

SEWAGE PUMP STATION - KINGFISHER RTU OPTION




















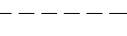

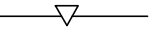
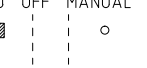

E-01	COVER PAGE & SYMBOL LIBRARY
EN-01	TELEMETRY TOPOLOGY - RADIO INSTALLATION
EN-02	TELEMETRY TOPOLOGY - NEXT 'G' MODEM INSTALLATION
EC-02	KINGFISHER - DI-5 DIGITAL INPUTS MODULE
EC-03	KINGFISHER - IO-3 I/O MODULE
EC-04	KINGFISHER - IO-2 DIGITAL INPUT/OUTPUT MODULE

THESE DRAWINGS SHOW THE ELECTRICAL DETAIL WHEN A TASWATER STANDARD PUMP STATION IS TO USE A KINGFISHER RTU.
 THIS SET OF DRAWINGS IS TO ONLY BE USED IN CONJUNCTION WITH TASWATER STANDARD SEWAGE PUMP STATION DRAWINGS:

- TWS-E-002 SPS TYPE 1 0.0 TO 4kW PUMPS
- TWS-E-003 SPS TYPE 2 >4 TO 22kW PUMPS

SITE SPECIFIC DRAWING NUMBERING
 PUMPSTATION ASSET NO. - TWA-YY-NNN
 WHERE YY = YEAR OF PROJECT, NNN = TW SEQUENCE NUMBER

DERIVED FROM STANDARD DRAWING TWS-E-0006, Rev B

SYMBOL LIBRARY			
	FUSE		PANEL TERMINAL
	CIRCUIT BREAKER		LINK TERMINAL
	CONTACTOR CONTACT		PLUG CONNECTION
	CONTACTOR /RELAY COIL		SOLENOID VALVE
	THERMAL OVERLOAD		LEVEL SWITCH - NORMALLY CLOSED
	RCD CIRCUIT BREAKER		LEVEL SWITCH - NORMALLY OPEN
	NORMALLY CLOSED CONTACT		PANEL INDICATION LAMP
	NORMALLY OPEN CONTACT		EXTERNAL INDICATION LAMP
	PROXIMITY SWITCH		PIEZO BUZZER
	EMERGENCY STOP PUSHBUTTON		OPTIONAL EQUIPMENT LINE
	PUSHBUTTON SWITCH		MECHANICAL INTERLOCK
	MANUAL SWITCH		
	KEY OPERATED SWITCH		

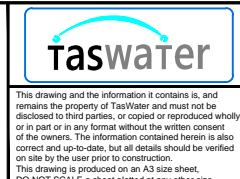
Revision Notes					
Sheet EN02 3G modem and part No. updated					
Sheets EN01 & EN02 RTU part no. and cable part no. updated					
Rev.	C	Date	23/03/2017	Approved	S. Dadswell



