

Ktech INDUSTRIAL PRODUCTS INC.

CP1100 Overfill Protection Device

Part No.: PC1103A-HL-2R Duplex Pump Control Panel c/w Relay Outputs

POWER:

When the light is on it indicates the panel has power.

MUTE Button:

The MUTE button mutes the horn.

AUTO Mode Pump #1/Pump #2:

HAND/OFF/AUTO selector switches are set to AUTO.

This duplex pump controller operates the pumps to control the level of a liquid in a tank. It is used in conjunction with a Ktech model FS301-4 float switch.

- The top contact FS-A provides a HIGH level warning and emergency shutdown for all pump operations. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.
- The 2nd contact FS-B stops the pumps.
- The 3rd contact FS-C starts one of the pumps. A green pilot light provides indication that the pump is running. Every time it starts it alternates between the two pumps when the pumps are in AUTO mode.
- The bottom contact FS-D triggers a LOW alarm signal and also starts the second pump. The alarm stays on until it is reset with the RESET button. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch.

Under normal operation, the liquid level doesn't fall to the LOW level. When the liquid level falls to the 3rd contact, the pump will start and the tank will fill. The pump will stop when the level reaches the 2nd contact. The next time it falls to the 3rd contact the other pump will turn on and stop when the level reaches the 2nd contact. If it does fall to the Low level the second pump is started to pump up the tank faster. The green pilot light indicates which pump is running.

If the HIGH level alarm sounds, it indicates that a float switch contact has failed or the HAND/OFF/AUTO switch is in the HAND position.

HAND Mode Pump #1/Pump #2:

HAND/OFF/AUTO selector switch is set to HAND.

Whatever switch you turn to HAND turns that pump on. The HIGH alarms will shut off the pumps.

OFF Mode:

HAND/OFF/AUTO selector switches are set to OFF.

In this mode the pump will never turn on.

Ktech INDUSTRIAL PRODUCTS INC.

P1 AUTO P2 Mode:

AUTO Mode:

P1/AUTO/P2 selector switch is set to AUTO.

In this mode, the pumps will alternate back and forth on each fill cycle.

P1/P2 Mode:

P1/AUTO/P2 selector switch is set to P1 or P2.

In this mode it permanently selects pump #1 or pump #2.

This allows one of the pumps to be serviced.

When you put it in P1/P2 mode make sure you turn off the opposite pump or when it goes to LOW alarm, it will turn on both pumps.

RESET Button:

The button resets the LOW alarm after the level of liquid in the tank goes above the LOW switch. This returns the panel to alternating pump mode.

Relay outputs:

The panel has 2 relay outputs.

1 – High Alarm

2 – Low Alarm

Electrical Specifications

- 120VAC, 60 Hz, 13.8A **13&14, 15&16**
- Pump contactor outputs at terminals **17&18, 19&20**
- Switch inputs at terminals **1&2, 3&4, 5&6, 7&8**
- Relay outputs at terminals **9&10, 11&12**
- Wire Gauge Range is 20-10AWG
- Horn - 95 dB @ 1 ft.



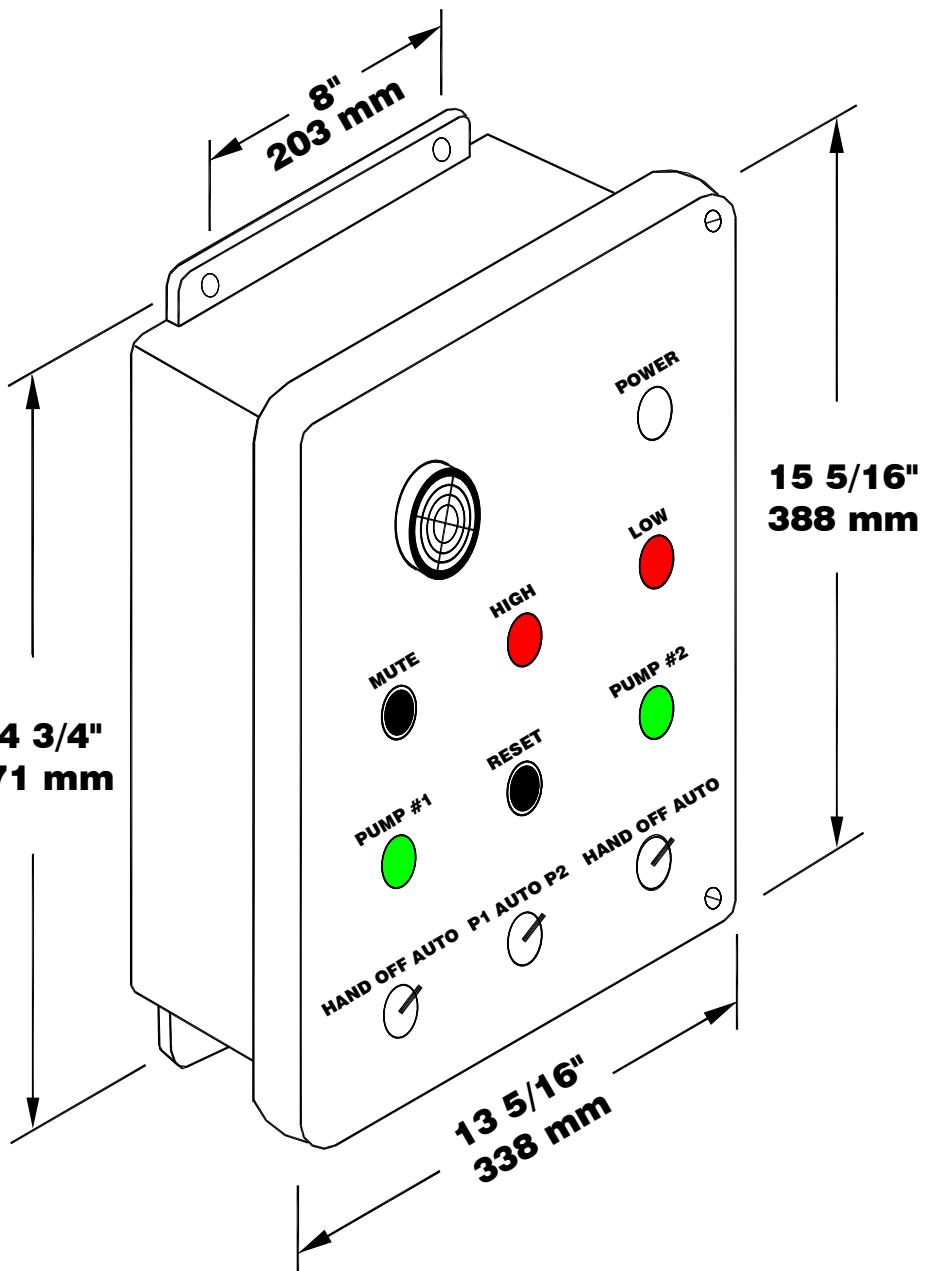
LISTED
OVERFILL
PROTECTION
DEVICES
4YC9

CAN/ULC-S661-10



ENCLOSED INDUSTRIAL CONTROL PANEL

Ktech INDUSTRIAL PRODUCTS INC.



