

Technical Pages

In the field, cables may be cut or damaged, leaving wires with no markers. This document will provide procedures to determine the wire numbers if no markers are found. If you are unsure of what cable is installed on the pump, consult HOMA document number 88WA2030 - Identifying Power Cables for assistance in identification.

Non-FM RHW Cable

For Non-FM pumps (non-explosion proof rated) equipped with RHW cable (qty.8 leads), leads are marked by colors. The below charts will allow you to determine which cable lead corresponds to the correct wire marker in the event wire markers are lost or removed.

Three Phase Wiring			
Lead Color	Tag	Wire Marker	Lead Type
Black	Power	U	L1
Red	Power	V	L2
White	Power	W	L3
Green		GROUND	Ground
Black	Control	T	Thermal
Red	Control	T	Thermal
White	Control	S1	Seal Fail
Orange	Control	S2	Seal Fail

Single Phase Wiring			
Lead Color	Tag	Wire Marker	Lead Type
Black	Power	U1	Common
Red	Power	U2	Run
White	Power	Z2	Start
Green		GROUND	Ground
Black	Control	T	Thermal
Red	Control	T	Thermal
White	Control	S1	Seal Fail
Orange	Control	S2	Seal Fail

Non-FM and FM Ozoflex-H07RN Cable (3-Phase)

For Non-FM and FM pumps equipped with Ozoflex cable (qty. 4, 5, 6, 7, or 10 leads), leads are marked with a white number on the jacket. The chart at right will allow you to determine which cable lead corresponds to the correct wire marker in the event wire markers are lost or removed.

After connection, always verify the rotation (Clockwise from above). If the pump is running backwards, swap L1 and L2.

Lead Num./Color		Wire Marker	Lead Type
Single Cable	Multi Cable		
1	Black	U	L1
2	Brown	V	L2
3	Gray	W	L3
Green	Green	GROUND	Ground
4	1	T	Thermal
5	2	T	Thermal
6	3	S1	Seal Fail
7	4	S2/S5	Seal Fail
n/a	5	S3	Moisture
n/a	6	S4	Moisture
8/9	7/8/9	Unused	

Non-FM and FM H07RN Cable (Single-Phase)

1. If the power cable has more than 4 leads, find the pair of wires with resistance value of approximately 0.4 ohms between them. These are the thermal switch leads. Mark T1 and T3 for reference.
2. If the motor is 1-phase, you must determine the start, run, and common leads. Mark the leads A, B, and C, measure the resistance between the combinations and record.
3. A-B: _____ A-C: _____ B-C: _____
4. (Example: A-B is 4.7 ohms, A-C is 2.6 ohms, and B-C is 8.3 ohms)
5. The highest resistance is always between wires Z2 and U2. This allows you to determine which lead is U1 common, because it is not in the highest resistance pair. In the example above, the highest resistance value is between B and C, so we know that wire A is U1.
6. The next highest resistance reading will be between U1 and Z2 (start winding). Determine which pair of wires has the second highest resistance reading. This will be a combination of U1 and an unmarked wire. Mark the unmarked wire in this pair Z2.
7. The final unmarked wire must be U2, verify that the resistance between U1 and U2 is the lowest value, and then mark the last wire U2. Now you can use the wiring diagram below to determine the connections to the control panel.