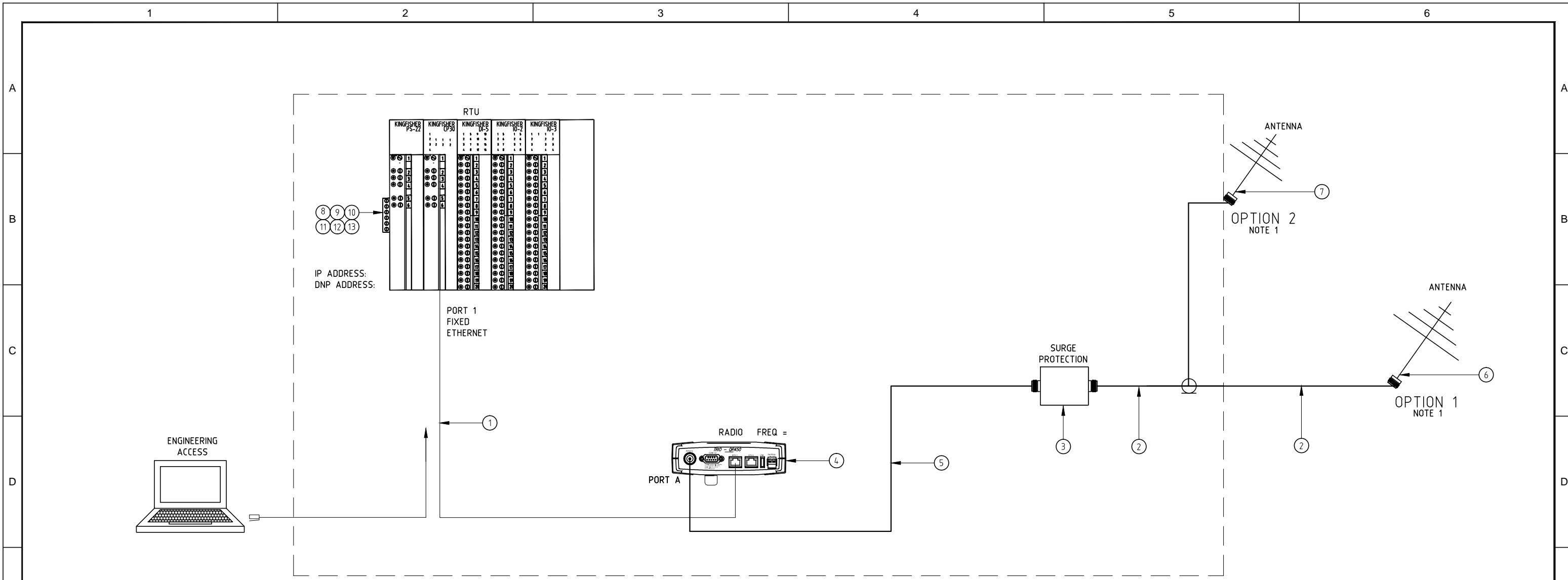
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Sheet Size	A3
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Project No.	J15152	Discipline E
Vault Folder	STANDARDS © 2017	
HPRM File Ref.	15/173273	

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TASWATER STANDARD DRAWING SEWAGE PUMP STATION KINGFISHER RADIO TELEMETRY OPTION COVER PAGE & SYMBOL LIBRARY			
TASMANIAN WATER & SEWAGE CORPORATION PTY LTD ABN: 47 162220 653		Sheet Number TWS-E-0006	REVISION E01 C



ITEM	QTY	DESCRIPTION	MAKER	TYPE	REMARKS
1	-	ETHERNET PATCH CABLE	GENERIC	CAT 5e	WITH RJ45 PLUGS FITTED
2	-	FEEDER, CO-AXIAL CABLE	RFI	RG8 MALE 'N' TYPE CONNECTOR	LENGTH TO BE DETERMINED
3	1	SURGE PROTECTOR	POLYPHASER	IS-B50LN-C1	INTERNALLY MOUNTED
4	1	QR SERIES TRIO RADIO	SCHNEIDER	TBURQR4HHE00E1L00	
5	100cm	FEEDER TAIL	SCHNEIDER ELECTRIC	TBURRFTTNCM-NM1.0M	TNC Male to N type male 1.0m RG-223
6	1	ANTENNA & BRACKET	RFI	YAGI YB SERIES - TASWATER TO ADVISE MODEL NUMBER	FREQUENCY 450-470Mhz UNLESS OTHERWISE ADVISED
7	1	PANEL MOUNT UNITY GAIN ANTENNA (VANDAL PROOF)	RFI	TLA400 SERIES	FREQUENCY TO SUIT RADIO
8	1	RTU	KINGFISHER	CP-30-I-T3	SERIAL AND ETHERNET OPTION PORTS
9	1	DIGITAL INPUT MODULE	KINGFISHER	DI-5	
10	1	DIGITAL INPUT/OUTPUT MODULE	KINGFISHER	IO-2	
11	1	ANALOG/DIGITAL MODULE	KINGFISHER	IO-3	
12	1	RTU BACKPANE	KINGFISHER	BA-6	
13	1	RTU POWER SUPPLY	KINGFISHER	PS-22	

NOTES
1/ CHOSEN OPTION TO BE APPROVED BY TASWATER

TYPE	DESCRIPTION	COMMENTS
OPTION 1	POLE MOUNTED AERIAL	SIZE DEPENDS ON RADIO PATH ANALYSIS
OPTION 2	PANEL MOUNTED AERIAL	VANDAL PROOF