Dry Contact Float Switch Inputs

HIGH FS1-A	• 1 •
HIGH FS1-A	• 2 •
STOP FS1-B	• 3 •
STOP FS1-B	• 4 •
START LEAD FS1-C	• 5 •
START LEAD FS1-C	• 6 •
LOW-START LAG FS1-D	• 7 •
LOW-START LAG FS1-D	• 8 •

High Relay-Com

High Relay-No

Low Relay-Com

Low Relay-No

120VAC - Line 1

Neutral

120VAC - Line 2

Neutral

Pump #1

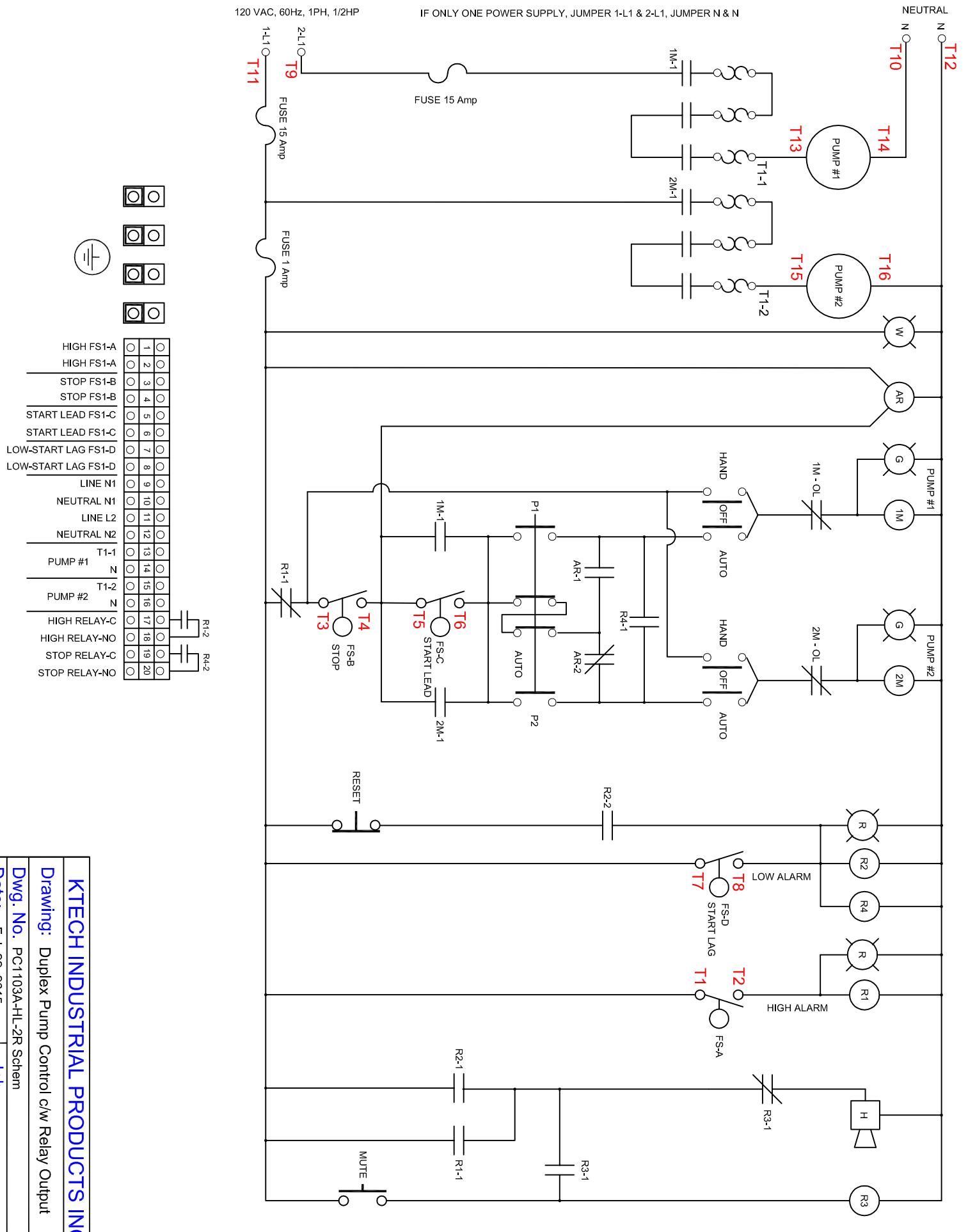
Neutral

(Switched Output (120VAC))

Pump #2

Neutral





KTECH INDUSTRIAL PRODUCTS INC.

Drawing: Duplex Pump Control c/w Relay Output

Dwg. No. PC1103A-HL-2R Schem

Date: Feb 22, 2015 Job:

Ktech INDUSTRIAL PRODUCTS INC.

CP1100 Overfill Protection Device

Part No.: PC1103A-HLLK-3R-120V Duplex Pump Control Panel

POWER:

When the light is on it indicates the panel has power.

MUTE Button:

The MUTE button mutes the horn.

AUTO Mode Pump #1/Pump #2:

HAND/OFF/AUTO selector switches are set to AUTO.

This duplex pump controller operates the pumps to control the level of a liquid in a tank. It is used in conjunction with a Ktech model FS301-4 float switch.

- The top contact FS-A provides a HIGH level warning and emergency shutdown for all pump operations. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.
- The 2nd contact FS-B stops the pumps.
- The 3rd contact FS-C starts one of the pumps. A green pilot light provides indication that the pump is running. Every time it starts it alternates between the two pumps when the pumps are in AUTO mode.
- The bottom contact FS-D triggers a LOW alarm signal and also starts the second pump. The alarm stays on until it is reset with the RESET button. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch.

Under normal operation, the liquid level doesn't fall to the LOW level. When the liquid level falls to the 3rd contact, the pump will start and the tank will fill. The pump will stop when the level reaches the 2nd contact. If it does fall to the Low level the second pump is started to pump up the tank faster. The green pilot light indicates which pump is running.

If either the HIGH or LOW level alarm sounds, it indicates that either the pump has failed or a float switch contact has failed or the HAND/OFF/AUTO switch is in the off mode.

HAND Mode Pump #1/Pump #2:

HAND/OFF/AUTO selector switch is set to HAND.

Whatever switch you turn to HAND turns that pump on. The HIGH alarm will shut off the pumps.

OFF Mode:

HAND/OFF/AUTO selector switches are set to OFF.

In this mode the pump will never turn on. If you turn a pump off make sure you turn the P1 AUTO P2 switch to the other pump.

When a pump is removed for service, turn **HOA** selector to OFF and **P1 AUTO P2** selector set to remaining pump.

Ktech INDUSTRIAL PRODUCTS INC.

P1 AUTO P2 Mode:

AUTO Mode:

P1/AUTO/P2 selector switch is set to AUTO.

In this mode, the pumps will alternate back and forth on each fill cycle.

P1/P2 Mode:

P1/AUTO/P2 selector switch is set to P1 or P2.

In this mode it permanently selects pump #1 or pump #2.

This allows one of the pumps to be serviced.

RESET Switch:

The switch resets the LOW alarm after the level of liquid in the tank goes above the switch.

This returns the panel to alternating pump mode.

