XRZ
THINOIL
LUBRICATOR

VALIADIS
HELLENIC MOTORS

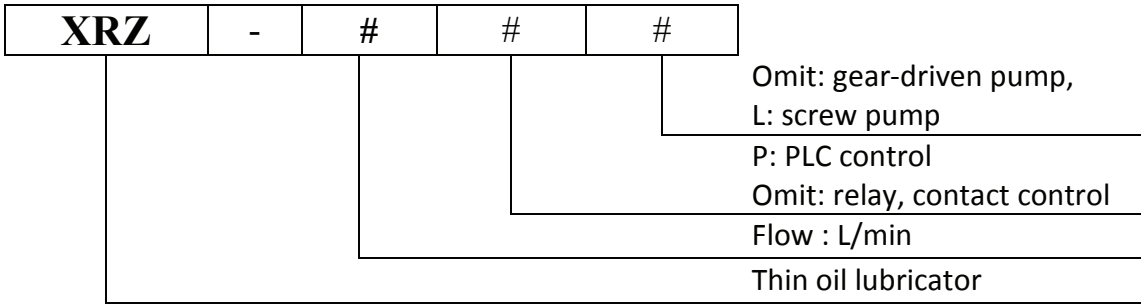
XRZ Series Thin Oil Lubricator

1.Usage :

The product mainly applies to mechanical thin oil circle lubrication system of cement metallurgy, rolling, mine energy sources, light industry, transportation petrochemistry and power industries , which will supply lubrication oil to friction parts such as gears and bearings of the machine to reduce friction and cool lubrication and ensure oil supply and lubrication quality and machine's continuous running. Its medium is N22-N460 extreme pressure industry gear lubrication oil or other oils.

The product consists of thin oil lubrication station, instrument panel and electrical control cabinet. The oil station is an integral unit and can be directly installed on smooth cement floor for use, no special foundation is required.

Model Code : applied at choose



For example: for thin oil lubrication unit with nominal flow of 125L/m and controlled by PLC,oil pump is grar pumps,XRZ-125P will be chosen.

2. Operation Principle

The thin oil station is comprised of oil box,oil pump, cooler, filter, electrical control panel, instrument board, pipes and valves.

Oil will be drawn out from oil box by gear pump and directly sent to lubricated parts through one-way valve, duplex thank mesh filter and aligned pipe oil cooler. Its highest operation pressure is 0.6MPa, normal pressure is 0.4MPa and lowest pressure is 0.2MPa. The pressure can be adjusted by saety valve according to requirement. The safety valve will automatically work and over oil will flow back to oil box when operation pressure of oil station is over than the pressure regulated by

safety valve. The station is equipped with filtering, cooling and heating units and safety interlock, automatic control and alarm.