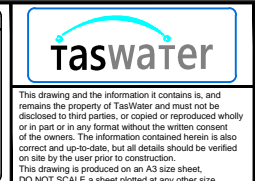
Revision Notes					
Sheet EN02 3G modem and part No. updated					
Sheets EN01 & EN02 RTU part no. and cable part no. updated					
Rev.	C	Date	23/03/2017	Approved	S. Dadswell



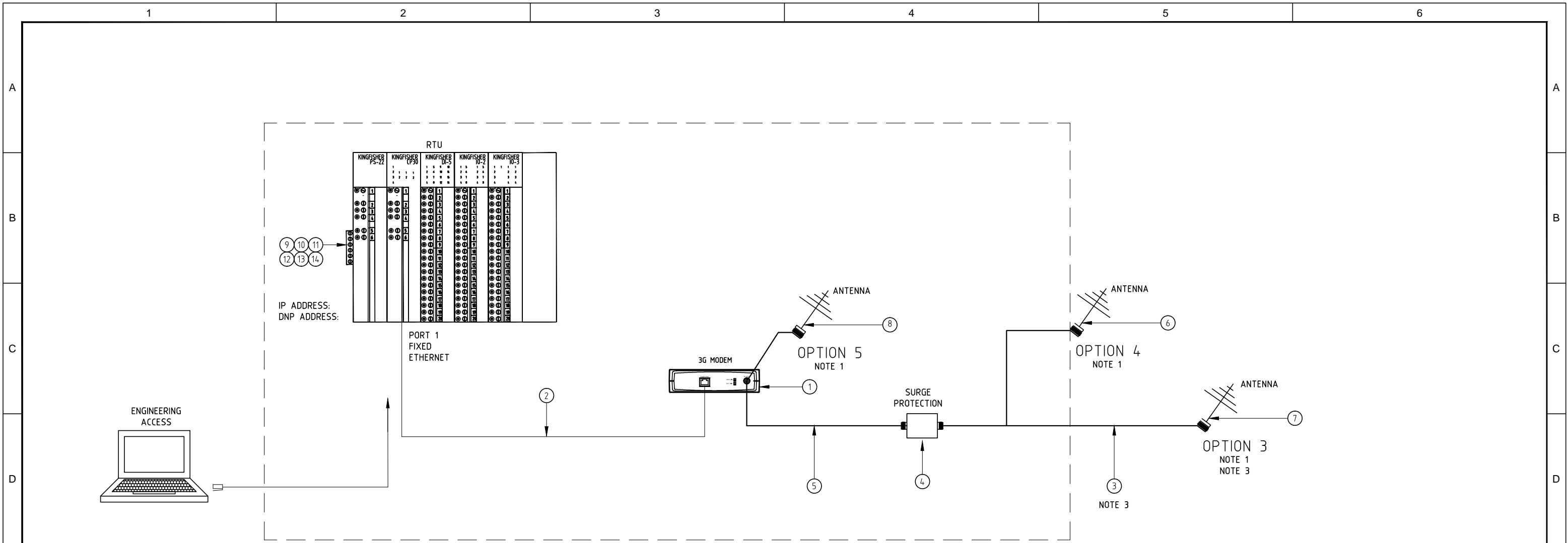
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TASWATER STANDARD DRAWING			
SEWAGE PUMP STATION			
KINGFISHER RADIO TELEMETRY OPTION			
TELEMETRY TOPOLOGY (RADIO INSTALLATION)			
TASMANIAN WATER & SEWAGE CORPORATION PTY LTD		ABN: 47 162220 653	
Sheet Number	TWS-E-0006	Revision	EN01 C