Electrical Specifications

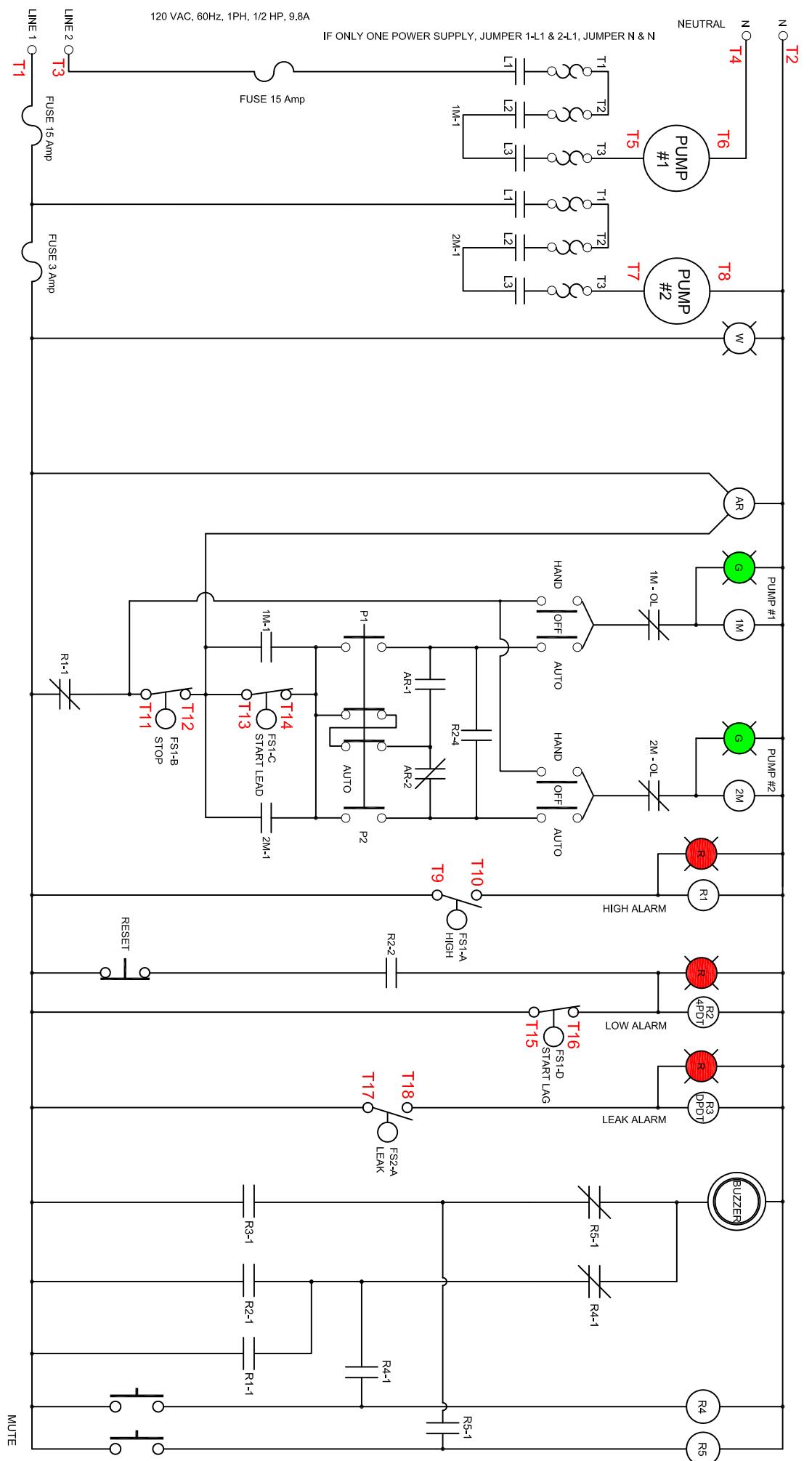
- 120VAC, 60 Hz, 9.8A (x2) **17&18, 19&20**
- Switch inputs at terminals **1&2, 3&4, 5&6, 7&8, 9&10**
- Pump Contactor output at terminals **21&22, 23&24**
- N.O. Relay Output at terminals **11&12, 13&14, 15&16**
- Horn - 95 dB @ 1 ft.



LISTED
OVERFILL
PROTECTION
DEVICES
4YC9

CAN/ULC-S661-10

LINE 1	
NEUTRAL 1	
LINE 2	
NEUTRAL 2	
PUMP #1	
NEUTRAL PUMP #1	
PUMP #2	
NEUTRAL PUMP #2	
HIGH FS1-A	
HIGH FS1-A	
STOP FS1-B	
STOP FS1-B	
START LEAD FS1-C	
START LEAD FS1-C	
LOW-START LAG FS1-D	
LOW-START LAG FS1-D	
LEAK FS2-A	
LEAK FS2-A	
HIGH RELAY-COM	
HIGH RELAY-NO	
LOW RELAY-COM	
LOW RELAY-NO	
LEAK RELAY-COM	
LEAK RELAY-NO	



Ktech INDUSTRIAL PRODUCTS INC.

CP1100 Overfill Protection Device

Part No.: PC1104-3R-HLL Pump Control Panel

POWER:

When the light is on it indicates the panel has power.

LOW MAIN:

A red pilot light provides the LOW MAIN visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.

AUTO Mode:

HAND/OFF/AUTO selector switches are set to AUTO.

This pump controller operates the pump to control the level of a liquid in a tank. It is used in conjunction with a Ktech model FS301-4 float switch.

- The top contact FS1-A provides a HIGH DAY level warning and emergency shutdown for the pump operations. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.
- The 2nd contact FS1-B stops the pump.
- The 3rd contact FS1-C starts the pump. A green pilot light provides indication that the pump is running.
- The bottom contact FS1-D triggers a LOW DAY alarm signal. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.

Under normal operation, the liquid level doesn't fall to the LOW level. When the liquid level falls to the 3rd contact, the pump will start and the tank will fill. The pump will stop when the level reaches the 2nd contact. The green pilot light indicates the pump is running.

If either the HIGH or LOW DAY level alarm sounds, it indicates that either the pump has failed or a float switch contact has failed.

HAND Mode:

HAND/OFF/AUTO selector switch is set to HAND.

In this mode you turn the pump on. The HIGH or LOW DAY alarms will shut off the pump, the LOW MAIN alarm will not shut the pump off.

OFF Mode:

HAND/OFF/AUTO selector switch is set to OFF.

In this mode the pump will never turn on.



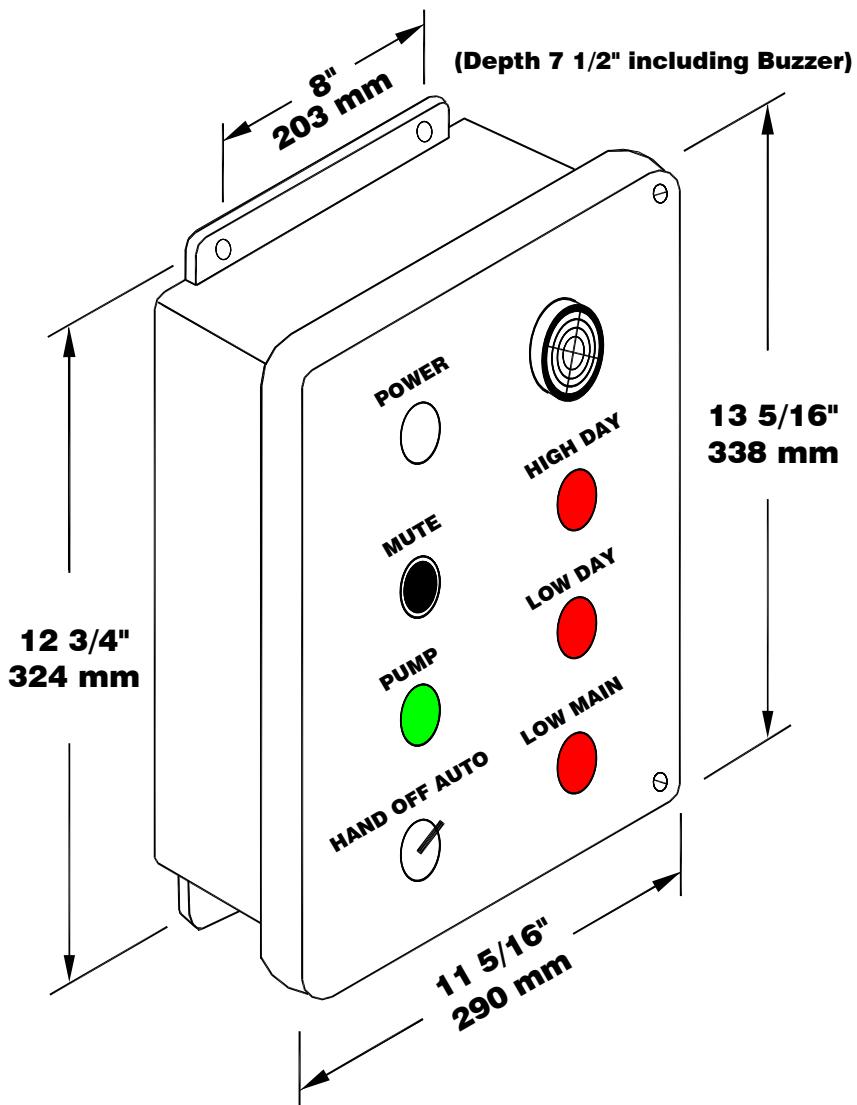
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DEVICES
4YC9