3. Performance Table

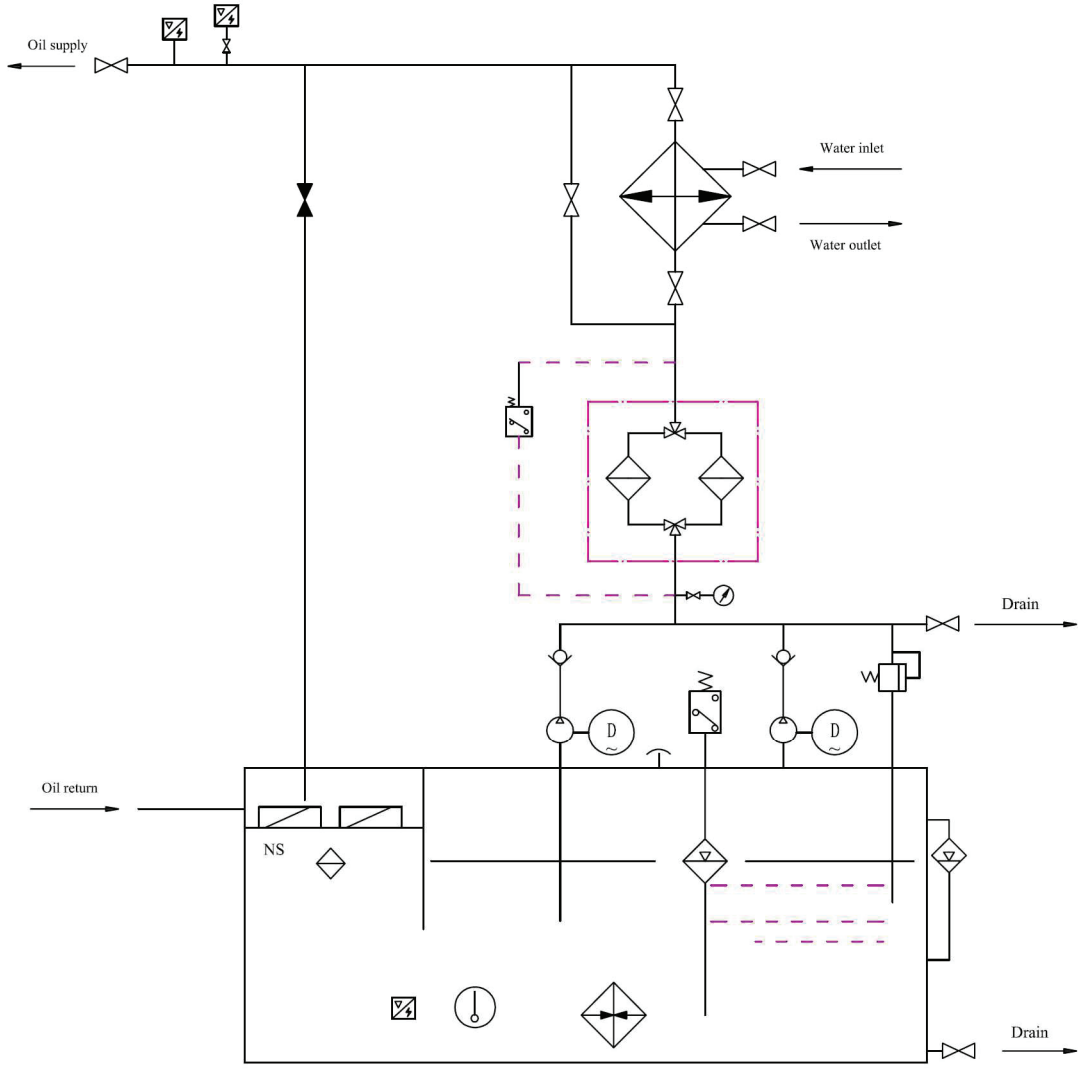
Model	Nominal flow L/min	Volume m^3	Operation pressure. MPa	Operation Temp. ^oC	Filter Accuracy mm	Motor Power kW	Filter Area mm^2	Heating Exchange area m^2	Cooling Water consump. m^3/h	Heater Power kW
XRZ-6	6	0.15				0.55	0.05	0.6	0.36	2
XRZ-10	10								0.6	
XRZ-16	16	0.63				1.1	0.13	4	1	12
XRZ-25	25								1.5	
XRZ-40	40	1.0				2.2	0.19	5	2.4	12
XRZ-50	50								3	
XRZ-63	63								3.8	
XRZ-80	80	1.6				4	0.4	7	4.8	12
XRZ-100	100								6	
XRZ-125	125								7.5	
XRZ-160	160	2.0	0.4	40±3	0.12	5.5	0.4	12	9.6	18
XRZ-200	200								12	
XRZ-250	250	2.5				7.5	0.52	16	15	24
XRZ-290	290								17.4	
XRZ-315	315	2.8				11	0.83	20	19	24
XRZ-350	350								21	
XRZ-400	400	3.5				15	0.83	28	24	36
XRZ-500	500								30	
XRZ-630	630	5.0				18.5	1.31	50	38	48
XRZ-800	800								48	
XRZ-1000	1000	6.3				30	2.2	60	60	48

Notes: 1. Viscosity of lubrication oil is N22-N460 and filtering accuracy of 0.05mm, 0.08mm, 0.12mm may be chosen.
2. If river water is used as cooling water, filtering and sediment are required and the temperature must be ≤30 ^oC.
3. if flow is over 1000L/min, oil station will be designed according to user's requirements.