ITEM	QTY	DESCRIPTION	MAKER	TYPE	REMARKS
1	1	3G M2M MODEM	CISCO	IR809G-LTE-GA-K9	3G M2M MODEM, SIM & CONFIG PROVIDED BY TASWATER BUSINESS SYSTEMS
2	-	ETHERNET (RJ45 CONNECTORS)	GENERIC	CAT 5e	WITH RJ45 PLUGS FITTED
3	-	FEEDER, CO-AXIAL CABLE	RFI	RG8 MALE 'N' TYPE CONNECTOR	LENGTH TO BE DETERMINED
4	1	SURGE PROTECTOR	POLYPHASER	DSXL-P	INTERNALLY MOUNTED
5	50cm	FEEDER TAIL	PULSE	9201N-0.6	M17/84-RG223
6	1	ANTENNA (VANDAL PROOF)	RFI	CSM 900	PANEL MOUNT
7	1	ANTENNA (POOR SIGNAL AREA)		NOTE 2	MOUNTED ON POLE - TASWATER TO ADVISE
8	1	ANTENNA (VANDAL PROOF)		NOTE 2	PANEL MOUNT- TASWATER TO ADVISE
9	1	RTU	KINGFISHER	CP-30-I-T3	SERIAL AND ETHERNET OPTION PORTS
10	1	DIGITAL INPUT MODULE	KINGFISHER	DI-5	
11	1	DIGITAL INPUT/OUTPUT MODULE	KINGFISHER	IO-2	
12	1	ANALOG/DIGITAL MODULE	KINGFISHER	IO-3	
13	1	RTU BACKPANE	KINGFISHER	BA-6	
14	1	RTU POWER SUPPLY	KINGFISHER	PS-22	

NOTES
 1/ CHOSEN OPTION TO BE APPROVED BY TASWATER
 2/ DETERMINED BY TASWATER TELECOMMUNICATION PROVIDER
 3/ TELSTRA MUST INSTALL THE ANTENNA AND CABLE, TO ENSURE CORRECT ORIENTATION OF ANTENNA AND CABLE TESTING.

TYPE	DESCRIPTION	COMMENTS
OPTION 3	POLE MOUNTED AERIAL	SIZE DEPENDS ON RADIO PATH ANALYSIS
OPTION 4	PANEL MOUNTED AERIAL	VANDAL PROOF
OPTION 5	NEXT G MODEM AND ANTENNA	INTERNALLY MOUNTED DIRECT TO MODEM

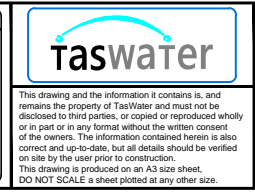
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Sheet EN02 3G modem and part No. updated					
Sheets EN01 & EN02 RTU part no. and cable part no. updated					
Rev.	C	Date	23/03/2017	Approved	S. Dadswell