CAN/ULC-S661-10

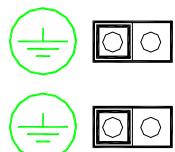
Ktech INDUSTRIAL PRODUCTS INC.

Electrical Specifications

- 120VAC, 60 Hz, 1PH, 1/3Hp 7.2A
 - Switch inputs at terminals **1&2, 3&4, 5&6, 7&8, 9&10**
 - High, Low Day & Low Main relay contact outputs at terminals, **11&12, 13&14, 15&16**
 - Pump output at terminals **19&20**
 - Horn - 95 dB @ 1 ft.



Dry Contact	Floating	Switch	Inputs	HIGH DAY FS1-A	•	1	•
				HIGH DAY FS1-A	•	2	•
				STOP FS1-B	•	3	•
				STOP FS1-B	•	4	•
				START FS1-C	•	5	•
				START FS1-C	•	6	•
				LOW DAY FS1-D	•	7	•
				LOW DAY FS1-D	•	8	•
				LOW MAIN FS2-A	•	9	•
				LOW MAIN FS2-A	•	10	•
				HIGH DAY RELAY-COM	•	11	•
				HIGH DAY RELAY-NO	•	12	•
				LOW DAY RELAY-COM	•	13	•
				LOW DAY RELAY-NO	•	14	•
				LOW MAIN RELAY-COM	•	15	•
				LOW MAIN RELAY-NO	•	16	•
				120VAC - LINE	•	17	•
				Neutral	•	18	•
				PUMP	•	19	•
				Neutral	•	20	•



Ktech INDUSTRIAL PRODUCTS INC.

Dispositif anti-débordement CP1100

No. d'article : Panneau de contrôle de la Solénoïde PC1104-3R-HLL

ALIMENTATION :

Le panneau est sous tension si le voyant est allumé.

PRINCIPAL BAS :

Un voyant rouge fournit l'indication d'alarme visuelle LOW MAIN. Il y a un buzzer avec interrupteur muet. Le circuit d'alarme se réinitialise automatiquement.

Mode AUTO :

Les interrupteurs de sélection HAND/OFF/AUTO sont réglés sur AUTO.

Ce contrôleur de pompe actionne la pompe pour contrôler le niveau d'un liquide dans un réservoir. Il est utilisé avec un commutateur à flotteur Ktech modèle FS301-4

- Le contact supérieur FS1-A fournit un avertissement de niveau élevé et un arrêt d'urgence pour le fonctionnement de la pompe. Un voyant rouge indique l'alarme visuelle. Il y a un avertisseur sonore avec interrupteur de sourdine. Le circuit d'alarme se réinitialise automatiquement
- Le 2e contact FS1-B arrête la pompe.
- Le 3ème contact FS1-C démarre la pompe. Un voyant vert indique que la pompe est en marche
- Le contact inférieur FS1-D déclenche un signal d'alarme BAS. Un voyant rouge indique l'alarme visuelle. Il y a un avertisseur sonore avec interrupteur de sourdine. Le circuit d'alarme se réinitialise automatiquement.

En fonctionnement normal, le niveau de liquide ne tombe pas au niveau BAS. Lorsque le niveau de liquide tombe au 3ème contact, la pompe démarre et le réservoir se remplit. La pompe s'arrête lorsque le niveau atteint le 2e contact. Le voyant vert indique que la pompe est en marche.

Si l'alarme de niveau HIGH ou LOW retentit, cela signifie que la pompe est en panne ou qu'un contact d'interrupteur à flotteur est en panne.

Mode HAND :

Le sélecteur HAND / OFF / AUTO est réglé sur HAND

Dans ce mode, vous allumez la pompe. L'alarme HIGH ou LOW DAY arrêtera la pompe, l'alarme LOW MAIN ne l'arrêtera pas.

Mode OFF :

Les interrupteurs de sélection HAND/OFF/AUTO sont réglés sur OFF.

En mode OFF, la pompe ne se mettra jamais en marche.