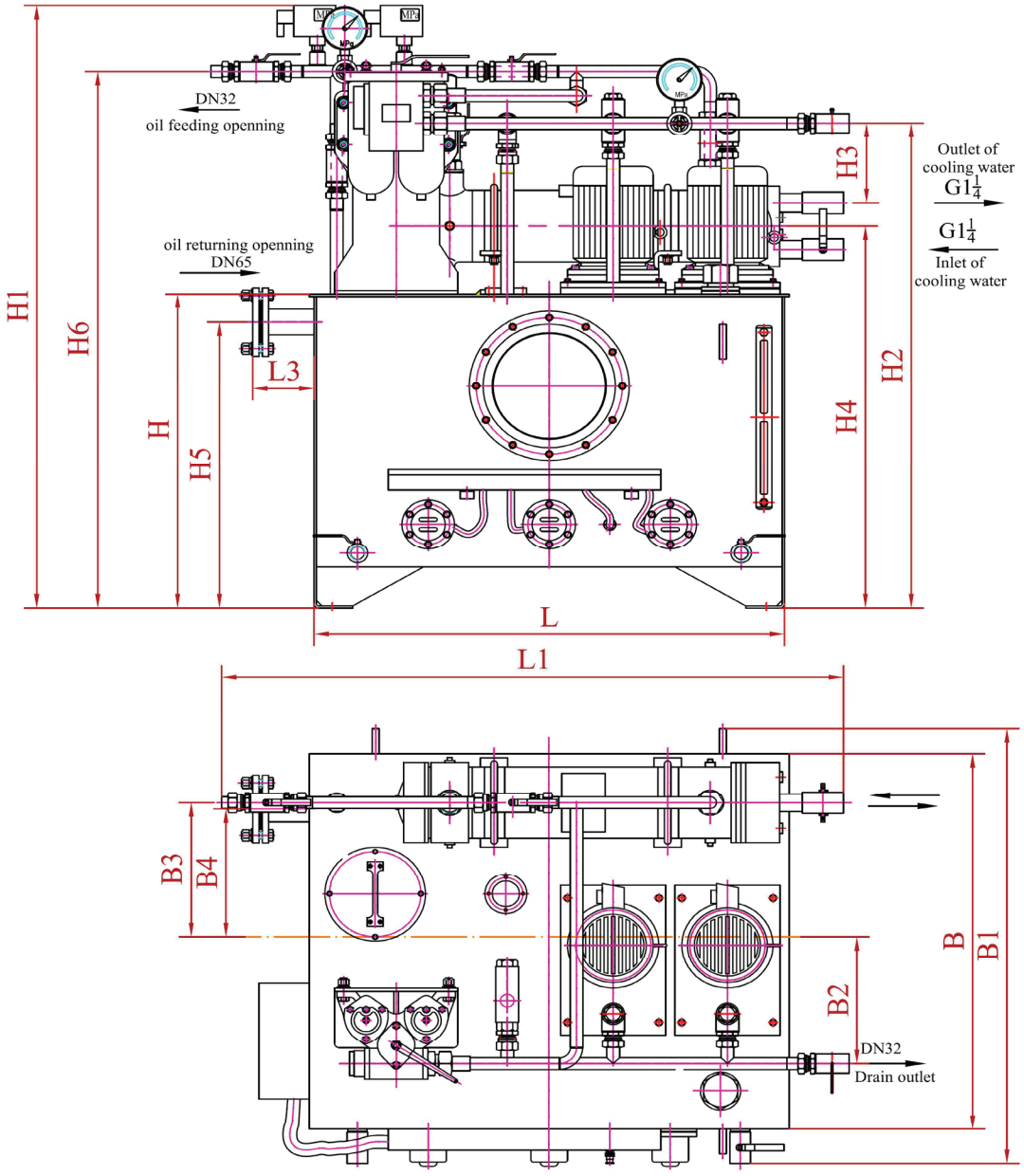
4. Technical Feature

1. Thin oil station is equipped with two pumps, one works and the other is for spare. The spare pump may automatically start/stop according to operation.
2. It is not necessary to stop machine while changing and cleaning filtering mesh for use of duplex tank mesh filter, and it will automatically alarm when the mesh is blocked.
3. Magnetic oil return filter can absorb 99% magnetic materials.
4. Segregated electrical heater will prevent carbonation of lubrication oil. It is easy to change heater and machine can still run at change. Oil box temperature is displayed by digits and can be self-controlled.
5. All oil pipes of the station are seamless pipes. The pipeline is connected by flanges and welded by arc welding to prevent leakage.
6. Instrument board can be directly installed in the station, so user can easily accept it at site.
7. Oil box has maintenance hole, filtering and bubble removing units and level control. Oil box and pipes are antirusted before assembling and cleanliness can reach NAS11.
8. Terminal box is used for electrical connecting of the station, so it is easy to connect.
9. Imported PLC control is used for electrical, and DCS interface is equipped. All electrical elements are imported or produced according to foreign technology. The electrical control panel can be local and remote controlled.
10. Thin oil station, electrical control panel and instrument board are interlocked with center control of the machine, so automatic management without worker can be achieved.

5. System Principle Drawing



6. XRZ 6-200 Appearance and Installation Dimension



XRZ 6-XRZ200 Oil Station Dimension

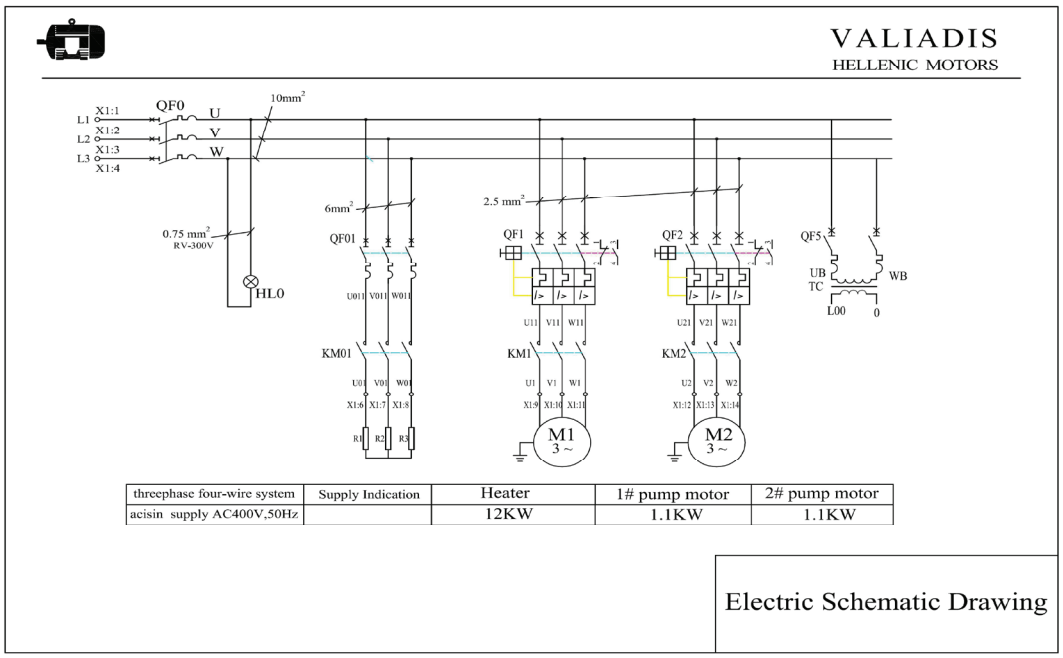
Model	L	L1	L2	L3	H	H1	H2	H3	H4	H5	H6
XRZ-6	800	1250	300	100	500	848	713	52	588	400	800
XRZ-10											
XRZ-16	1160	1660	300	100	800	1232	1085	78	893	700	1175
XRZ-25											
XRZ-40	1500	2000	350	100	950	1518	1240	110	1108	850	1450
XRZ-63											
XRZ-80											
XRZ-100	1800	2300	350	100	1000	1603	1305	110	1158	880	1530
XRZ-125											
XRZ-160	2100	2600	400	100	1050	1780	1400	140	1258	920	1700
XRZ-200											

XRZ 6-XRZ200 Oil Station Dimension(continued)