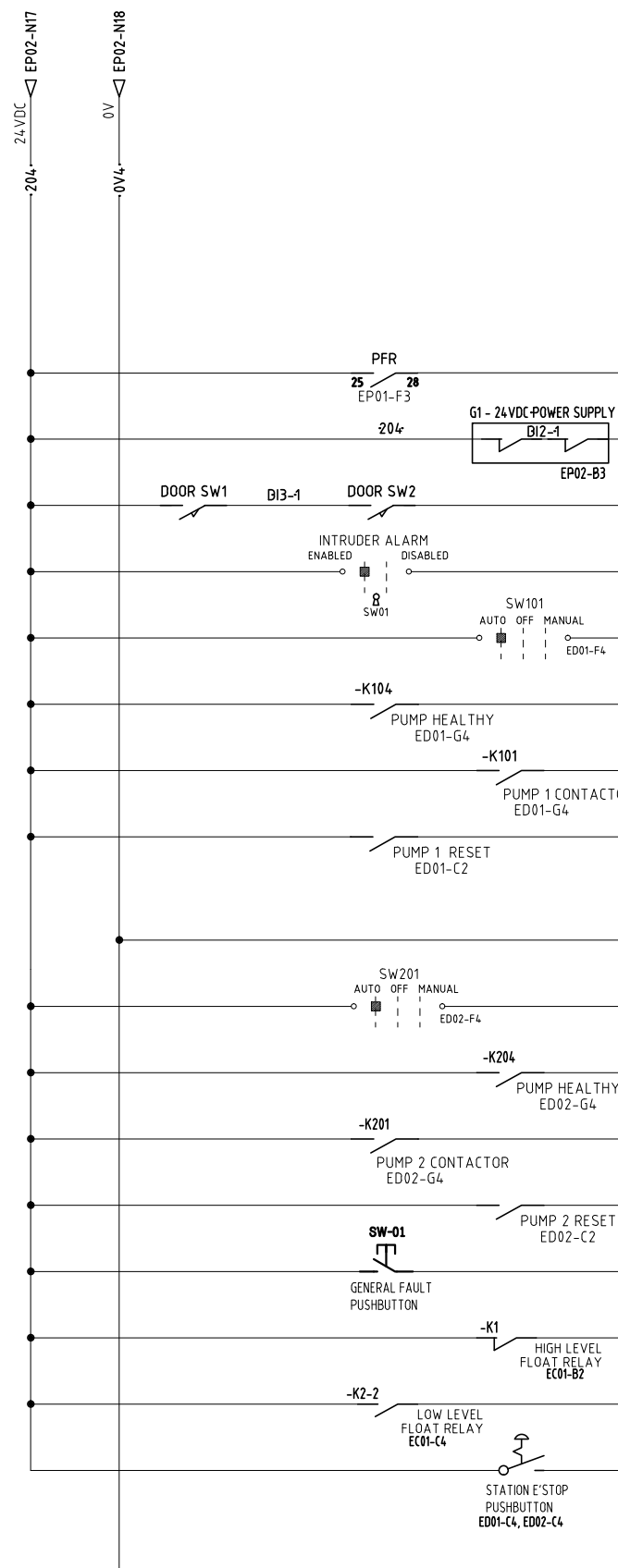
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TASWATER STANDARD DRAWING SEWAGE PUMP STATION KINGFISHER RADIO TELEMETRY OPTION TELEMETRY TOPOLOGY (NEXT G INSTALLATION)			
TASMANIAN WATER & SEWAGE CORPORATION PTY LTD ABN: 47 162220 653		Sheet Number TWS-E-0006	REVISION EN02 C



KINGFISHER DI-5 (SLOT 3)

DIGITAL INPUT MODULE	
ADDRESS	DESCRIPTION
1	DI-1 AC SUPPLY VOLTAGE OK
2	DI-2 24VDC SUPPLY HEALTHY (NOT OFF OR TRIPPED)
3	DI-3 INTRUDER ALARM
4	DI-4 AUTHORISED OCCUPIER
5	DI-5 PUMP 1 IN AUTO
6	DI-6 PUMP 1 HEALTHY
7	DI-7 PUMP 1 RUNNING
8	DI-8 PUMP 1 RESET PUSHBUTTON
9	+12V OUTPUT
10	0V COMMON
11	DI-9 PUMP 2 IN AUTO
12	DI-10 PUMP 2 HEALTHY
13	DI-11 PUMP 2 RUNNING
14	DI-12 PUMP 2 RESET PUSHBUTTON
15	DI-13 GENERAL RESET
16	DI-14 HIGH LEVEL ALARM
17	DI-15 LOW LEVEL ALARM
18	DI-16 EMERGENCY STOP
19	+12V OUTPUT
20	0V COMMON

Revision Notes					
Sheet EN02 3G modem and part No. updated					
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Rev.	C	Date	23/03/2017	Approved	S. Dadswell
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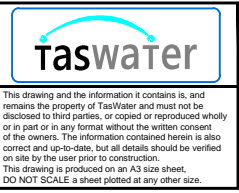