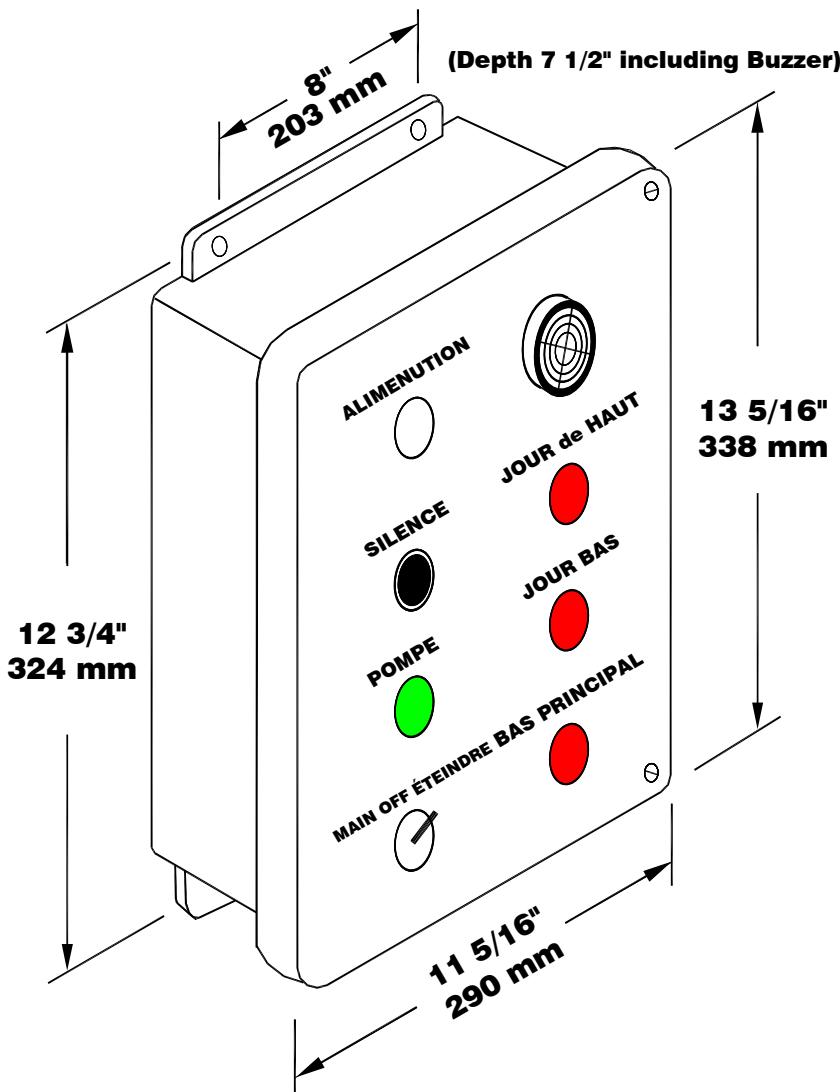


CAN/ULC-S661-10

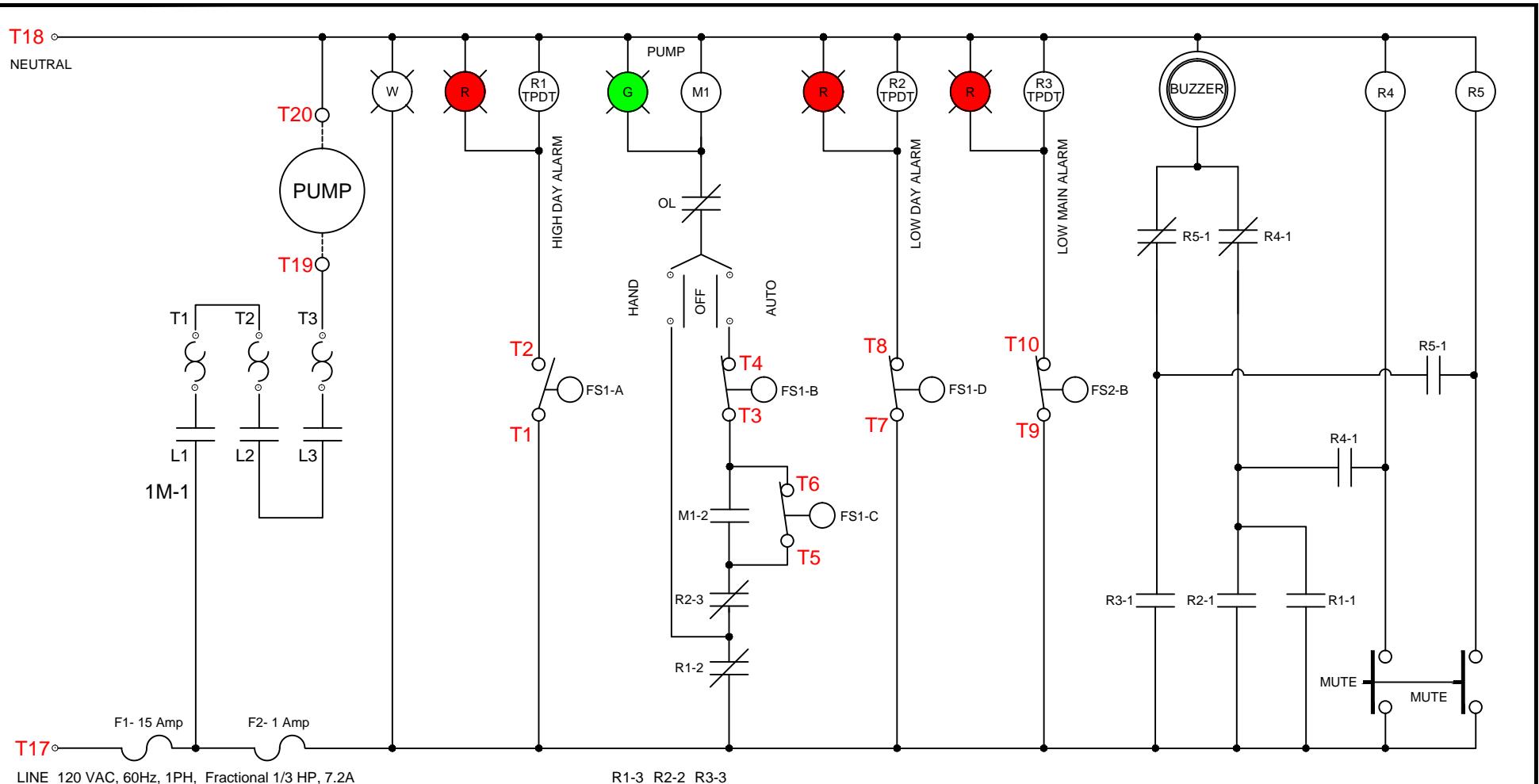
Ktech INDUSTRIAL PRODUCTS INC.

Spécifications électriques

- 120VAC, 60 Hz, 1PH, 1/3Hp 7.2A
- Entrées de l'interrupteur aux terminaux **1et2, 3et4, 5et6, 7et8, 9et10**
- Contact de sortie de relais Haut, Bas & Bas aux terminaux, **11et12, 13et14, 15et16**
- Sortie pompe aux terminaux **19et20**
- Sonnerie - 95 dB @ 1 pied.



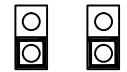
Entrées de Contact Sec	• 1 •
JOUR de HAUT NIVEAU FS1-A	• 2 •
JOUR de HAUT NIVEAU FS1-A	• 3 •
ARRÊTEZ FS1-B	• 4 •
ARRÊTEZ FS1-B	• 5 •
DÉMARRER FS1-C	• 6 •
DÉMARRER FS1-C	• 7 •
JOUR BAS NIVEAU FS1-D	• 8 •
JOUR BAS NIVEAU FS1-D	• 9 •
BAS NIVEAU PRINCIPAL FS2-A	• 10 •
BAS NIVEAU PRINCIPAL FS2-A	• 11 •
JOUR de HAUT NIVEAU RELAIS COM	• 12 •
JOUR de HAUT NIVEAU RELAIS NO	• 13 •
JOUR BAS NIVEAU RELAIS COM	• 14 •
JOUR BAS NIVEAU RELAIS NO	• 15 •
BAS NIVEAU PRINCIPAL RELAIS COM	• 16 •
BAS NIVEAU PRINCIPAL RELAIS NO	• 17 •
120VCA - LIGNE	• 18 •
NEUTRE	• 19 •
POMPE	• 20 •
NEUTRE	
120VCA SORTIE COMMUTÉE	



	R1-3	R2-2	R3-3
HIGH DAY FS1-A			
HIGH DAY FS1-B			
STOP FS1-B			
START FS1-C			
LOW DAY FS1-D			
LOW DAY FS1-D			
LOW MAIN FS2-B			
HIGH DAY RELAY-COM			
HIGH DAY RELAY-NO			
LOW DAY RELAY-COM			
LOW DAY RELAY-NO			
LOW MAIN RELAY-COM			
LOW MAIN RELAY-NO			
120VAC-LINE			
NEUTRAL			
Switched Output (120VAC)			

Dry Contact Float Switch Inputs

Dry Contact Outputs



Pump Up

KTECH INDUSTRIAL PRODUCTS INC.

Drawing: Pump Control & High/Low Level Day & Low Main
c/w Mute, Auto Reset & 3 Relay Outputs

wg. No. PC1104-3R-HLL Schem

Date: Sept 26, 2022

Ktech INDUSTRIAL PRODUCTS INC.

CP1100 Overfill Protection Device Part No.: PC1104-HL-2R Solenoid Control Panel

POWER:

When the light is on it indicates the panel has power.