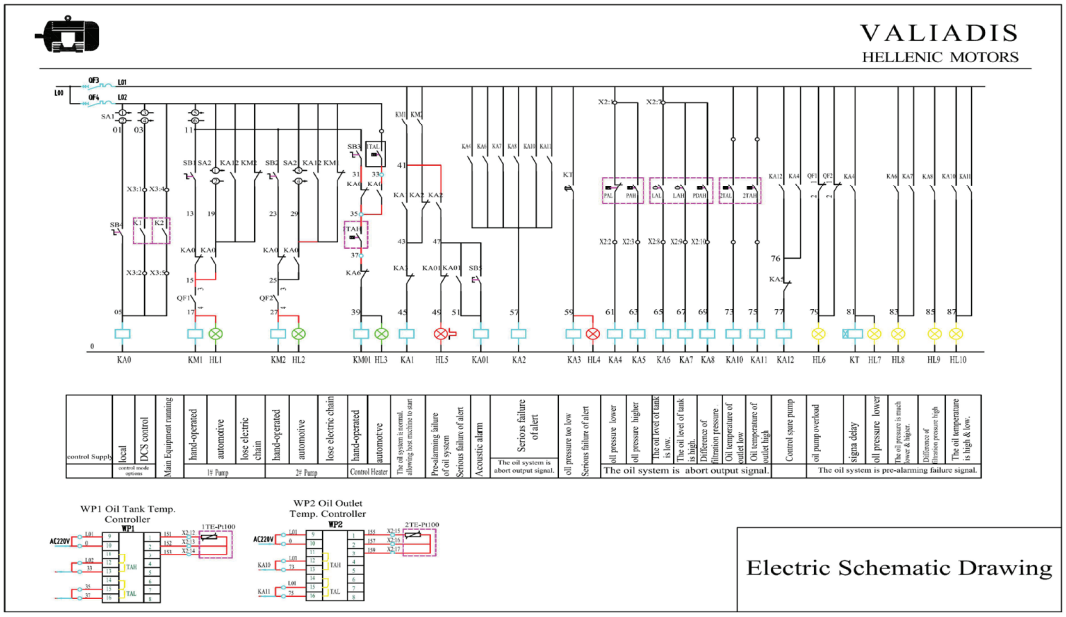
Model	B	B1	B2	B3	B4	CN1	DN2	DN3	DN4	DN5
XRZ-6	600	750	255	220	125	15	25	20	20	15
XRZ-10										
XRZ-16	1000	1150	410	363	175	25	50	40	40	25
XRZ-25										
XRZ-40	1000	1150	470	390	248	32	50	40	40	32
XRZ-63										
XRZ-80										
XRZ-100	1200	1350	560	444	170	40	80	40	40	40
XRZ-125										
XRZ-160	1250	1400	590	460	220	50	100	65	65	50
XRZ-200										

Examples of electric schematic drawings

a)



b)



c)

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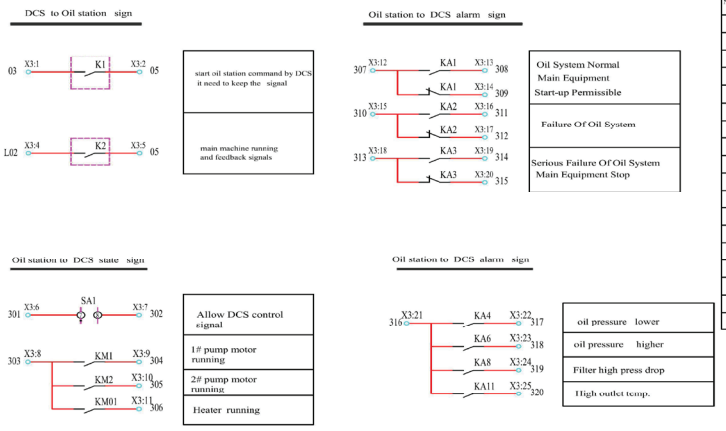

Lubrication oil station in DCS control room linked list of signals (I / O)