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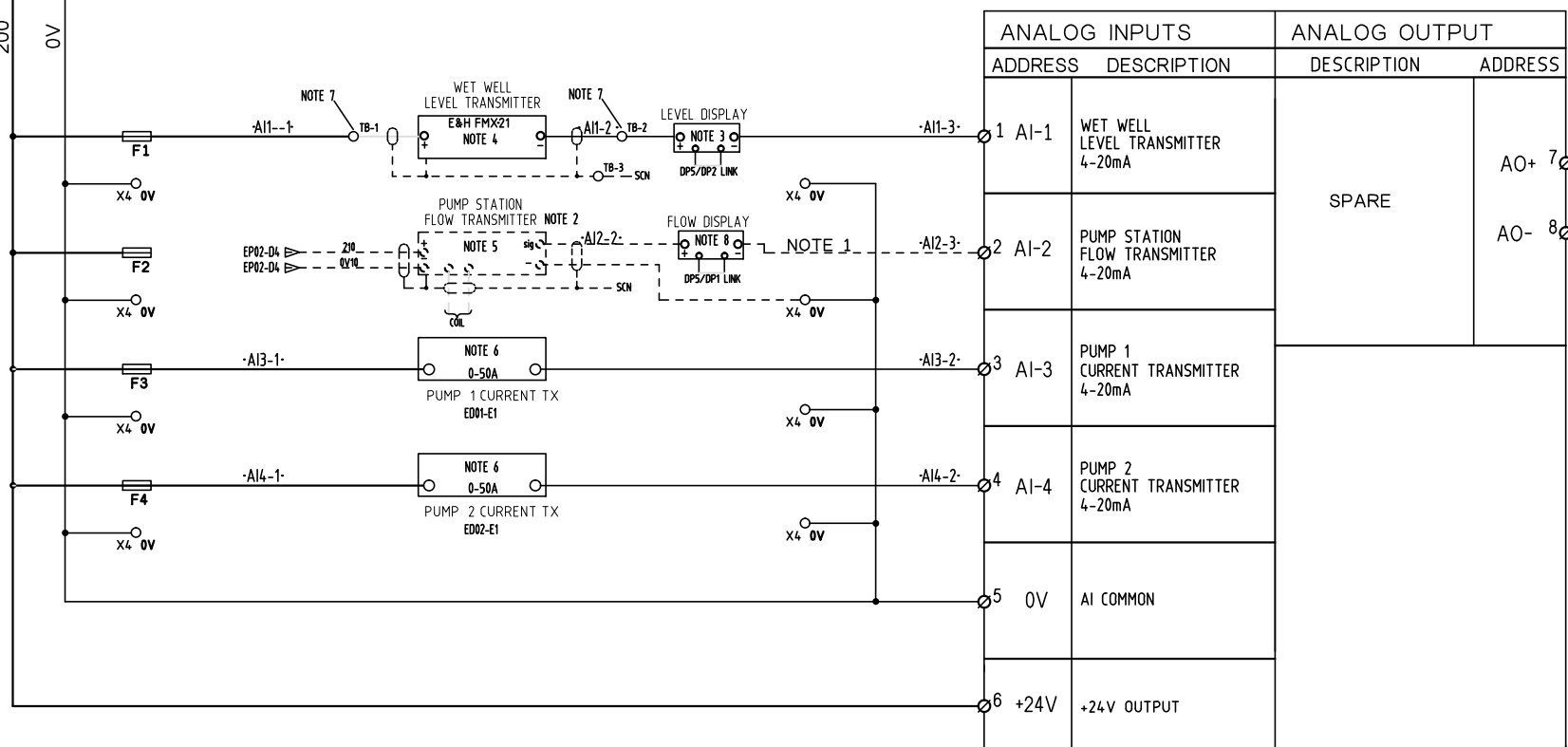
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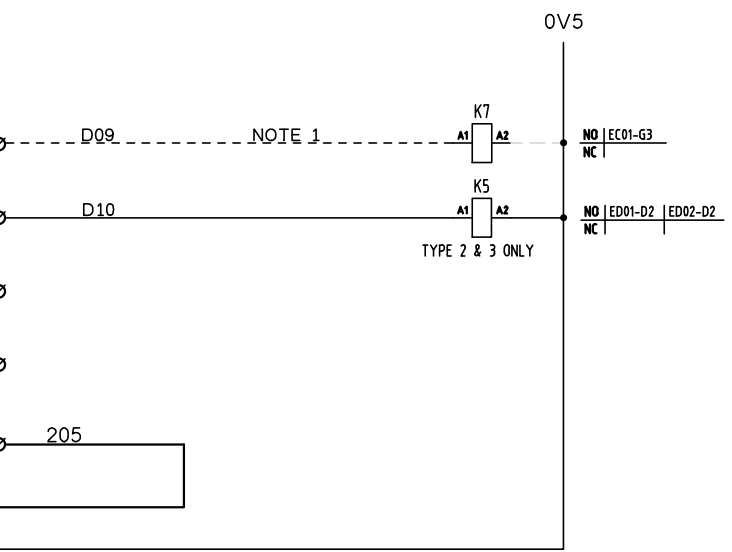


