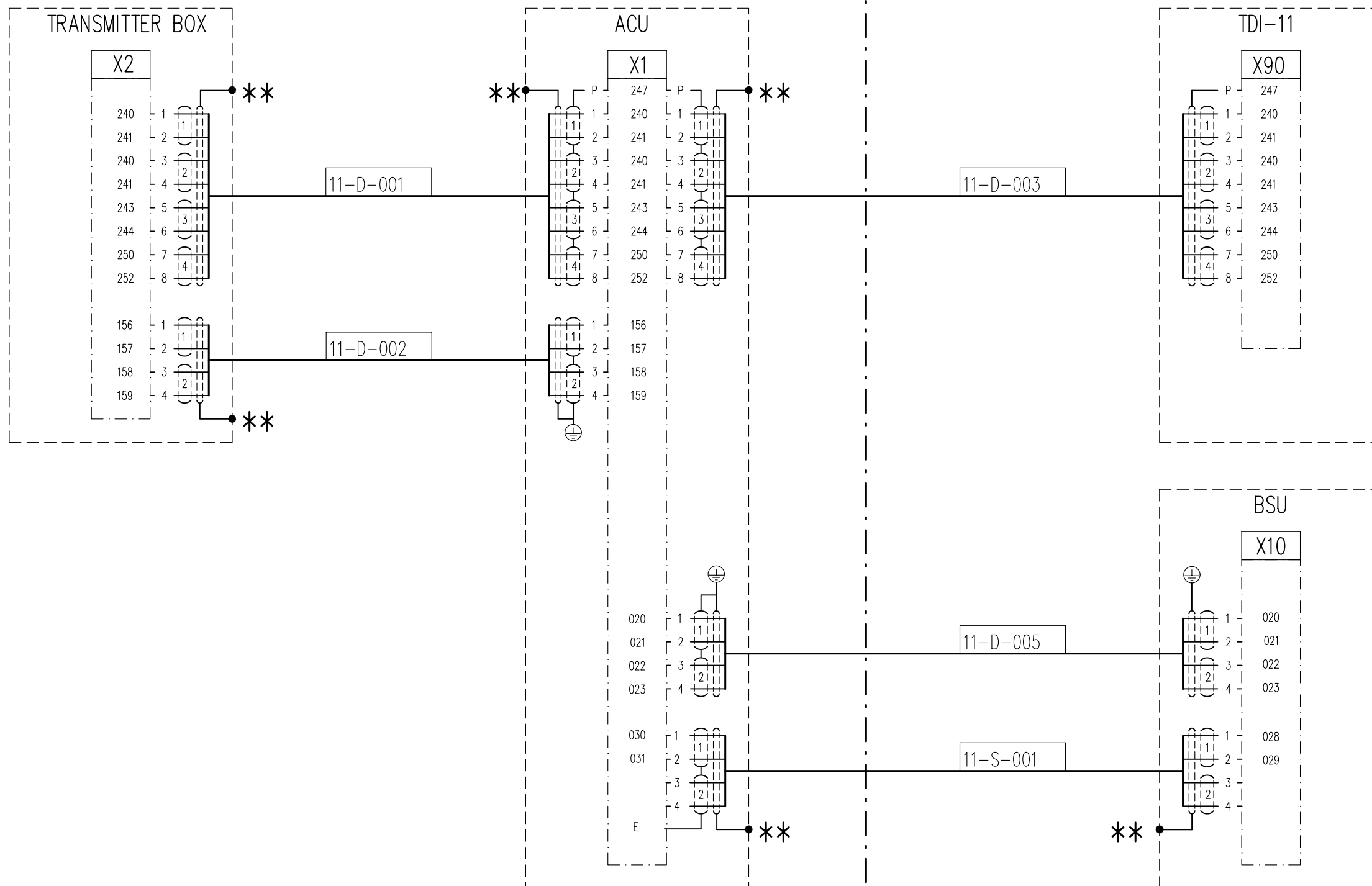
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Drawn	26.6.2008	TAOJ	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	kg	Scale	7 3 6 0 1 2 1		- A - 0 0 0	0 1	/ 0 1	U		

PL01DATE: 17.09.2008 E

THRUSTER ROOM / AQM1

BRIDGE, Port



**) CABLE SHIELD HAS TO CONNECT TO BODY OF THE UNIT THROUGH EMC CABLE GLAND!

⊕ EARTH TERMINAL OR EARTH BAR

Languages: U



AQUAPILOT CONTROL SYSTEM
Data cables

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Approved
TATU
Checked
TKH

Interconnecting diagram

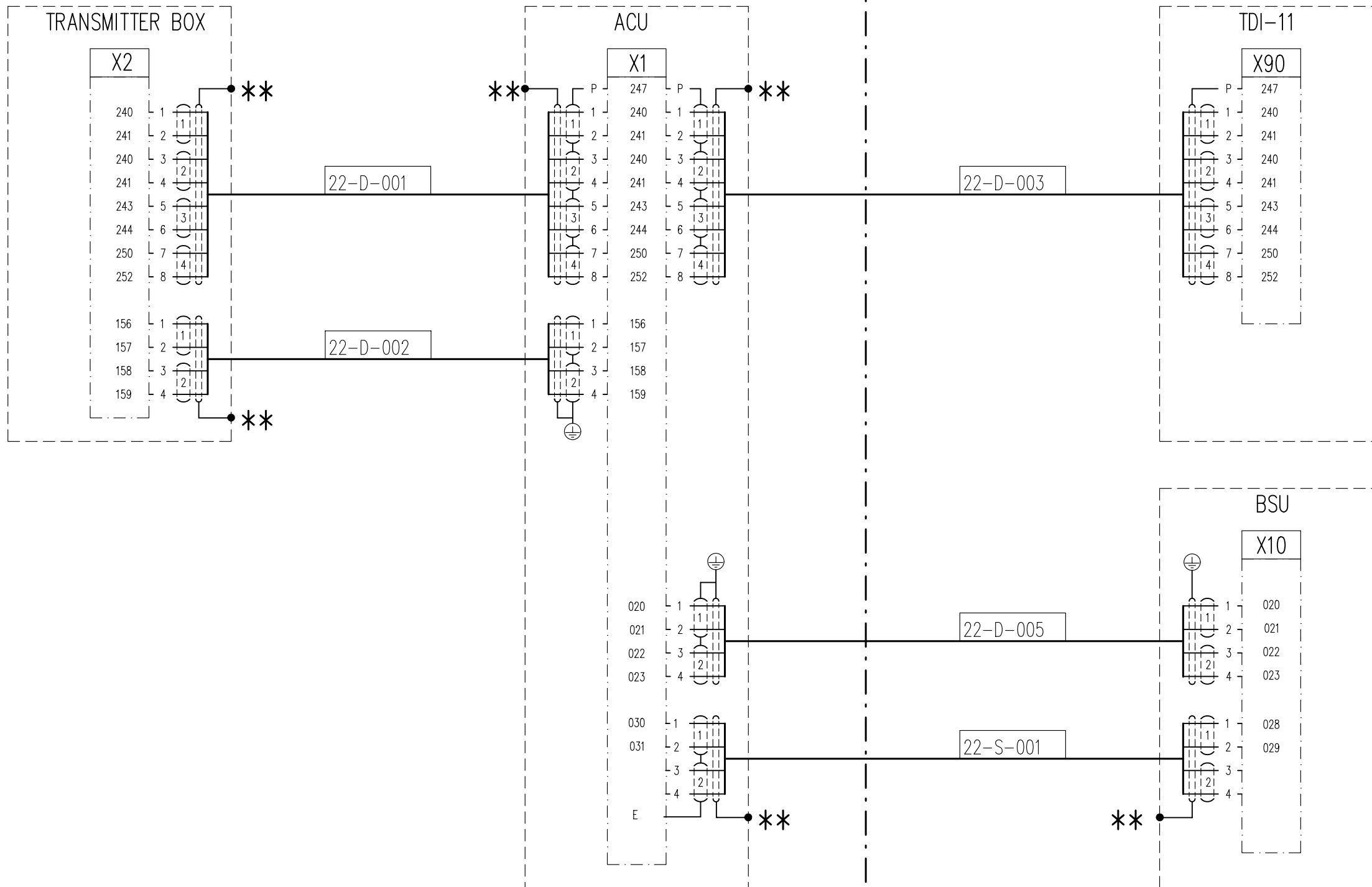
W

Drawn	13.2.2004	JUYL	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	Scale		7357970-0-005			01	103	U		