Numerical order	Signal name	Signal type	The contact relevant	Contacts state	The control function	Alarm value set	Comment
1	start oil station command by DCS	IN	K1	NO	Value is 1,running Value is 0,stopping	／	keep the signal
2	main machine running and feedback signals	IN	K2	NO	Value is 1, oil station is interlocking	／	keep the signal
3	DCS control	OUT	SA1	NO	Value is 1, allow DCS control oil station	／	
4	1# pump motor running	OUT	KM1	NO	Value is 1, working state instructions	／	
5	2# pump motor running	OUT	KM2	NO	Value is 1, working state instructions	／	
6	Heater running	OUT	KM01	NO	Value is 1, working state instructions	／	
7	Oil System Normal	OUT	KA1	NO	Value is 1, the main machine can start	／	the condition of main machine running
8		OUT	KA1	NC	Value is 1, the oil station stop or have faults	／	
9	Failure Of Oil System	OUT	KA2	NO	Value is 1,alerting	／	
10		OUT	KA2	NC	Value is 1,oil station did not start or failure-free	／	
11	Serious Failure Of Oil System	OUT	KA3	NO	Value is 1, Serious failure of alert	≤0.1 MPa	
12		OUT	KA3	NC	Value is 0,main machine stopped by interlock	delay 15 s	
13	oil pressure lower	OUT	KA4	NO		≤0.1 MPa	
14	oil level low	OUT	KA6	NO	Value is 1,alerting	lower limit	
15	Filter high press drop	OUT	KA8	NO	Value is 1,alerting	≥0.15 MPa	
16	High outlet temp.	OUT	KA11	NO	Value is 1,alerting	≥50 °C	
17							
18							

Electric Schematic Drawing

d)

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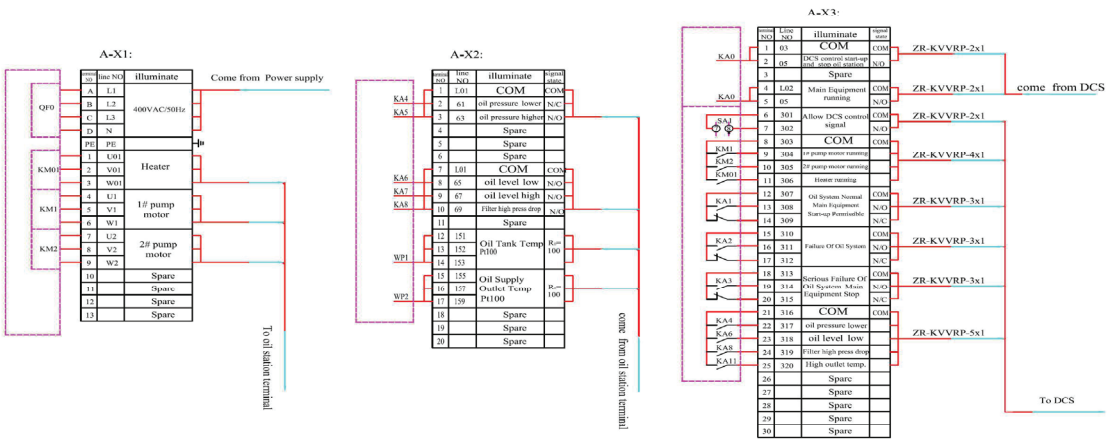
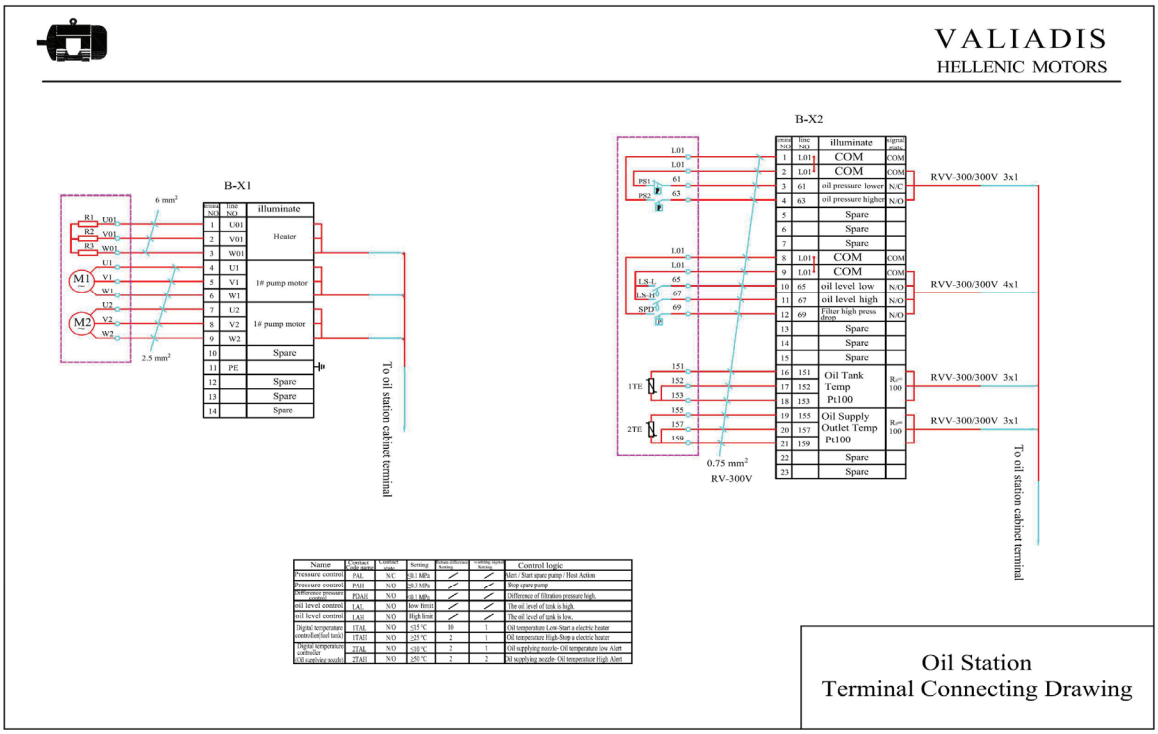


Oil Station
Terminal Connecting Drawing

e)


VALIADIS
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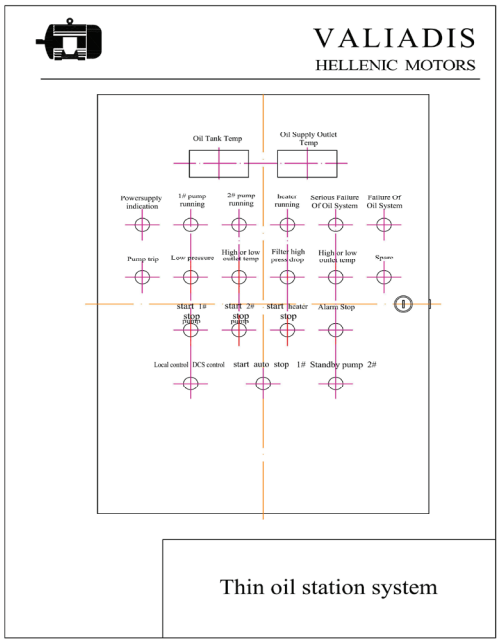
B-X1
6 mm²
2.5 mm²
illuminate
Heater
1# pump motor
1# pump motor
Spare
To oil station cabinet terminal
B-X2
illuminate
COM
COM
oil pressure lower
oil pressure higher
Spare
COM
COM
oil level low
oil level high
Filter high press drop
Oil Tank Temp Pt100
Oil Supply Outlet Temp Pt100
0.75 mm²
RV-300V
RVV-300/300V 3x1
RVV-300/300V 4x1
RVV-300/300V 3x1
RVV-300/300V 3x1
To oil station cabinet terminal
Name
Control logic
Pressure control
Pressure control
Difference pressure control
oil level control
oil level control
Digital temperature controller
Digital temperature controller
Oil supplying nozzle
Oil supplying nozzle
Oil Station
Terminal Connecting Drawing

f)


VALIADIS
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Oil Tank Temp
Oil Supply Outlet Temp
Powersupply indication
1# pump running
2# pump running
heater running
Serious Failure Of Oil System
Failure Of Oil System
Pump trip
Low pressure
Higher low outlet temp
Filter high press drop
Higher low outlet temp
Spare
start 1# stop
start 2# stop
start heater stop
Alarm Stop
Local control
DCS control
start
auto
stop
1# Standby pump 2#
Thin oil station system

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