TASWATER STANDARD DRAWING			
SEWAGE PUMP STATION			
KINGFISHER RADIO TELEMETRY OPTION			
KINGFISHER DI-5 MODULE			
TASMANIAN WATER & SEWAGE CORPORATION PTY LTD	ABN: 47 162220 653	Sheet Number	REVISION
		TWS-E-0006	EC02 C

KINGFISHER IO-3 (SLOT 5)



ANALOG INPUTS		ANALOG OUTPUT	
ADDRESS	DESCRIPTION	DESCRIPTION	ADDRESS
1 AI-1	WET WELL LEVEL TRANSMITTER 4-20mA	SPARE	AO+ 7
2 AI-2	PUMP STATION FLOW TRANSMITTER 4-20mA		AO- 8
3 AI-3	PUMP 1 CURRENT TRANSMITTER 4-20mA		
4 AI-4	PUMP 2 CURRENT TRANSMITTER 4-20mA		
5 0V	AI COMMON		
6 +24V	+24V OUTPUT		
9 GND			
DIGITAL INPUTS		DIGITAL OUTPUTS	
ADDRESS	DESCRIPTION	DESCRIPTION	ADDRESS
10 DI-1	SPARE	EMERGENCY STORAGE WASHDOWN RELAY	DO-1 15
11 DI-2	SPARE	SOFT STARTER REMOTE RESET	DO-2 16
12 DI-3	SPARE	SPARE	DO-3 17
13 DI-4	SPARE	SPARE	DO-4 18
14 0V4	DI COMMON	DO COMMON	19 205



- NOTES**
- 1/ DOTTED LINES INDICATE OPTIONAL EQUIPMENT, REQUIREMENT TO BE DETERMINED.
 - 2/ FLOW METER TO BE INCLUDED ONLY IF REQUIRED (SIEMENS OR E&H)
 - 3/ DISPLAY TO HAVE LINK DP2 CONNECTED TO MEASURE 0 - 10.00
 - 4/ LEVEL TRANSMITTER TO BE SET FOR 0 - 10.00M = 4-20mA
 - 5/ FLOW TRANSMITTER TO BE SET FOR 0 - 100L/sec = 4-20mA
 - 6/ CURRENT TO BE SET FOR 0 - 50A = 4-20mA
 - 7/ LEVEL TRANSMITTER EXTERNAL TERMINAL BOX
 - 8/ DISPLAY TO HAVE LINK DP1 CONNECTED TO MEASURE 0 - 100L/sec
 - 9/ WIRING CONFIGURATION FOR 'DOL' DRIVE ONLY
 - 10/ FOR SOFT STARTER PUMPS USE TYPE 2 OR 3 WIRING ON TW SCADAPACK STANDARD DRAWINGS.

Revision Notes					
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Sheets EN01 & EN02 RTU part no. and cable part no. updated					
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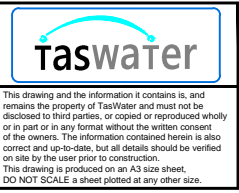