AUTO Mode:

HAND/OFF/AUTO selector switches are set to AUTO.

This pump controller operates the pump to control the level of a liquid in a tank. It is used in conjunction with a Ktech model FS301-4 float switch.

- The top contact FS-A provides a HIGH level warning and emergency shutdown for the pump operations. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.
- The 2nd contact FS-B stops the pump.
- The 3rd contact FS-C starts the pump. A green pilot light provides indication that the pump is running.
- The bottom contact FS-D triggers a LOW alarm signal. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically.

Under normal operation, the liquid level doesn't fall to the LOW level. When the liquid level falls to the 3rd contact, the pump will start and the tank will fill. The pump will stop when the level reaches the 2nd contact. The green pilot light indicates the pump is running.

If either the HIGH or LOW level alarm sounds, it indicates that either the pump has failed or a float switch contact has failed.

HAND Mode:

HAND/OFF/AUTO selector switch is set to HAND.

In this mode you turn the pump on. The HIGH alarm will shut off the pump.

OFF Mode:

HAND/OFF/AUTO selector switch is set to OFF.

In this mode the pump will never turn on.

Electrical Specifications

- 120VAC, 60 Hz, 1PH, 1/2Hp 9.8A
- Switch inputs at terminals **1&2, 3&4, 5&6, 7&8**
- High & Low relay contact outputs at terminals **9&10, 11&12**
- Pump output at terminals **15&16**
- Horn - 95 dB @ 1 ft.



ENCLOSED INDUSTRIAL CONTROL PANEL
UL508A



CAN/ULC-S661-10

Ktech INDUSTRIAL PRODUCTS INC.

Dispositif anti-débordement CP1100

No. d'article : Panneau de contrôle de la Solénoïde PC1104-HL-2R

ALIMENTATION :

Le panneau est sous tension si le voyant est allumé.

Mode AUTO :

Les interrupteurs de sélection HAND/OFF/AUTO sont réglés sur AUTO.

Ce contrôleur de pompe contrôle la première électrovanne pour contrôler le niveau d'un liquide dans un réservoir. Il est utilisé en conjonction avec un interrupteur à flotteur Ktech modèle FS301-4.

- Le contact supérieur FS-A fournit un niveau d'alerte HIGH et un arrêt d'urgence lors des opérations de pompage. Un témoin lumineux rouge donne une indication d'alarme visuelle. La sonnerie dispose d'un interrupteur "silencieux" (MUTE). Le circuit d'alarme se réinitialise automatiquement.
- Le 2ème contact FS-B arrête la pompe.
- Le 3ème contact FS-C démarre la pompe. Le voyant vert indique que la pompe est en marche.
- Le contact du bas FS-D déclenche un signal d'alarme BAS. Un témoin lumineux rouge donne une indication d'alarme visuelle. La sonnerie dispose d'un interrupteur "silencieux" (MUTE). Le circuit d'alarme se réinitialise automatiquement.

En mode de fonctionnement normal, le niveau du liquide n'atteint pas le niveau BAS. Lorsque le niveau du liquide atteint le 3e contact, la pompe démarre et le réservoir se remplit. La pompe s'arrêtera lorsque le niveau atteint le 2e contact. Le voyant vert indique que la pompe est en marche.

Si le signal d'alarme niveau HAUTE ou BAS se déclenche, cela indique que la pompe ou le contact de l'interrupteur à flotteur est en panne.

Mode HAND :

Les interrupteurs de sélection HAND/OFF/AUTO sont réglés sur HAND.

Ce mode vous permet de mettre la pompe en marche. Les alarmes HAUTE arrêteront la pompe

Mode OFF :

Les interrupteurs de sélection HAND/OFF/AUTO sont réglés sur OFF.

En mode OFF, la pompe ne se mettra jamais en marche.

Spécifications électriques

- 120VAC, 60 Hz, 1PH, 1/2HP 9.8A
- Entrées de l'interrupteur aux terminaux **1et2, 3et4, 5et6, 7et8**
- Contact de sortie de relais Haute & Bas aux terminaux **9et10, 11et12**
- Sortie pompe aux terminaux **15et16**
- Sonnerie - 95 dB @ 1 pied.