PLOTDATE: 18.02.2004 E

THRUSTER ROOM / AQM2

BRIDGE, Stbd



Languages:
U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
Data cables

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Approved
TATU
Checked
TKH

Interconnecting diagram

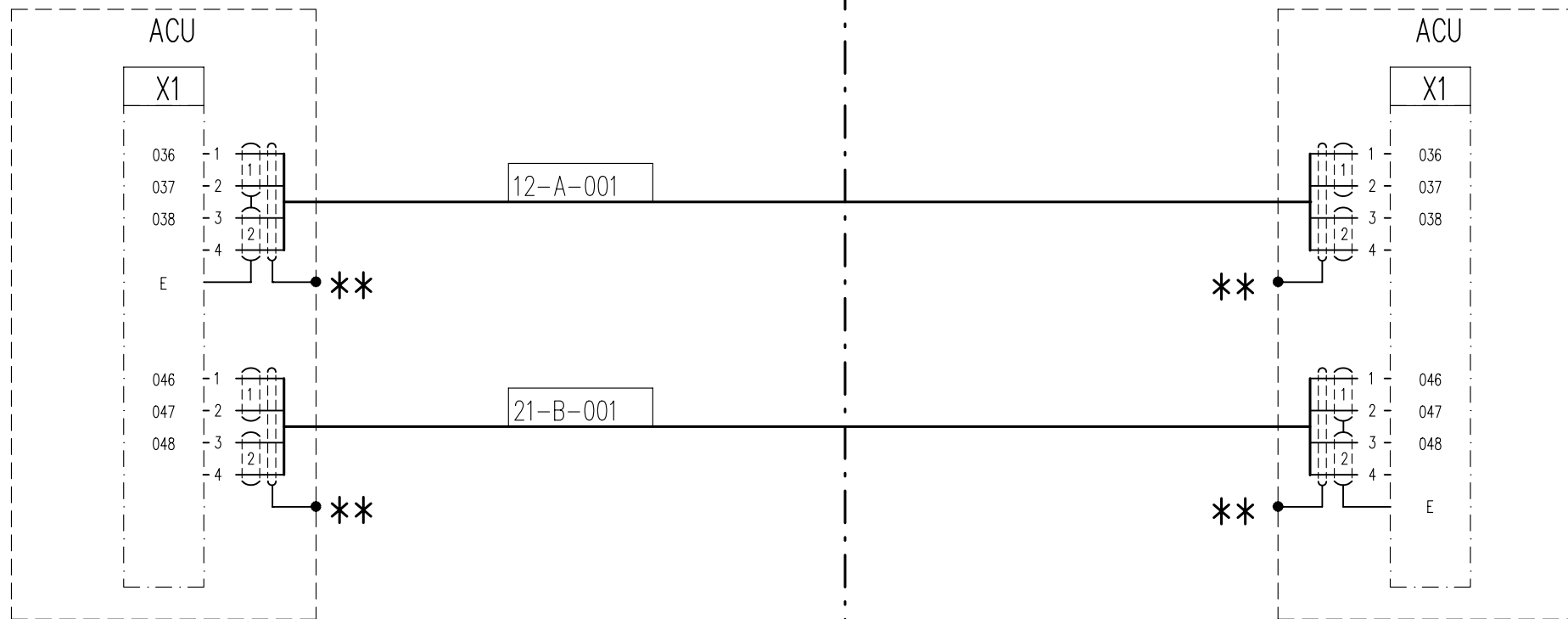
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Drawn	13.2.2004	JUJYL	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	Scale		7357970-0-005			02/03		U		


PLOTDATE: 18.02.2004 E

THRUSTER ROOM / AQM1

THRUSTER ROOM / AQM2



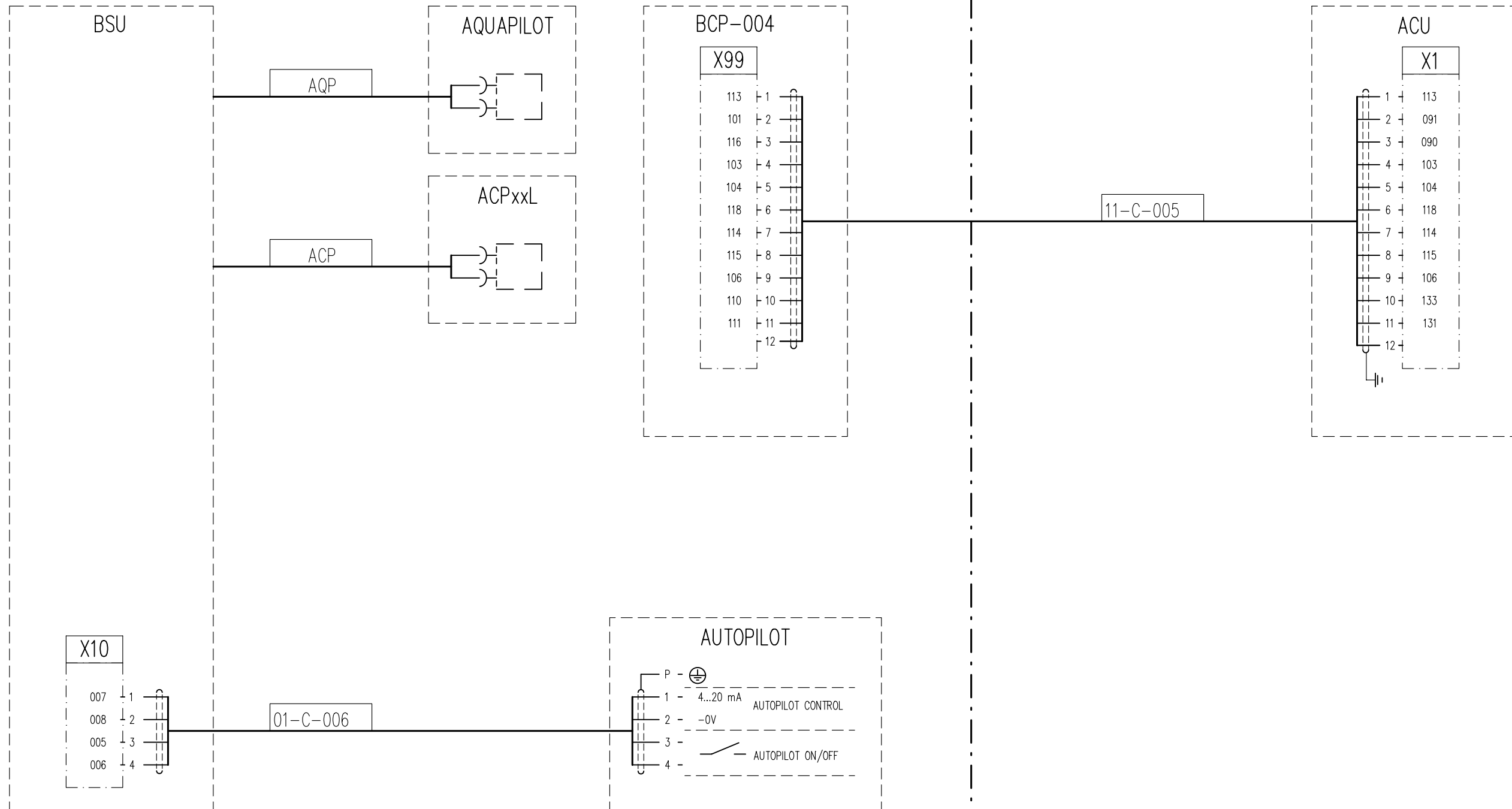
Languages:
U

 Rolls-Royce		AQUAPILOT CONTROL SYSTEM Data cables	
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		Checked TKH	
Drawn 13.2.2004 JUYL	Group Size Serial number	Rev	Variant
Weight kg	Scale	Page	
7357970-0-005		03 / 03	U

PLOTDATE: 18.02.2004 E

BRIDGE / CONTROL STATION

ENGINE ROOM



11-I-004

2ND AND 3RD DIGIT ARE FOR CABLE IDENTIFICATION
SEQUENCE NUMBER

1ST DIGIT
0 = SHIPYARD'S DELIVERY AND INSTALLATION
1 = ROLLS-ROYCE'S DELIVERY SHIPYARD'S INSTALLATION
2 = ROLLS-ROYCE'S DELIVERY AND INSTALLATION

TYPE
A = A BUS CABLE I = ALARM CABLE
B = B BUS CABLE P = DC SUPPLY CABLE
C = CONTROL CABLE M = MASTER BUS CABLE
D = DATA CABLE S = SLAVE BUS CABLE
E = AC SUPPLY CABLE

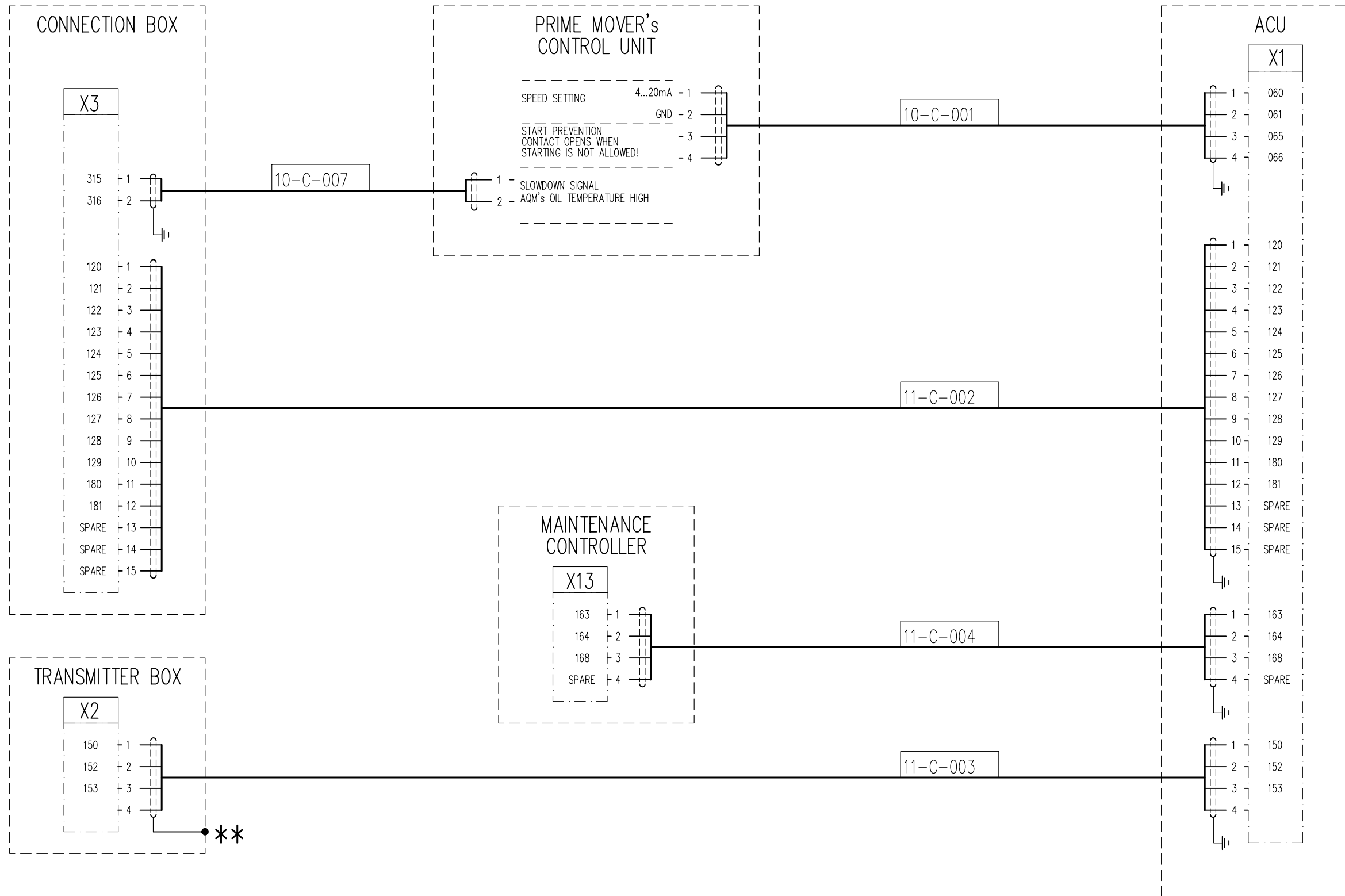
SYSTEM FROM/TO
11 = AQUAMASTER 1
22 = AQUAMASTER 2
12 = FROM AQUAMASTER 1 TO AQUAMASTER 2
21 = FROM AQUAMASTER 2 TO AQUAMASTER 1
00 = COMMON CABLE FOR ALL AQUAMASTER SYSTEMS
01 = FROM COMMON SYSTEM TO AQUAMASTER 1
02 = FROM COMMON SYSTEM TO AQUAMASTER 2
10 = FROM AQUAMASTER 1 TO COMMON SYSTEM
20 = FROM AQUAMASTER 2 TO COMMON SYSTEM

Languages: U

		AQUAPILOT CONTROL SYSTEM Control cables One control station Interconnecting diagram		AQM1 W
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Weight kg	Scale	7357974-0-001		

PLOTDATE: 04.12.2003 E

ENGINE ROOM



***) CABLE SHIELD HAS TO CONNECT TO BODY OF THE UNIT THROUGH EMC CABLE GLAND!

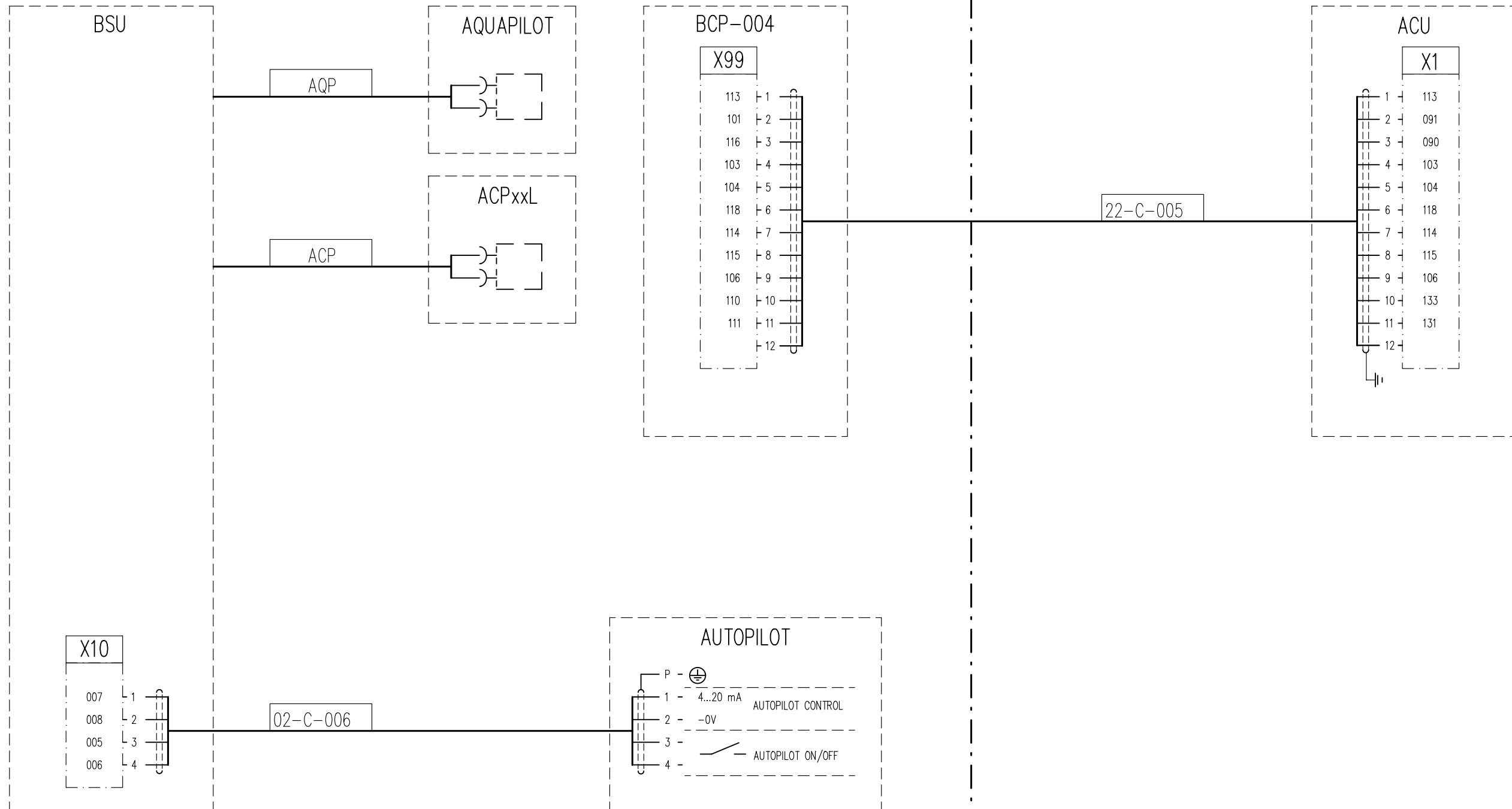
Languages: U

		AQUAPILOT CONTROL SYSTEM				AQM1	
		Control cables				W	
THIS DRAWING IS PROPERTY OF ROLLS-ROYCE (BY AB). IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE (BY AB).		Approved JAJA		One control station Interconnecting diagram			
Drawn 24.11.2003 JUYL		Group Size Serial number		Rev Variant		Page Total pages Lang	
Weight kg Scale		7357974-0-001		02/02		U	

PLOTDATE: 04.12.2003 E

BRIDGE / CONTROL STATION

ENGINE ROOM



11-I-004

2ND AND 3RD DIGIT ARE FOR CABLE IDENTIFICATION
SEQUENCE NUMBER
1ST DIGIT
0 = SHIPYARD'S DELIVERY AND INSTALLATION
1 = ROLLS ROYCE'S DELIVERY SHIPYARD'S INSTALLATION
2 = ROLLS-ROYCE'S DELIVERY AND INSTALLATION

TYPE
A = A BUS CABLE I = ALARM CABLE
B = B BUS CABLE P = DC SUPPLY CABLE
C = CONTROL CABLE M = MASTER BUS CABLE
D = DATA CABLE S = SLAVE BUS CABLE
E = AC SUPPLY CABLE

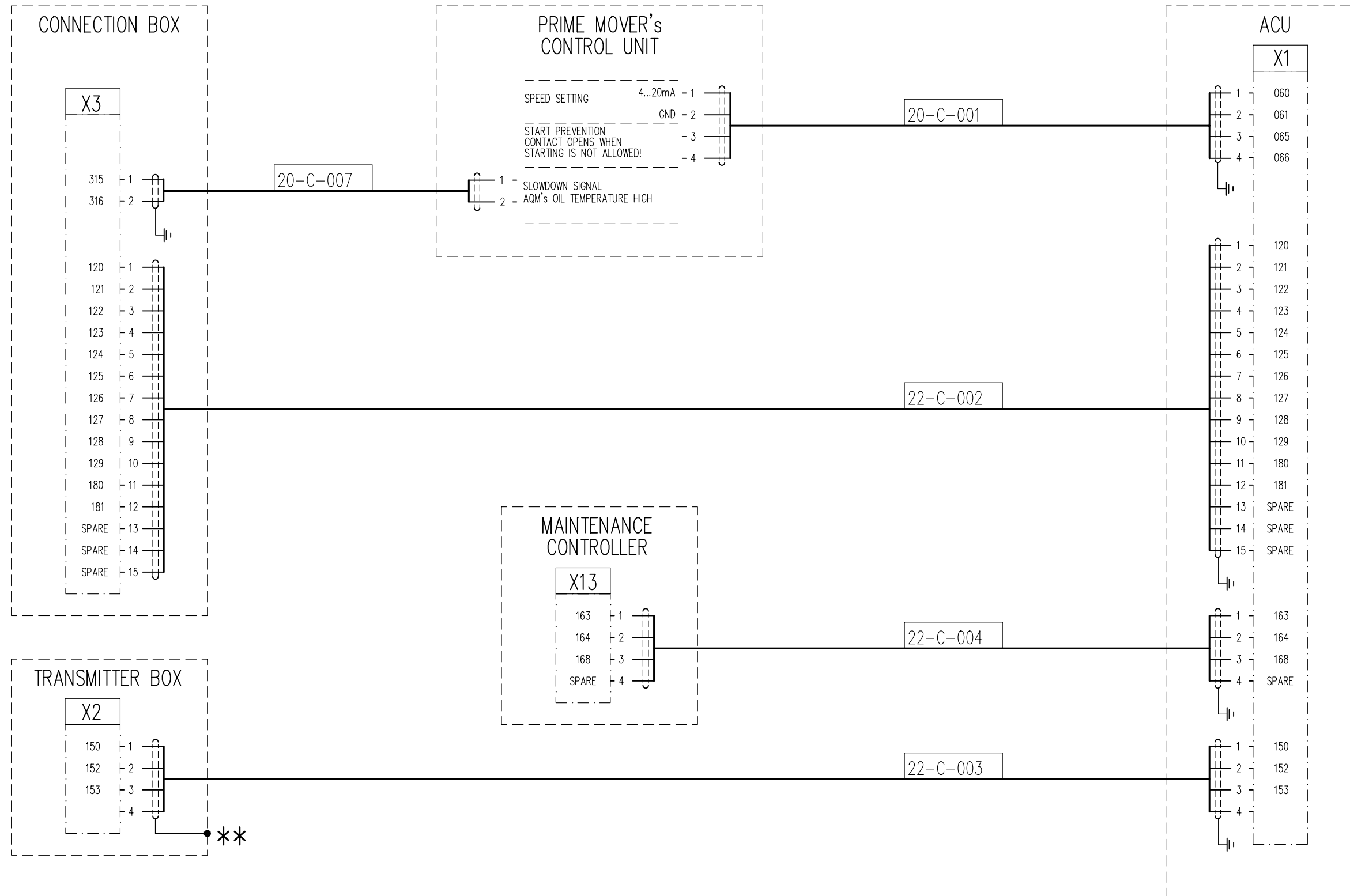
SYSTEM FROM/TO
11 = AQUAMASTER 1
22 = AQUAMASTER 2
12 = FROM AQUAMASTER 1 TO AQUAMASTER 2
21 = FROM AQUAMASTER 2 TO AQUAMASTER 1
00 = COMMON CABLE FOR ALL AQUAMASTER SYSTEMS
01 = FROM COMMON SYSTEM TO AQUAMASTER 1
02 = FROM COMMON SYSTEM TO AQUAMASTER 2
10 = FROM AQUAMASTER 1 TO COMMON SYSTEM
20 = FROM AQUAMASTER 2 TO COMMON SYSTEM

Languages: U

		AQUAPILOT CONTROL SYSTEM Control cables One control station Interconnecting diagram		AQM2 W
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Weight kg	Scale	7357974-0-002		01 / 02 U

PLOTDATE: 04.12.2003 E

ENGINE ROOM



***) CABLE SHIELD HAS TO CONNECT TO BODY OF THE UNIT THROUGH EMC CABLE GLAND!

Languages: U

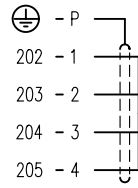
		AQUAPILOT CONTROL SYSTEM				AQM2	
		Control cables					
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		Checked TATU		Interconnecting diagram			
Drawn	24.11.2003	JUJL	Group	Size	Serial number	Rev	Variant
Weight	Scale		7357974-0-002		02/02	U	
kg							

PLOTDATE: 04.12.2003 E

AQM1 THRUSTER ROOM

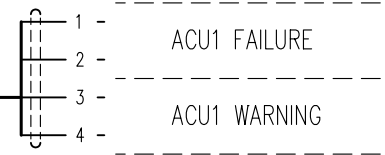
ENGINE CONTROL ROOM

ACU
X1

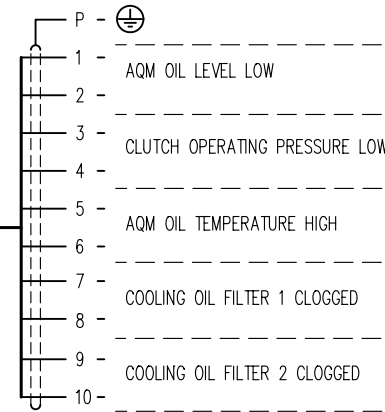


11-I-001

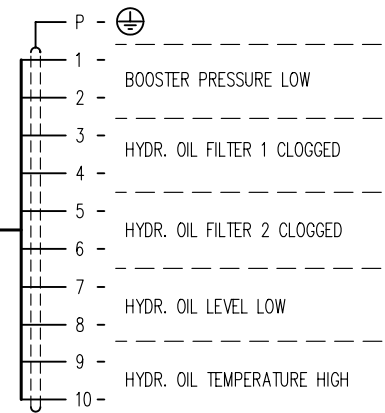
ALARM SYSTEM



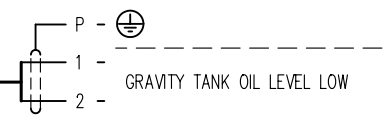
11-I-002



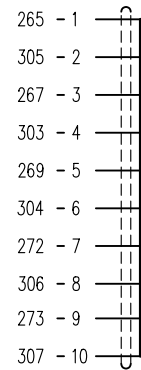
11-I-003



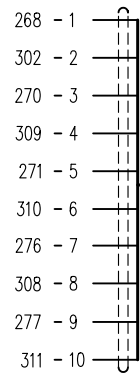
11-I-004



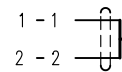
CONNECTION BOX
X3



CONNECTION BOX
X8



CONNECTION BOX
X108



11-I-004

2ND AND 3RD DIGIT ARE FOR CABLE IDENTIFICATION
SEQUENCE NUMBER
1ST DIGIT
0 = SHIPYARD'S DELIVERY AND INSTALLATION
1 = ROLLS ROYCE'S DELIVERY SHIPYARD'S INSTALLATION
2 = ROLLS-ROYCE'S DELIVERY AND INSTALLATION

TYPE
A = A BUS CABLE I = ALARM CABLE
B = B BUS CABLE P = DC SUPPLY CABLE
C = CONTROL CABLE M = MASTER BUS CABLE
D = DATA CABLE S = SLAVE BUS CABLE
E = AC SUPPLY CABLE

SYSTEM FROM/TO
11 = AQUAMASTER 1
22 = AQUAMASTER 2
12 = FROM AQUAMASTER 1 TO AQUAMASTER 2
21 = FROM AQUAMASTER 2 TO AQUAMASTER 1
10 = FROM AQUAMASTER 1 TO COMMON SYSTEM
20 = FROM AQUAMASTER 2 TO COMMON SYSTEM

Languages:
U

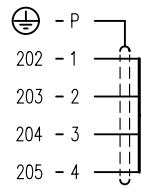
		AQUAPILOT CONTROL SYSTEM		PORT/AQM1	
		Alarm cables		W	
THIS DRAWING IS PROPERTY OF ROLLS-ROYCE (BY AB). IT IS NOT TO BE REPRODUCED OR SHOWN TO ANY THIRD PARTY WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE (BY AB).		Approved SSI			
		Checked TATU			
Drawn 25.10.2001 TKH	Group	Size	Serial number	Rev	Variant
Weight kg	Scale	7357103 - 0 - 003		Page 01	Total pages / 01
				Lang U	

PLOT DATE: 05.12.2002 E

AQM2 THRUSTER ROOM

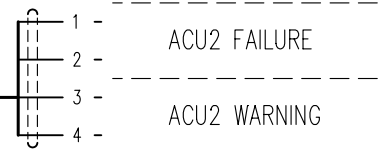
ENGINE CONTROL ROOM

ACU
X1



22-1-001

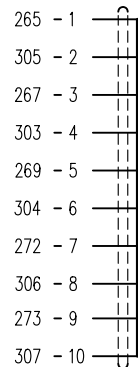
ALARM SYSTEM



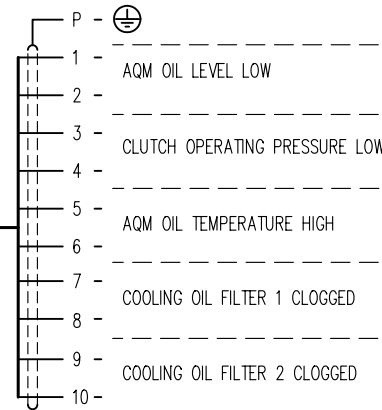
ACU2 FAILURE

ACU2 WARNING

CONNECTION BOX
X3



22-1-002



AQM OIL LEVEL LOW

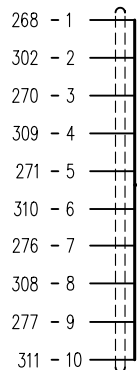
CLUTCH OPERATING PRESSURE LOW

AQM OIL TEMPERATURE HIGH

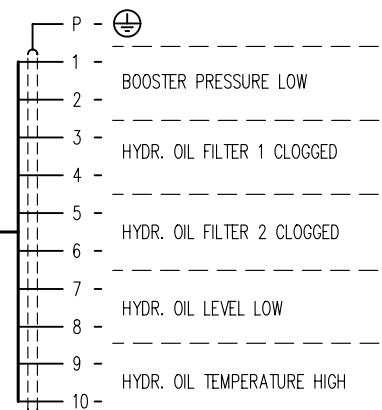
COOLING OIL FILTER 1 CLOGGED

COOLING OIL FILTER 2 CLOGGED

CONNECTION BOX
X8



22-1-003



BOOSTER PRESSURE LOW

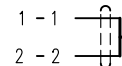
HYDR. OIL FILTER 1 CLOGGED

HYDR. OIL FILTER 2 CLOGGED

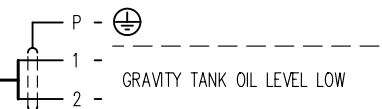
HYDR. OIL LEVEL LOW

HYDR. OIL TEMPERATURE HIGH

CONNECTION BOX
X108



22-1-004



GRAVITY TANK OIL LEVEL LOW

11-1-004

2ND AND 3RD DIGIT ARE FOR CABLE IDENTIFICATION
SEQUENCE NUMBER

1ST DIGIT
0 = SHIPYARD'S DELIVERY AND INSTALLATION
1 = ROLLS-ROYCE'S DELIVERY SHIPYARD'S INSTALLATION
2 = ROLLS-ROYCE'S DELIVERY AND INSTALLATION

TYPE
A = A BUS CABLE I = ALARM CABLE
B = B BUS CABLE P = DC SUPPLY CABLE
C = CONTROL CABLE M = MASTER BUS CABLE
D = DATA CABLE S = SLAVE BUS CABLE
E = AC SUPPLY CABLE

SYSTEM FROM/TO
11 = AQUAMASTER 1
22 = AQUAMASTER 2
12 = FROM AQUAMASTER 1 TO AQUAMASTER 2
21 = FROM AQUAMASTER 2 TO AQUAMASTER 1
10 = FROM AQUAMASTER 1 TO COMMON SYSTEM
20 = FROM AQUAMASTER 2 TO COMMON SYSTEM

Languages:
U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM
Alarm cables

STBD/AQM2

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Approved
SSI
Checked
TATU

Interconnecting diagram

W

Drawn	25.10.2001	TKH	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	kg	Scale	7357103 - 0 - 004			01	/01	U		

PLOT DATE: 05.12.2002 E

ENGINE ROOM

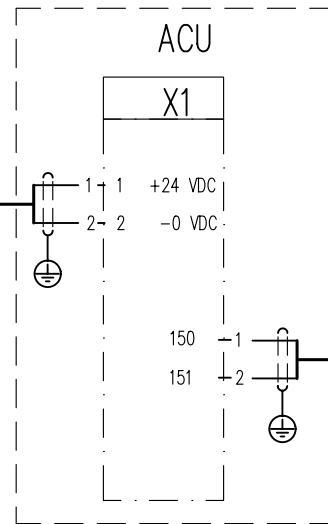
AQM1

BRIDGE

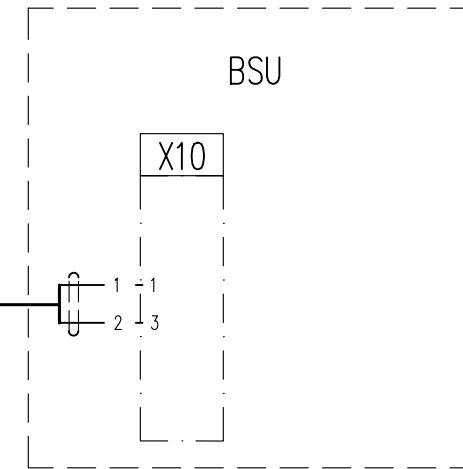
AQM1



11-P-001



11-P-002

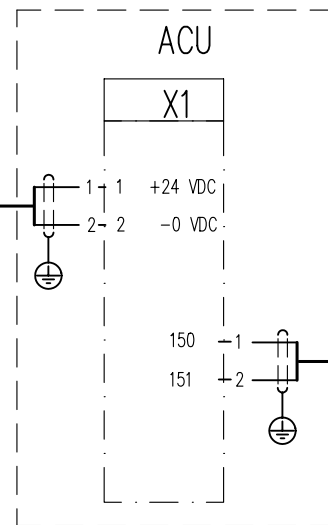


AQM2

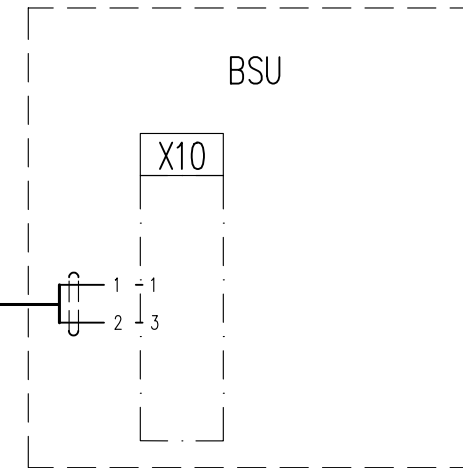
AQM2



22-P-001



22-P-002



11-I-004

2ND AND 3RD DIGIT ARE FOR CABLE IDENTIFICATION
 RUNNING NUMBER
 1ST DIGIT
 0 = SHIPYARD'S DELIVERY AND INSTALLATION
 1 = ROLLS ROYCE'S DELIVERY SHIPYARD'S INSTALLATION
 2 = ROLLS-ROYCE'S DELIVERY AND INSTALLATION

TYPE
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 B = B BUS CABLE P = DC SUPPLY CABLE
 C = CONTROL CABLE M = MASTER BUS CABLE
 D = DATA CABLE S = SLAVE BUS CABLE
 E = AC SUPPLY CABLE

SYSTEM FROM/TO
 11 = AQUAMASTER 1
 22 = AQUAMASTER 2
 12 = FROM AQUAMASTER 1 TO AQUAMASTER 2
 21 = FROM AQUAMASTER 2 TO AQUAMASTER 1
 00 = COMMON CABLE FOR ALL AQM SYSTEMS
 10 = FROM AQUAMASTER 1 TO COMMON SYSTEM
 20 = FROM AQUAMASTER 2 TO COMMON SYSTEM

Languages: U



Rolls-Royce

AQUAPILOT CONTROL SYSTEM

US

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 WITHOUT SPECIAL PERMISSION OF ROLLS-ROYCE (BY AB).

Approved
 ARAS
 Checked
 KIKO

Control supply arrangement
 Interconnecting diagram

W

Drawn	12.12.2001	TKH	Group	Size	Serial number	Rev	Variant	Page	Total pages	Lang
Weight	kg	Scale	7357113 - 0 - 006			01	/01	U		

PLOT DATE: 17.12.2001 E

Work No. : 514-h659-340 -02
 Drawing No. : K 7357847-0-001

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

BRIDGE SLIO UNIT
 BSU7847.01 ; (FP_o-o)

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	A 7578587	COVER	PCS	1
2	A 7578408	EAR HANDLE	PCS	1
3	A 7587080	END CLAMP	PCS	2
4	A 7587105	TERMINAL BLOCK	PCS	20
5	A 7587132	TERMINAL BLOCK	PCS	3
6	A 7587158	TERMINAL WITH RESISTOR	PCS	1
8	A 7587080	END CLAMP	PCS	2
9	A 7587105	TERMINAL BLOCK	PCS	3
10	A 7587123	END PLATE	PCS	1
11	A 7587143	DIODE CONNECTOR	PCS	1
12	A 7587144	DIODE CONNECTOR	PCS	1
13	A 7356590	CABLE GLAND	PCS	1
14	A 7356597	LOCKING NUT	PCS	1
15	A 7356639	CABLE GLAND	PCS	1
16	A 7356640	LOCKING NUT	PCS	1
17	A 7356514	CABLE GLAND	PCS	2
18	A 7356475	LOCKING NUT	PCS	2
19	A 7356472	CABLE GLAND	PCS	2
20	A 7356476	LOCKING NUT	PCS	2
21	A 7356592	CAP PLUG	PCS	1
24	K 7452463-0-L05	CABLE WITH CONNECTOR	PCS	2
25	A 7356639	CABLE GLAND	PCS	2
26	A 7356640	LOCKING NUT	PCS	3

Work No. : 514-h659-340 -02
 Drawing No. : K 7357847-0-001

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

BRIDGE SLIO UNIT
 BSU7847.01 ; (FP_o-o)

PART No	CODE/DRW	DESCRIPTION	UN	QTY
27	A 7356642	CABLE GLAND	PCS	1
28	A 7356643	LOCKING NUT	PCS	1
29	A 7243982	EARTHING CABLE	M	1
29	A 7369297	CABLE SHOE	PCS	1
71	K 7452455-0-005	LABELING	PCS	1
72	K 7452455-0-005	LABELING	PCS	1
73	K 7452455-0-005	LABELING	PCS	1
74	K 7452455-0-101	LABELING	PCS	1
75	A 7451635-B-001	PRODUCT LABEL	PCS	1
A11	A 7033186	ELECTRONIC UNIT	PCS	1
HHT	A 7369192	MULTIPLUG CONNECTOR	PCS	1
K10	A 7479292	relay module	PCS	1
XP5	A 7369222	MULTIPLUG CONNECTOR	PCS	1
UG10	A 7780133	CONVERTER I/U	PCS	1
Dwg.c	D 7452432-A-002	Cable entries	PCS	1
Dwg.w	W 7357848-D-001	BRIDGE SLIO UNIT	PCS	1
XP1.2	A 7369224	MULTIPLUG CONNECTOR	PCS	2
C.wire	A 7243969	INSULATED WIRE	M	1
C.wire	A 7243972	INSULATED WIRE	M	1
Envil.	D -	FILE POCKET	PCS	1
XP3-13	A 7369225	MULTIPLUG CONNECTOR	PCS	6
XP6-12	A 7369226	MULTIPLUG CONNECTOR	PCS	4

Work No. : 514-h659-340 -02
 Drawing No. : K 7452258-0-005

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

Aquamaster control panel
 ACP05L

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	D 7355781---002	Aquamaster control panel	PCS	1
2	A 7435012	PUSH-BUTTON WITH SIGNAL L.	PCS	3
2	A 7435022	LENS OF PUSH BUTTON	PCS	3
3	A 7429726	SIGNAL LAMP	PCS	5
3	A 7435014	LENS FOR SIGNAL LAMP	PCS	5
5	A 7429724	CONTACT BLOCK WITH SOCKET	PCS	8
6	A 4333757	SLOT-HEADED BOLT, CUP HEAD	PCS	2
7	A 7369188	MULTIPLUG CONNECTOR	PCS	1
7	A 7369189	FIXING SET	PCS	1
12	A 7451635-B-001	PRODUCT LABEL	PCS	1
13	D 7451919---001	Aquamaster control panel	PCS	1
WIRING	W 7356891-0-005	Aquamaster control panel	PCS	1

Work No. : 514-h659-340 -02
 Drawing No. : K 7452258-0-010

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

Aquamaster control panel
 ACP10L

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	D 7355781---002	Aquamaster control panel	PCS	1
2	A 7435012	PUSH-BUTTON WITH SIGNAL L.	PCS	2
2	A 7435022	LENS OF PUSH BUTTON	PCS	2
3	A 7429726	SIGNAL LAMP	PCS	5
3	A 7435014	LENS FOR SIGNAL LAMP	PCS	5
5	A 7429724	CONTACT BLOCK WITH SOCKET	PCS	7
6	A 4333757	SLOT-HEADED BOLT, CUP HEAD	PCS	2
7	A 7369188	MULTIPLUG CONNECTOR	PCS	1
7	A 7369189	FIXING SET	PCS	1
9	A 7429728	CAP PLUG	PCS	1
12	A 7451635-B-001	PRODUCT LABEL	PCS	1
13	D 7451919---001	Aquamaster control panel	PCS	1
WIRING	W 7356891-0-010	Aquamaster control panel	PCS	1

Work No. : 514-h659-340 -02
Drawing No. : K 7352233-A-005

Client : Open JSC "Leningrad shp Pel
Shipyard : Open JSC "Leningrad shp Pel
Ship name : Dobrynya
Building num. : 616
Owner : Sovcomflot
Unit : US 205
Serial No. : 64527 - 64528

THRUST AND DIRECTION INDICA
TDI-11

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	A 7450487-B-001	THRUST DIRECTION INDICATOR	PCS	1
3	A 7351526---001	GLARE SHIELD	PCS	1
4	A 7450802---002	MOUNTING PROTECTION	PCS	1

Work No. : 514-h659-340 -02
 Drawing No. : K 7452656-A-004

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

BACK-UP CONTROL PANEL
 BCPxxx

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	D 7355798---001	BACK-UP CONTROL PANEL	PCS	1
2	A 7435012	PUSH-BUTTON WITH SIGNAL L.	PCS	2
2	A 7435019	LENS OF PUSH BUTTON	PCS	2
3	A 7429724	CONTACT BLOCK WITH SOCKET	PCS	2
4	A 7429727	ROTARY HANDLE KEY	PCS	1
5	A 7429725	CONTACT BLOCK WITH SOCKET	PCS	1
6	A 7353990---001	POTENTIOMETER WITH SWITCH	PCS	1
7	A 7587067	TERMINAL BLOCK	PCS	20
7	A 7587120	TERMINAL BLOCK	PCS	2
8	A 4333757	SLOT-HEADED BOLT, CUP HEAD	PCS	4
9	A 7239058	CABLE	M	2
ID	A 7451635-B-001	PRODUCT LABEL	PCS	1
UG99	A 7780153	CONVERTER	PCS	1
Label	D 7451919---001	Aquamaster control panel	PCS	1
WIRING	W 7359995-0-004	BACK-UP CONTROL PANEL	PCS	1

Work No. : 514-h659-340 -02
Drawing No. : K 7356258-A-001

Client : Open JSC "Leningrad shp Pel
Shipyard : Open JSC "Leningrad shp Pel
Ship name : Dobrynya
Building num. : 616
Owner : Sovcomflot
Unit : US 205
Serial No. : 64527 - 64528

Aquapilot control head
AQP-DB

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	A 7357723---001	Aquapilot control head	PCS	1

Work No. : 514-h659-340 -02
 Drawing No. : K 7356785-A-001

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

AQUAMASTER CONTROL UNIT
 ACU6785.01 ; (FP_o-o)

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	D -	BOX COLOUR	PCS	1
1	A 7578436	COVER	PCS	1
2	A 7578151	EAR HANDLE SZ 2508.000;	PCS	4
3	D -	FILE POCKET	PCS	1
5	A 7578154	LATCH FOR DOOR SZ 2519;	PCS	1
9	A 7356590	CABLE GLAND	PCS	7
9	A 7356597	LOCKING NUT	PCS	7
E	A 7587110	TERMINAL BLOCK	PCS	1
10	A 7356591	CAP PLUG	PCS	4
10	A 7356597	LOCKING NUT	PCS	4
11	A 7356639	CABLE GLAND	PCS	4
11	A 7356640	LOCKING NUT	PCS	4
12	A 7356475	LOCKING NUT	PCS	5
12	A 7356514	CABLE GLAND	PCS	5
13	A 7356475	LOCKING NUT	PCS	4
13	A 7356592	CAP PLUG	PCS	4
14	A 7356472	CABLE GLAND	PCS	2
14	A 7356476	LOCKING NUT	PCS	2
15	A 7356476	LOCKING NUT	PCS	2
15	A 7356593	CAP PLUG	PCS	2
16	A 7356639	CABLE GLAND	PCS	3
16	A 7356640	LOCKING NUT	PCS	3
20	A 7587158	TERMINAL WITH RESISTOR	PCS	3

Work No. : 514-h659-340 -02
 Drawing No. : K 7356785-A-001

AQUAMASTER CONTROL UNIT
 ACU6785.01 ; (FP_o-o)

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

PART No	CODE/DRW	DESCRIPTION	UN	QTY
21	A 7587105	TERMINAL BLOCK	PCS	92
22	A 7587080	END CLAMP	PCS	5
23	A 7587123	END PLATE	PCS	2
24	A 7587111	TERMINAL BLOCK	PCS	4
25	A 7587157	END PLATE	PCS	1
26	A 7587080	END CLAMP	PCS	2
27	A 7434841	EARTH BAR	PCS	2
28	A 7356642	CABLE GLAND	PCS	1
29	A 7356643	LOCKING NUT	PCS	1
30	A 7243982	EARTHING CABLE	M	1
30	A 7369297	CABLE SHOE	PCS	1
71	K 7452455-0-001	LABELING	PCS	1
72	K 7452455-0-001	LABELING	PCS	1
73	K 7452455-0-001	LABELING	PCS	1
74	K 7452455-0-101	LABELING	PCS	1
75	A 7451635-B-001	PRODUCT LABEL	PCS	1
76	K 7452455-0-001	LABELING	PCS	1
77	A 7015027	TEMPERATURE INDICATOR	PCS	1
A1	A 7033184	ELECTRONIC UNIT	PCS	1
F1	A 7537061	CIRCUIT BREAKER	PCS	1
F2	A 7537061	CIRCUIT BREAKER	PCS	1
F3	A 7537061	CIRCUIT BREAKER	PCS	1
F4	A 7537061	CIRCUIT BREAKER	PCS	1

Work No. : 514-h659-340 -02
 Drawing No. : K 7356785-A-001

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

AQUAMASTER CONTROL UNIT
 ACU6785.01 ; (FP_o-o)

PART No	CODE/DRW	DESCRIPTION	UN	QTY
F5	A 7537061	CIRCUIT BREAKER	PCS	1
S3	A 7445050	SELECTOR SWITCH	PCS	1
SS	A 7445051	SELECTOR SWITCH	PCS	1
A21	A 7780139	ISOLATOR FOR SERIAL SIGNALS	PCS	1
A23	K 7356254-0-001	PUMP UNIT ASSEMBLY	PCS	1
XF1	A 7369206	MULTIPLUG CONNECTOR	PCS	1
XTf	D -	Screws	PCS	1
XTf	D -	Support clamp h=10mm	PCS	1
XTf	A 7369293	MULTIPLUG CONNECTOR	PCS	1
ZF1	K 7356257-A-001	SURGE FILTER UNIT	PCS	1
ZF2	A 7959110	DISTURBANCE FILTER	PCS	1
4dwg	D -	7356785---XXX	PCS	1
4dwg	D -	Data leaf	PCS	1
4dwg	W 7360048-A-001	AQUAMASTER CONTROL UNIT	PCS	1
4dwg	D 7452432---004	Drawing	PCS	1
A1.0	A 7033186	ELECTRONIC UNIT	PCS	1
UG11	A 7780130	GALVANIC ISOLATOR	PCS	1
C1,C2	A 7959109	CAPACITOR	PCS	2
SCR-3	A 7351976---001	SECONDARY STEERING ELECT.	PCS	1
XP(2)	A 7369222	MULTIPLUG CONNECTOR	PCS	1
XP(4)	A 7369224	MULTIPLUG CONNECTOR	PCS	3
XP(6)	A 7369225	MULTIPLUG CONNECTOR	PCS	7
XP(8)	A 7369226	MULTIPLUG CONNECTOR	PCS	6

Work No. : 514-h659-340 -02
 Drawing No. : K 7356785-A-001

Client : Open JSC "Leningrad shp Pel
 Shipyard : Open JSC "Leningrad shp Pel
 Ship name : Dobrynya
 Building num. : 616
 Owner : Sovcomflot
 Unit : US 205
 Serial No. : 64527 - 64528

AQUAMASTER CONTROL UNIT
 ACU6785.01 ; (FP_o-o)

PART No	CODE/DRW	DESCRIPTION	UN	QTY
ZV1-2	A 7914001	TRANSIENT PROTECTION	PCS	2
A1 EEP	A 7909012	MEMORY CIRCUIT	PCS	1
C.Wire	A 7243969	INSULATED WIRE	M	1
C.Wire	A 7243972	INSULATED WIRE	M	1
K51...	A 7479292	relay module	PCS	26
K51...	A 7479296	pushbar	PCS	1
Starra	K 7452455-0-101	LABELING	PCS	1

Work No. : 514-h659-340 -02
Drawing No. : K 7452044-B-002

Client : Open JSC "Leningrad shp Pel
Shipyard : Open JSC "Leningrad shp Pel
Ship name : Dobrynya
Building num. : 616
Owner : Sovcomflot
Unit : US 205
Serial No. : 64527 - 64528

MAINTENANCE CONTROLLER
MCH.02 / X13

PART No	CODE/DRW	DESCRIPTION	UN	QTY
1	A 7346702	COVER	1 12 22 08;220x120x80 MM	PCS 1
2	A 7451635-B-001	PRODUCT LABEL		PCS 1
3	A 7587067	TERMINAL BLOCK		PCS 3
4	A 7356472	CABLE GLAND		PCS 1
5	A 7429724	CONTACT BLOCK WITH SOCKET		PCS 2
6	A 7435023	LENS OF PUSH BUTTON		PCS 2
7	A 7435042	PUSH-BUTTON WITH SIGNAL L.		PCS 2
9	A 7578381	HINGE		PCS 2
10	D -	Label		PCS 2
WIRE	A 7243971	INSULATED WIRE	M	1