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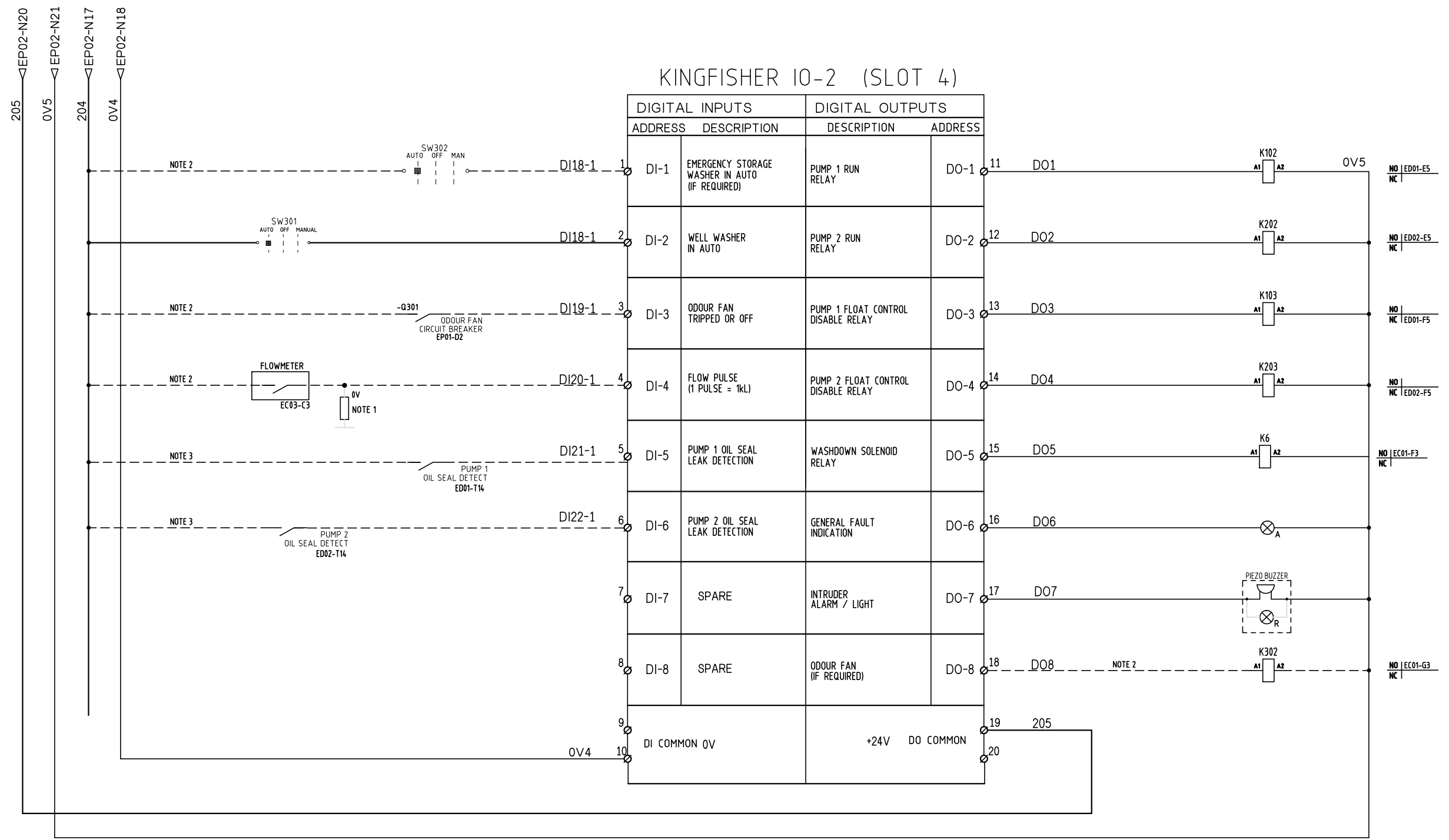
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TASWATER STANDARD DRAWING			
SEWAGE PUMP STATION			
KINGFISHER RADIO TELEMETRY OPTION			
KINGFISHER IO-3 MODULE 2			
TASMANIAN WATER & SEWAGE CORPORATION PTY LTD		ABN: 47 162220 653	
Sheet Number	TWS-E-0006	Revision	EC03 C

KINGFISHER IO-2 (SLOT 4)



NOTES

- 1/ REFER TO FLOW METER FOR CORRECT SIZING OF RESISTOR.
- 2/ DOTTED LINES INDICATE OPTIONAL EQUIPMENT, REQUIREMENT TO BE DETERMINED.
- 3/ DEPENDENT ON PUMP SIZE (>11kW)

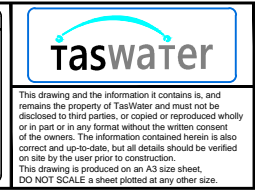
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KINGFISHER IO-3 MODULE			
TASMANIAN WATER & SEWAGE CORPORATION PTY LTD ABN: 47 162220 653		Drawing Number TWS-E-0006	Revision EC04 C