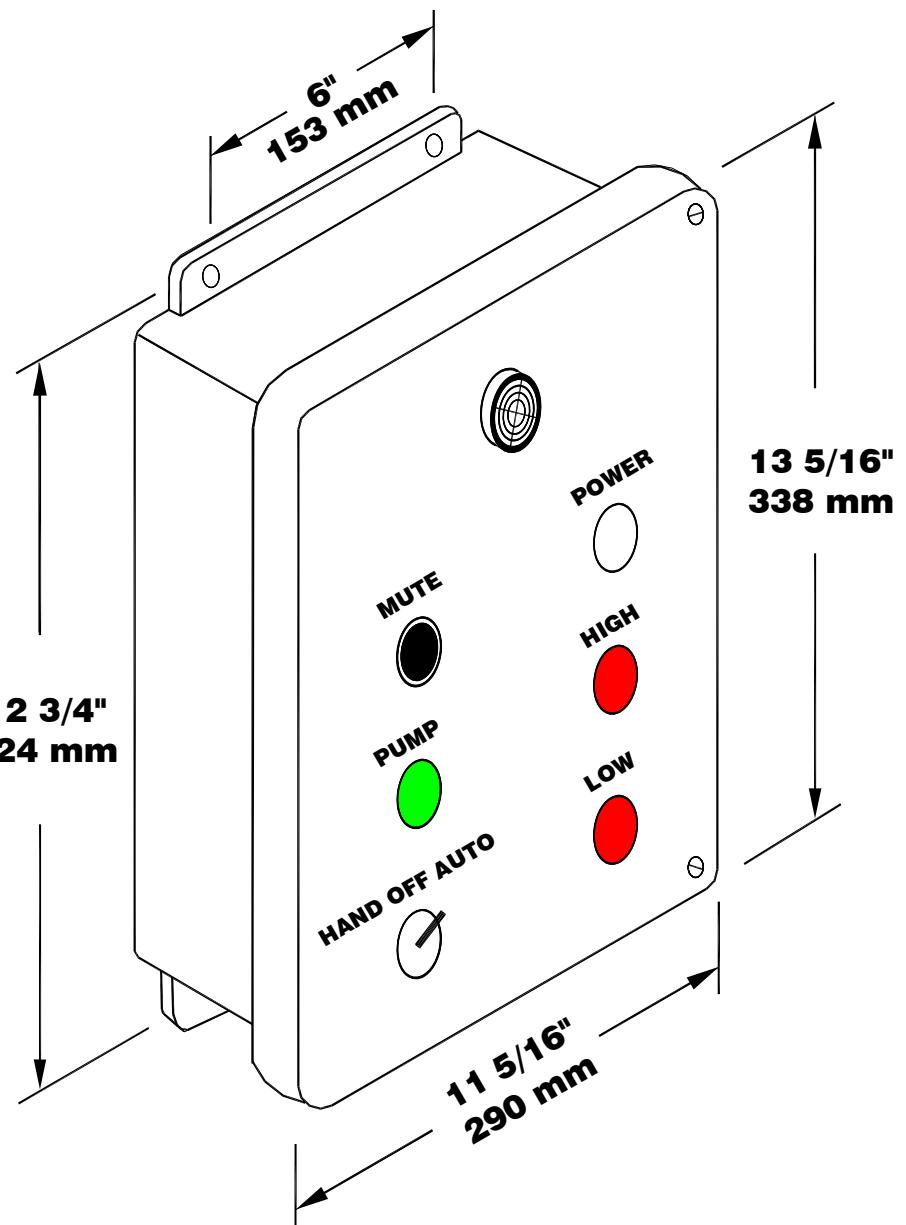


tableau de commande industriel fermé
UL508A



CAN/ULC-S661-10

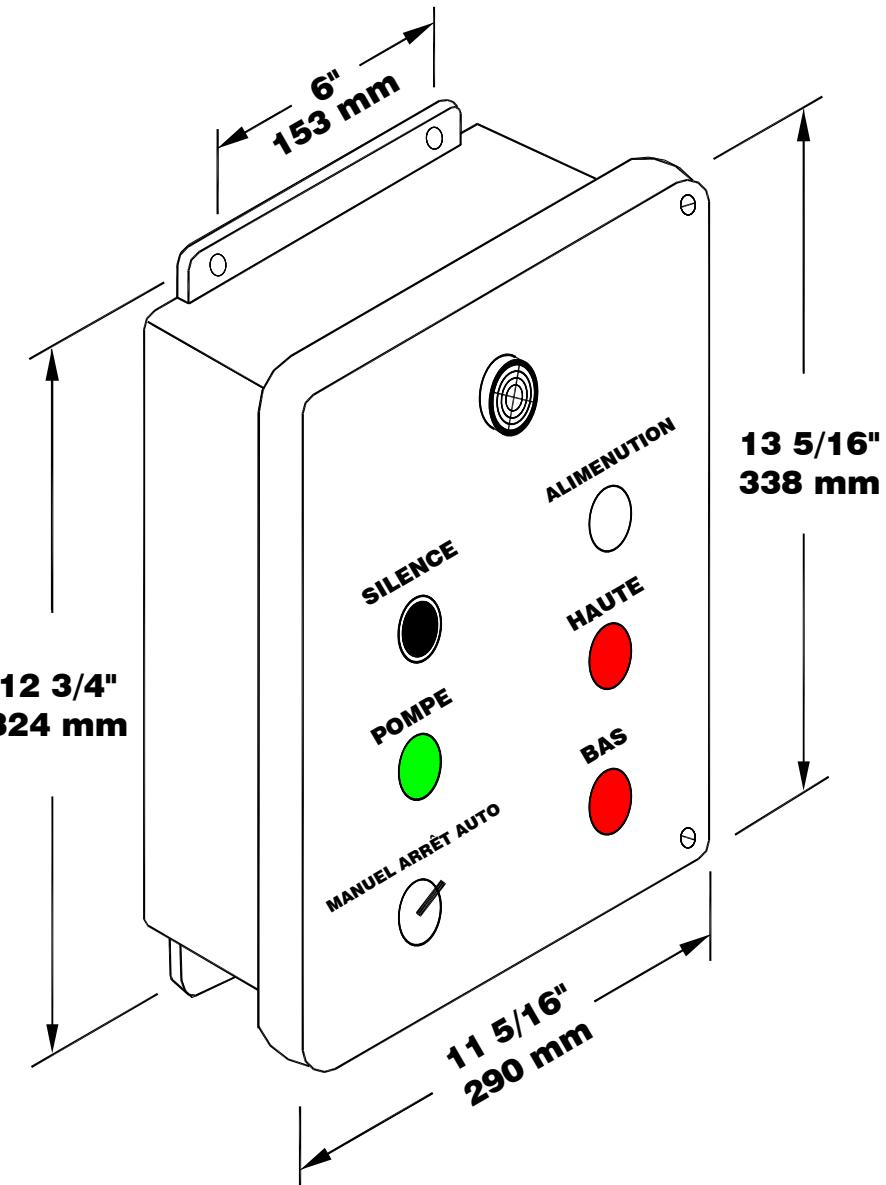
Ktech INDUSTRIAL PRODUCTS INC.



Dry Contact Switch Inputs	HIGH FS1-A HIGH FS1-A STOP FS1-B STOP FS1-B START FS1-C START FS1-C LOW FS1-D LOW FS1-D HIGH RELAY-C HIGH RELAY-NO LOW RELAY-C LOW RELAY-NO
Dry Contact Outputs	120VAC - Line Neutral PUMP Neutral



Ktech INDUSTRIAL PRODUCTS INC.



Entrées de Contact Sec

Sortie contact sec

HAUT FS1-A

HAUT FS1-A

ARRÊTEZ FS1-B

ARRÊTEZ FS1-B

DÉMARRER FS1-C

DÉMARRER FS1-C

BAS FS1-D

BAS FS1-D

HAUT RELAIS-COM

HAUT RELAIS-NF

BAS RELAIS-COM

BAS RELAIS-NF

120VCA - LIGNE

NEUTRE

POMPE

NEUTRE

sorties
combinées
(2 voies)



Ktech INDUSTRIAL PRODUCTS INC.

CP1100 Overfill Protection Device Part No.: PC1104-L-R Pump Control Panel

POWER:

When the light is on it indicates the panel has power.

AUTO Mode:

HAND/OFF/AUTO selector switches are set to AUTO.

This pump controller operates the pump to control the level of a liquid in a tank. It is used in conjunction with a Ktech model FS301-3 float switch.

- The 1st contact FS3-A stops the pump.
- The 2nd contact FS3-B starts the pump. A green pilot light provides indication that the pump is running.
- The bottom contact FS3-C triggers a LOW alarm signal. A red pilot light provides the visual alarm indication. There is a buzzer with mute switch. The alarm circuit resets automatically. There is a relay output for the low alarm.

Under normal operation, the liquid level drops and closes the stop switch (FS3-A) then when it drops down more it will close the start pump switch (FS3-B), this starts the pump and starts to add liquid to the tank, when it goes above the stop switch (FS3-A) it will open and it will shut off the pump. It repeats this process under normal conditions. The green pilot light indicates the pump is running.

If the LOW level alarm sounds, it indicates that the 2nd float switch contact has failed or the HAND/OFF/AUTO is in the off position..

HAND Mode:

HAND/OFF/AUTO selector switches are set to HAND.

In this mode you turn the pump on and add liquid to the tank.

HAND/OFF/AUTO selector switches are set to OFF.

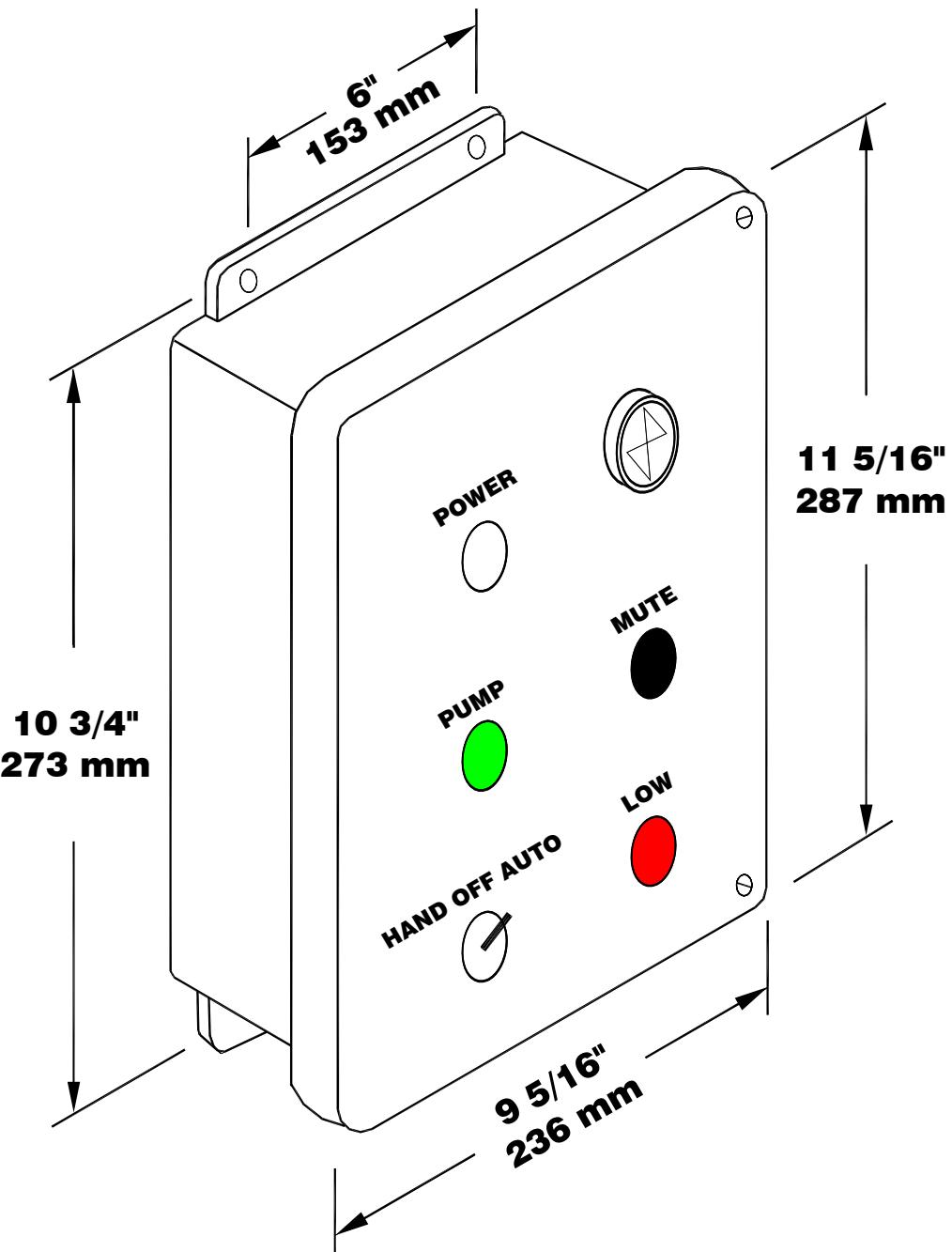
In this mode the pump will never turn on.

Electrical Specifications

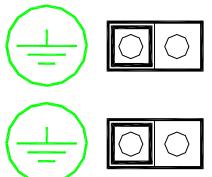
- 120VAC, 60 Hz, 1PH, 1/3 HP, 7.2A
- Switch inputs at terminals **1&2, 3&4, 5&6**
- Low relay contact output at terminals **9&10**
- Pump control output at terminals **11&12**
- Horn - 95 dB @ 1 ft.

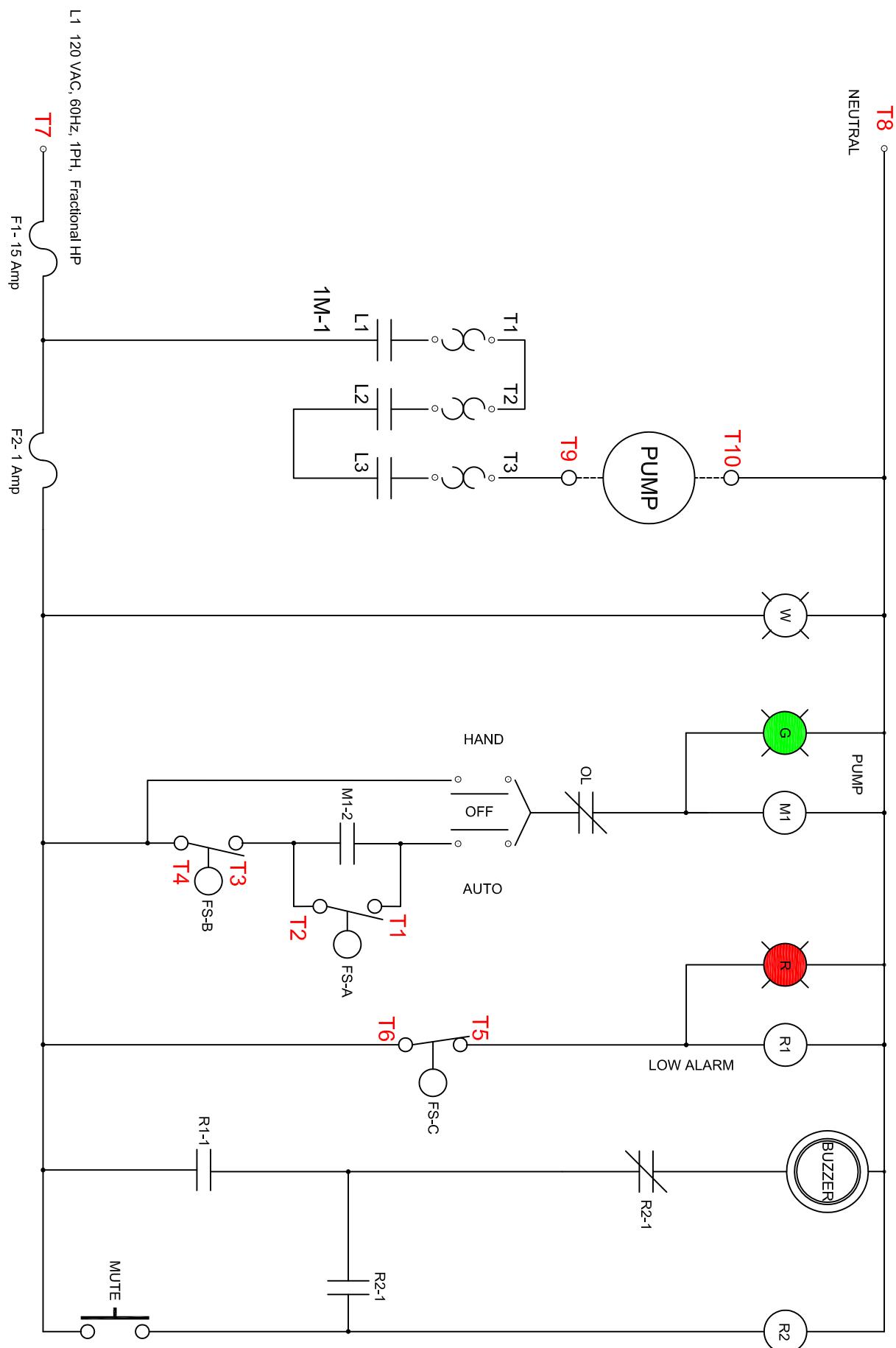


Ktech INDUSTRIAL PRODUCTS INC.



STOP FS1-A	•	1	•
STOP FS1-A	•	2	•
START FS1-B	•	3	•
START FS1-B	•	4	•
LOW FS1-C	•	5	•
LOW FS1-C	•	6	•
LOW RELAY-COM	•	7	•
LOW RELAY-NO	•	8	•
120VAC - LINE	•	9	•
NEUTRAL	•	10	•
PUMP T1	•	11	•
NEUTRAL	•	12	•





KTECH INDUSTRIAL PRODUCTS INC.

Drawing: Pump Control & Low Level Alarm

Dwg. No. PC1104-L Schem

Date: June 15, 2016 Job: