

Pass Through Machines



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Introduction

CAREFULLY READ THESE INSTRUCTIONS, BEFORE INSTALLING AND OPERATING OR REPAIRING THIS APPLIANCE.

INCORRECT INSTALLATION, ADAPTATIONS OR ALTERATIONS COULD RESULT IN INJURY OR DAMAGE TO PROPERTY.

MALICIOUS DAMAGE, DAMAGE DUE TO NEGLIGENCE, OR FAILURE TO COMPLY WITH THESE INSTRUCTIONS AND LOCAL LEGISLATION, OR UNAUTHORISED TAMPERING WILL INVALIDATE ANY WARRANTY AND RELIEVE THE MANUFACTURER OF ALL LIABILITY

DAMAGE CAUSED DUE TO THE LACK OF, OR INCORRECT USE OF A WATER SOFTNER, OR LIMESCALE DAMAGE WILL NOT BE COVERED BY THE MANUFACTURES WARRANTY

Introduction

Prior to reading this manual, it is essential that you are familiar with the contents and subject matter covered within the ***'Installation & Operators Manual'***.

Installation:

Installation should only be carried out by a ***'Classeq'*** approved / trained technician, and in accordance with current regulations and within our instructions.









Repairs and spare parts:

The appliance must only be repaired by a ***'Classeq'*** approved / trained technician, using genuine ***'Classeq'*** spare parts, failure to do so could invalidate any warranty and relieve the manufacture of all liability.

Modification:

'Classeq' reserves the right to modify either the appliance or the contents of these instructions without notice

Recommended Tool Kit

Recommended hand tools	
	5.5mm - Spanner / nut runner / socket
	7.0mm - Spanner / nut runner / socket
	8.0mm - Spanner / nut runner / socket
	10.0mm - Spanner / nut runner / socket
	10mm to 18mm - Adjustable spanner
	Pliers
	2.5mm - Alan key
	4.0mm - Alan key
	No. 2 - Pozi screw driver
	Electric screw driver (small)
	Flat bladed screw driver (large)
	Wire cutters
	Wire crimpers
	Multi meter Capable of measuring Volts (10v ~ 240v AC) Amps (0 ~ 20 Amps) Ohms (0 ~ 30MΩ)

Machine Specifications

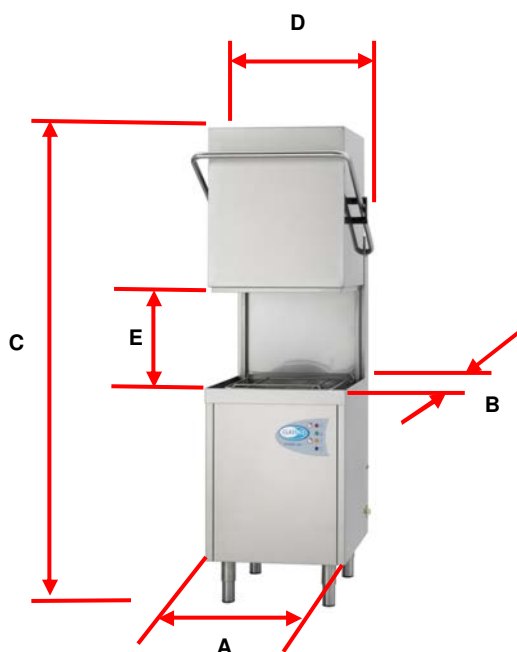
Specification		Hydro 857A	Hydro 957A
Width	Excluding handle	630mm	630mm
	Including handle	730mm	730mm
Depth	Excluding handle	720mm	720mm
	Including handle	945mm (max)	945mm (max)
Height	Hood open	1890 - 1940mm	1890 - 1940mm
	Hood closed	1470 - 1520mm	1470 - 1520mm
Rack size (square)		500mm	500mm
Maximum plates per rack		18	18
Wash chamber entry height		410mm	410mm
Operating level		<70 db	<70 db
Net weight	Empty	83 kg	83 kg
	Fully loaded	130 kg	130 kg
	Shipping	95 kg	95 kg
Rinse pump		✓	✓
Detergent pump		Optional	Optional
Rinse aid pump		✓	✓
Cycle time	Short cycle	1 ½ minute	1 ½ minute
	Long cycle	3 minute	3 minute
Water connection		3/4" BSP	3/4" BSP
Water inlet height from floor		250mm	250mm
Drain type	Gravity	Optional	Optional
	Pumped	✓	✓
Drain size		Ø 40mm	Ø 40mm
Operating voltage	220~240v (1ph)	Optional	✗
	380~415v (3ph)	✓	✓
Total Amps required	32 A	Optional	✗
	13 A per phase (3ph)	✓	✗
	17 A per phase (3ph)	✗	✓
Total load		6.84 kW	9.48 kW
Wash tank element		3 x 1.35 kW	3 x 1.35 kW
Rinse tank element		3 x 2.00 kW	3 x 2.88 kW
Wash pump size		0.742kW	0.72 kW
Wash pump capacity		380 litres / min	380 litres / min
Wash tank capacity		39 litres	39 litres
Wash water operating temperature		55 °C	55 °C
Rinse boiler capacity		7.5 litres	7.5 litres
Rinse water operating temperature		80 °C	80 °C
Rinse water consumption		2.75 to 3.5 litres	2.75 to 3.5 litres

Specification		Hydro 957AS	Hydro 957AS/WS
Width	Excluding handle	630mm	630mm
	Including handle	730mm	730mm
Depth	Excluding handle	720mm	720mm
	Including handle	945mm (max)	945mm (max)
Height	Hood open	1890 - 1940mm	1890 - 1940mm
	Hood closed	1470 - 1520mm	1470 - 1520mm
Rack size (square)		500mm	500mm
Maximum plates per rack		18	18
Wash chamber entry height		410mm	410mm
Operating level		<70 db	<70 db
Net weight	Empty	83 kg	83 kg
	Fully loaded	130 kg	130 kg
	Shipping	95 kg	95 kg
Rinse pump		✓	✓
Detergent pump		Optional	Optional
Rinse aid pump		✓	✓
Cycle time	Short cycle	1 ½ minute	1 ½ minute
	Long cycle	3 minute	3 minute
Water connection		3/4" BSP	3/4" BSP
Water inlet height from floor		250mm	250mm
Drain type	Gravity	Optional	Optional
	Pumped	✓	✓
Drain size		Ø 40mm	Ø 40mm
Operating voltage	220~240v (1ph)	Optional	✗
	380~415v (3ph)	✓	✓
Total Amps required	32 A	Optional	✗
	13 A per phase (3ph)	✗	✗
	17 A per phase (3ph)	✗	✓
Total load		12.84 kW	12.84 kW
Wash tank element		3 x 1.35 kW	3 x 1.35 kW
Rinse tank element		3 x 2.00 kW	3 x 2.00 kW
Wash pump size		0.742kW	0.72 kW
Wash pump capacity		380 litres / min	380 litres / min
Wash tank capacity		39 litres	39 litres
Wash water operating temperature		55°C	55°C
Rinse boiler capacity		7.5 litres	7.5 litres
Rinse water operating temperature		80°C	80°C
Rinse water consumption		2.75 to 3.5 litres	2.75 to 3.5 litres

Site Requirements

Front Loading:

Dimensions:



Dimensions (mm)		Hydro 857	Hydro 957
Machine	'A' = Width (excluding handle)	630	630
	'B' = Depth (excluding handle)	720	720
	'C' = Height (hood open)	1890-1940	1890-1940
	'C' = Height (hood closed)	1470-1520	1470-1520
	'D' = Width across handle	730	730
	'E' = Clear entry height	410	410

Misc.	Hydro 857	Hydro 957
Machine fully loaded weight	130 kg	130 kg
Operating noise levels	<70db	<70db

Electric Supply:

Electrical connection:

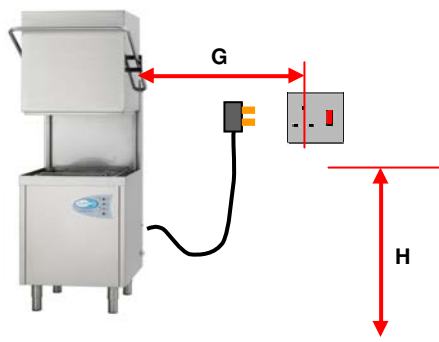
Electrical connections MUST be carried out in accordance with local regulations. As a minimum **Classeq** recommends the following standards are maintained:

All appliances are connected via a residual current device (R.C.D.) or earth leakage protection device.

EN 60204 - Supply isolator switch has all pole separation of more than 3mm.

EN 60335 - Connect to an equi-potential conductor, connection stud located at rear of appliance, this is in addition to the earthed electrical supply.

Prior to connecting the appliance, ensure voltage and supply fuse comply with rating plate.



Electrics		Hydro 857	Hydro 957
Volts	220~240v (1 Phase)	Optional	×
	380~415v (3 Phase)	✓	✓
Amps	32 Amps	Optional	×
	13 Amps per phase	✓	×
	17 Amps per phase	×	✓
	22 Amps per phase	×	Hydro 957AS models only
Max total load		6.84kW	9.48kW 12.84kW (Hydro957AS)

Electrical supply (mm)		Hydro 857	Hydro 957
Max. position of electrical supply socket	'G' = Width	700	700
	'H' = Height	1550	1550

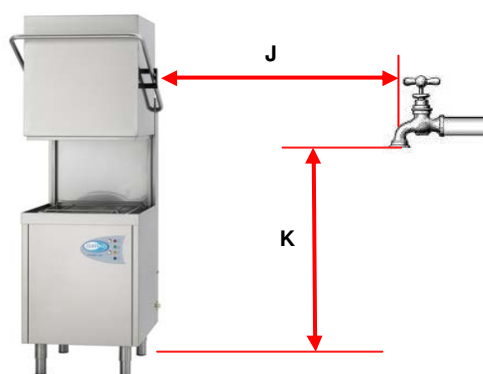
Note! Electrical supply can be either side of appliance, appliance are not supplied with electrical plugs.

If the supply cable is damaged, it must be replaced by a cable or cord assembly supplied by Classeq, or its service agents, or to the following minimum specification.

Machine rating	Cable type	Temp. rating	Length of cable	Conform to
220-240V / 1N~ / 32A	PVC 3G 4.0	80 °C minimum	2.75m	IEC 60335-2-58 & IEC 60227 types 56 & 57
380-415V / 3N~ / 13A	PVC 5G 2.5			
380-415V / 3N~ / 17A	PVC 5G 2.5			
380-415V / 3N~ / 22A	PVC 5G 6.0			

For electrical rating of appliance refer to rating plate located on appliance or in this manual.

Water Inlet:



Note! Water supply can be either side of appliance

Water connection:

		Hydro 857	Hydro 957
Temperature range		5 - 55 °C	
Pressure	0~2 bar	Booster pump req'd	
	2~4 bar	No modification	
	4~6 bar	Flow restrictor req'd	
	6 bar +	Pressure reducing valve req'd	
Flow rate		4 litres / min	
Water connection		3/4" BSP	
Max. position of water supply (mm)	'J' = Width	650	600
	'K' = Height	650	650

The appliance comes with a water supply hose requiring a G $\frac{3}{4}$ " ($\frac{3}{4}$ " BSP) male threaded connection at the mains water supply, upon installation and commissioning all water joints must be checked for leaks.

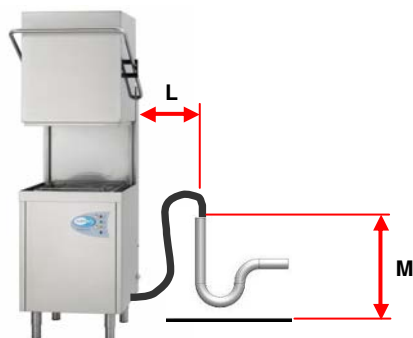
Old existing, defective or damaged water supply hoses are NOT to be used when installing the appliance.

Commercial appliance wash results will be affected by external conditions such as incoming water temperature, pressure, harness and choice of chemicals.

For the longevity of any water related devices and to ensure you get consistently good results it is essential your machine is either fed from a soft water supply, or your Classeq appliance is connected to an appropriate water softener.

IMPORTANT - All supplier warranties are void if lime scale is present within an appliance.

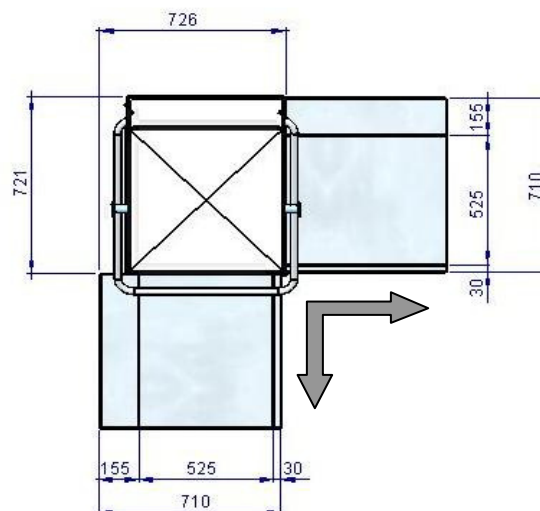
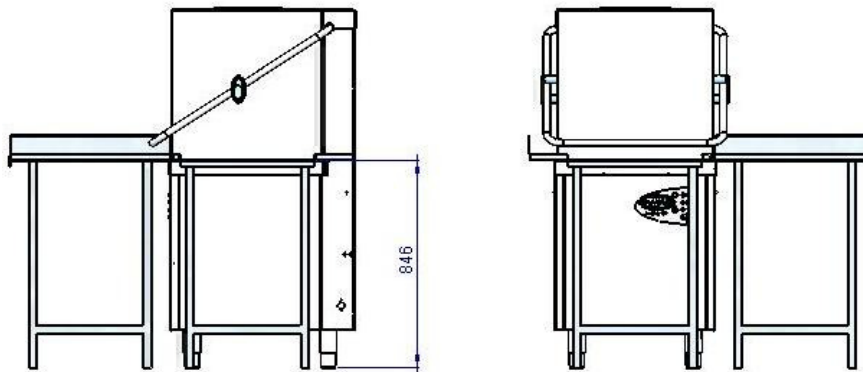
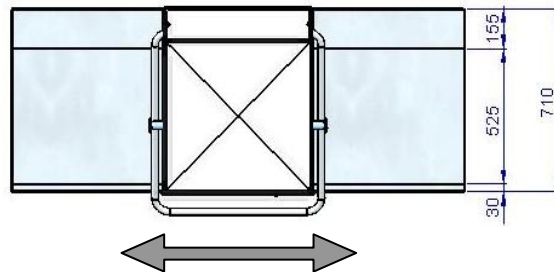
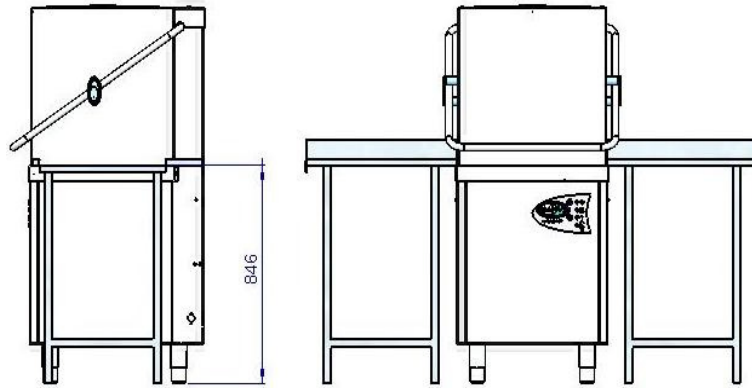
Waste outlet:



Note! Drains can be either side of appliance

Drainage dimensions (mm)	Hydro 857	Hydro 957
Drain stand pipe diameter	35	35
'L' = Max. distance from machine	400	400
'M' = Drain pipe height (Gravity drain)	0 - 350	0 - 350
'M' = Drain pipe height (Drain pump)	0 - 700	0 - 700

Table Layouts



Installation Instructions

The site:

Ensure that there is sufficient space for the installation, servicing and easy access to all mains isolator switches / valves (i.e. electricity and water).

As the machine weighs in at approx 130kgs (20 ½ stone), ensure that the surface the appliance is going to be installed onto is adequately stable and capable of supporting the appliance during normal operation (*see site requirements*).

Once installed ensure the appliance is stable, with its weight being distributed equally and does not tilt more than 3° in any direction.

Adjuster feet:



While removing the machine from the transport pallet, attach the 4 adjuster feet to the underside of the machine, use the fixing supplied and ensure all the feet are securely fixed.

Electrical connection:



All electrical connections **MUST** be carried out by an authorised technician and in accordance with local regulations.

As a minimum '**Classeq**' recommends that the following standards are maintained:

All appliances are connected via a residual current device (R.C.D.) or earth leakage protection device.

EN 60204 Supply isolator switch must have all pole separation of more than 3mm.

EN 60335 The appliance must be connected to an equi-potential conductor, the connection stud is located at the rear of the appliance (a suitable ring terminal shall be required), this is in addition to the earthed electrical supply.

Prior to connecting the appliance, ensure that the voltage and the supply fuse complies with the rating plate on the appliance.

Electrical rating:



The '**Classeq**' H857 can be either down rated or up rated electrically, such a procedure **MUST** be carried out by a '**Classeq**' approved technician.

The down / up rating of the machine is carried out by configuring the terminal block within the appliance.

More details in terminal block configuration section.

Water connection:

The appliance comes with a water supply hose requiring a G^{3/4}" (¾" BSP) male threaded connection at the mains water supply, upon installation and commissioning all water joints must be checked for leaks).

Commercial appliance wash results will be affected by external conditions such as incoming water temperature, pressure, water hardness and choice of chemicals

For the longevity of any water related devices and to ensure you get consistently good results it is essential your machine is either fed from a soft water supply, or your Classeq appliance is connected to an appropriate water softener.

**IMPORTANT:**

All supplier warranties are void if lime scale is present within an appliance

**Water supply restrictions:**

Water supply constraints must be adhered to:

Incoming water temperature:

4 °C minimum

55 °C maximum

Supply water dynamic pressure:

0 to 2 bar (0 to 200kPa)

2 to 4 bar (200 to 400kPa)

4 to 6 bar (400 to 600kPa)

6 bar plus (600kPa plus)

Rinse booster pump required.

No modifications required.

Flow restrictor required.

Pressure reducing valve required.

If the above requirements are not adhered to, the performance of the appliance will be impaired

Drainage systems:

Appliances are available as either gravity drain or pumped drain, upon installation the waste hose must be configured as shown within this manual, also all installations must be with a running / 'P' trap to ensure hygiene:

All appliances

- On drain pump appliances the flexible drain hose must be securely attached to the waste outlet of the underside of the appliance, on gravity drain appliances this will be already attached
- Ø40mm (1 ½") standpipe required, must be lower than the baseline of the appliance.
- Drain hose must be a close / tight fit into the drain pipe to reduce odours from the drain system.
- To ensure correct drainage, the height the sites drain is from the floor / surface the machine sits upon MUST be within the following.



0 to 300mm - Gravity drain machines

0 to 600mm - Drain pump machines



Note ! If you have any doubts about the drainage system on the machine, please contact either **Classeq** or your dealer/agent.

Commissioning Instructions

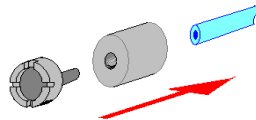
Rinse aid & Detergent:

Chemical pump(s) are located behind the front lower panel, prior to removing any panels all electrical supplies **MUST** be isolated. An Allen key is required for this operation.

A coil of PVC hose is attached to each chemical pump, un-coil PVC hose and feed through either the right or left hand slots located at the front of the base of the machine.

Prior to feeding the PVC hose into the chemical bottle, push the bottle weight supplied onto the end of each PVC hose.

Ensure the correct chemical tubes now go to the corresponding chemical bottles. (*I.e. rinse aid hose into rinse aid bottle*).



WARNING: Only rinse aids and detergents developed for commercial glass and dishwashers are to be used, rinse aids must be suitable for water temperatures down to 40 °C.

Priming of Rinse aid & Detergent:

This procedure is only required when commissioning the machine and not in normal operation

Ensure the machine is empty of water

Switch the water supply OFF

Now switch the machine ON at both the mains supply and at the fascia for 90 seconds only

Now switch the machine at the OFF at the fascia

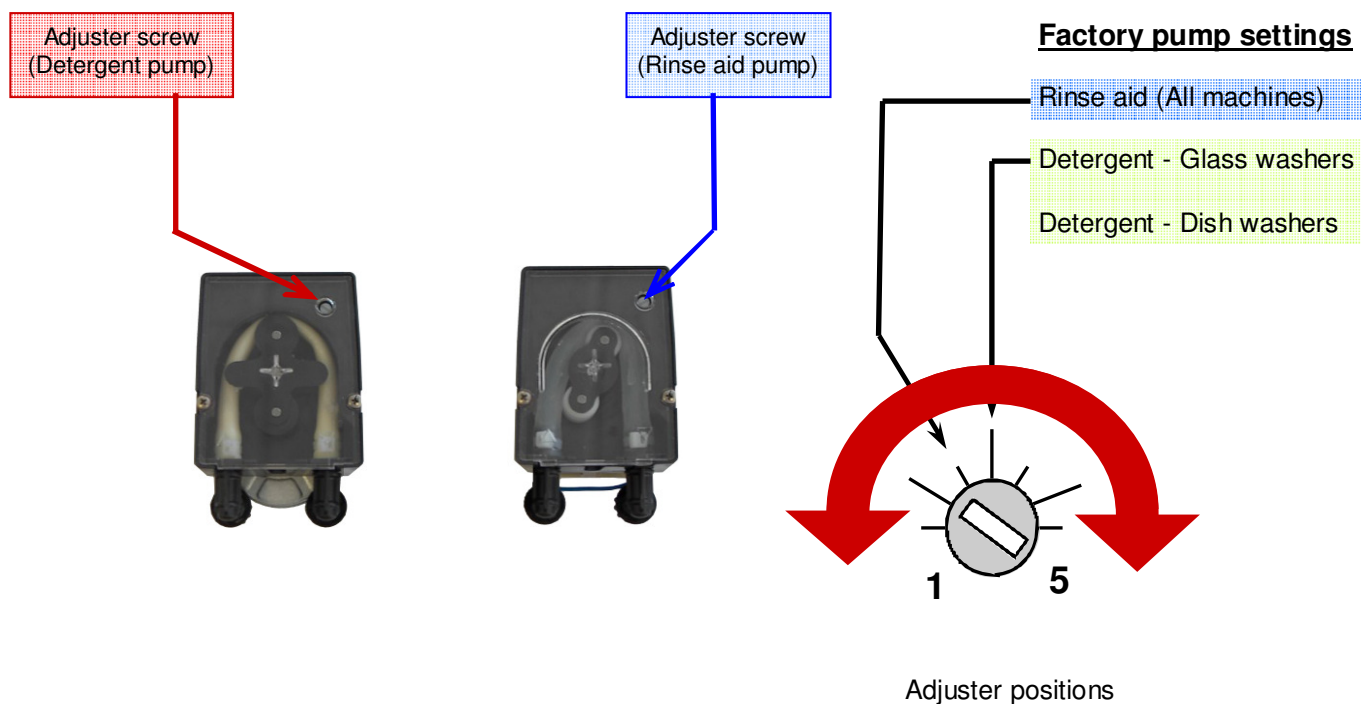
Turn the water supply ON

The rinse aide will now be primed, the machine can now be switch ON and allowed to fill & heat as normal.

Chemical dosage:

Chemical doses are pre-set, however they can be adjustment to suit the Individual sites requirements, and such adjustment is made by turning an adjuster screw on each chemical pump

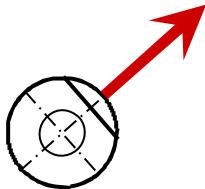
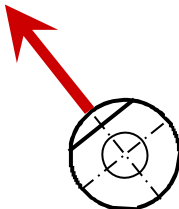
Chemical Pumps:



		Min	PUMP SETTINGS			Max
Pump run times	Run (seconds)	0	1.5	3	4.5	6
	Stop (seconds)	6	4.5	3	1.5	0
Rinse aid	Dose rate (ml/sec)	0.00	0.05	0.09	0.14	0.18
	Dose rate (litres / hour)	0.00	0.16	0.32	0.49	0.65
	Dose per 6 seconds (ml)	0.00	0.30	0.50	0.8	0.9
	Dilution rate	-	1 : 3009	1 : 1641	1 : 1165	1 : 903
	Dilution as parts per litre	-	0.33	0.61	0.86	1.11
	Dilution as %	-	0.03 %	0.06 %	0.09 %	0.11 %
Detergent	Dose rate (ml/sec)	0.00	0.35	0.69	1.04	1.39
	Dose rate (litres / hour)	0.00	1.25	2.5	3.75	5.00
	Dose per 6 seconds (ml)	0.00	2.10	4.20	6.30	7.00
	Dilution rate	-	1 : 390	1 : 213	1 : 151	1 : 117
	Dilution as parts per litre	-	2.57	4.70	6.63	8.55
	Dilution as %	-	0.26 %	0.47 %	0.66 %	0.86 %

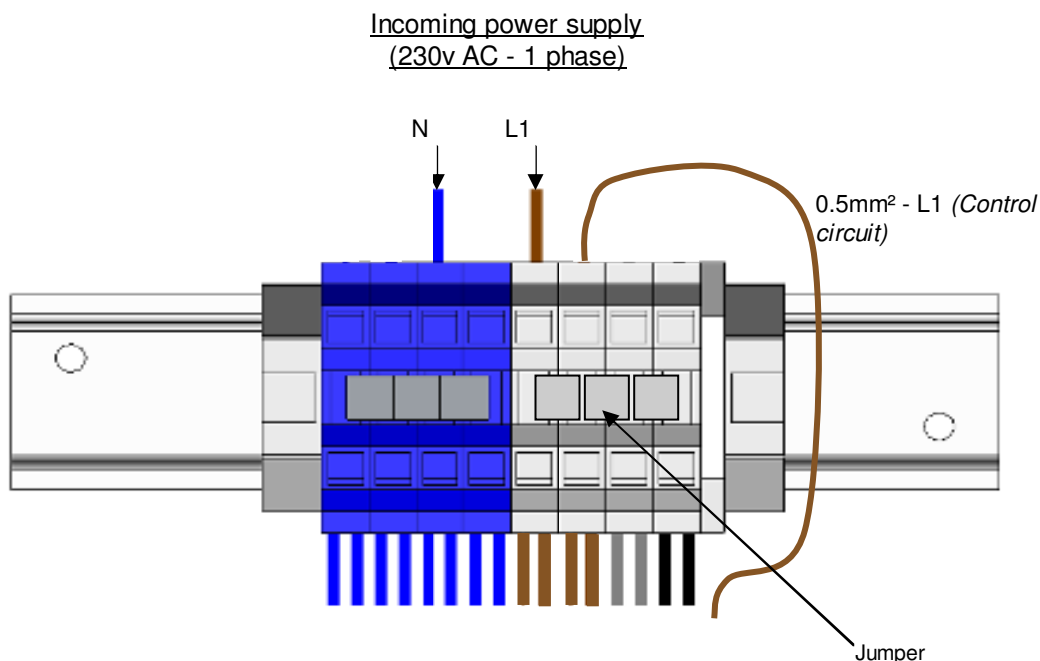
Temperature settings:

The water temperatures on '*Classeq*' range of machines are adjustable, but have been pre-set to:

Machine	105 °C Thermostat positions	
	Rinse thermostat	Wash thermostat
All Machines	<p>Rinse temp 82°C</p> 	<p>Wash temp 55°C</p> 

Work Instructions

Terminal block configuration (Single phase)



Note! The 'jumpers' between L1, L2 & L3 **MUST** be present. Removal of the jumpers will have detrimental effect on the rating of the machine.

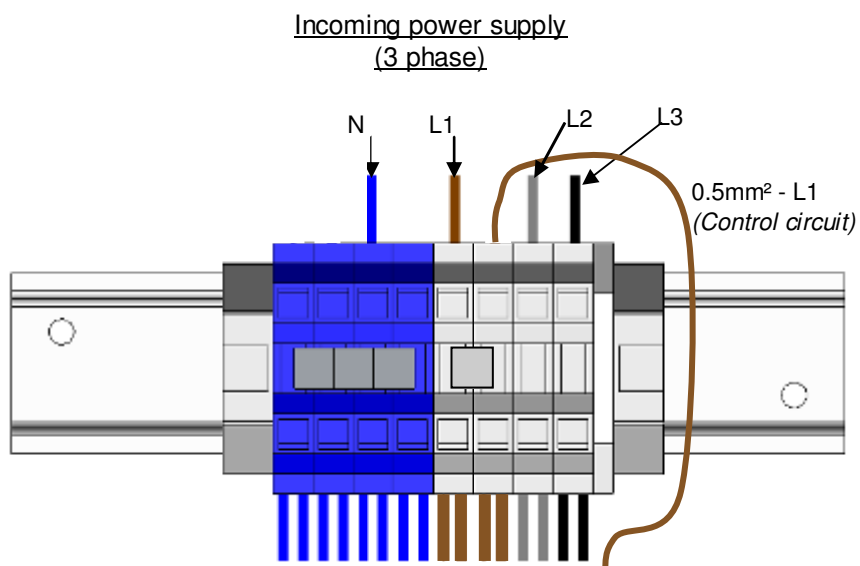


WARNING

The Classeq H957 range **MUST** only ever be installed on 3 phase, as the amperage required for single phase operation would exceed 52 amps and the capacity of the electrical wiring within the machine.

Machine type	Single phase - Electrical data (220 - 240v AC)			
	kW Total	Amps (rating)	Supply cable size	Min. breaker size
H857	6.84	32	4.0mm ²	32 A
H957	n/a	n/a	n/a	n/a

Terminal block configuration (3 phase)



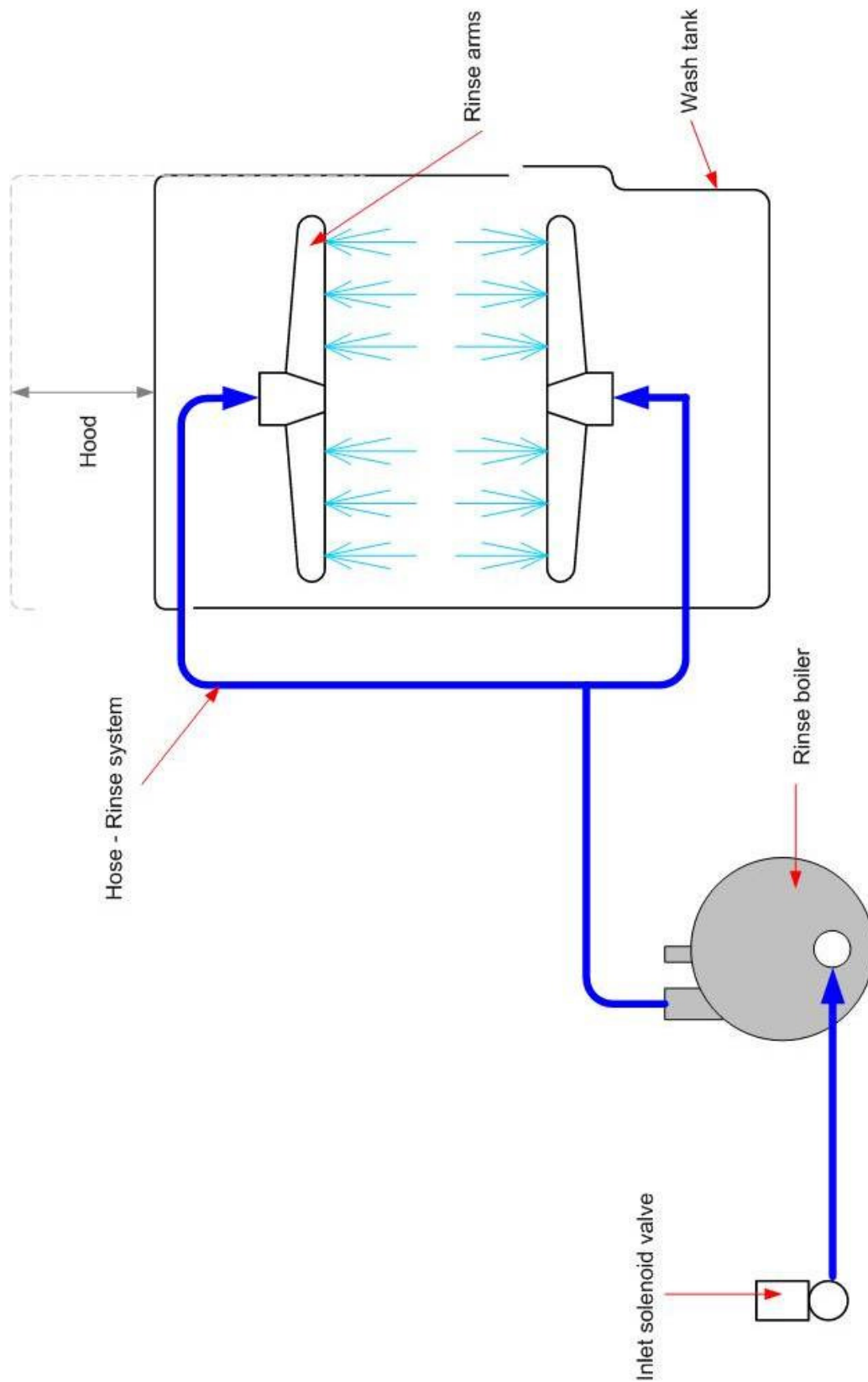
WARNING

Classeq' 3 phase machines **MUST** have a Neutral supply, as all their internal components work at 230v AC and not at 415v AC.

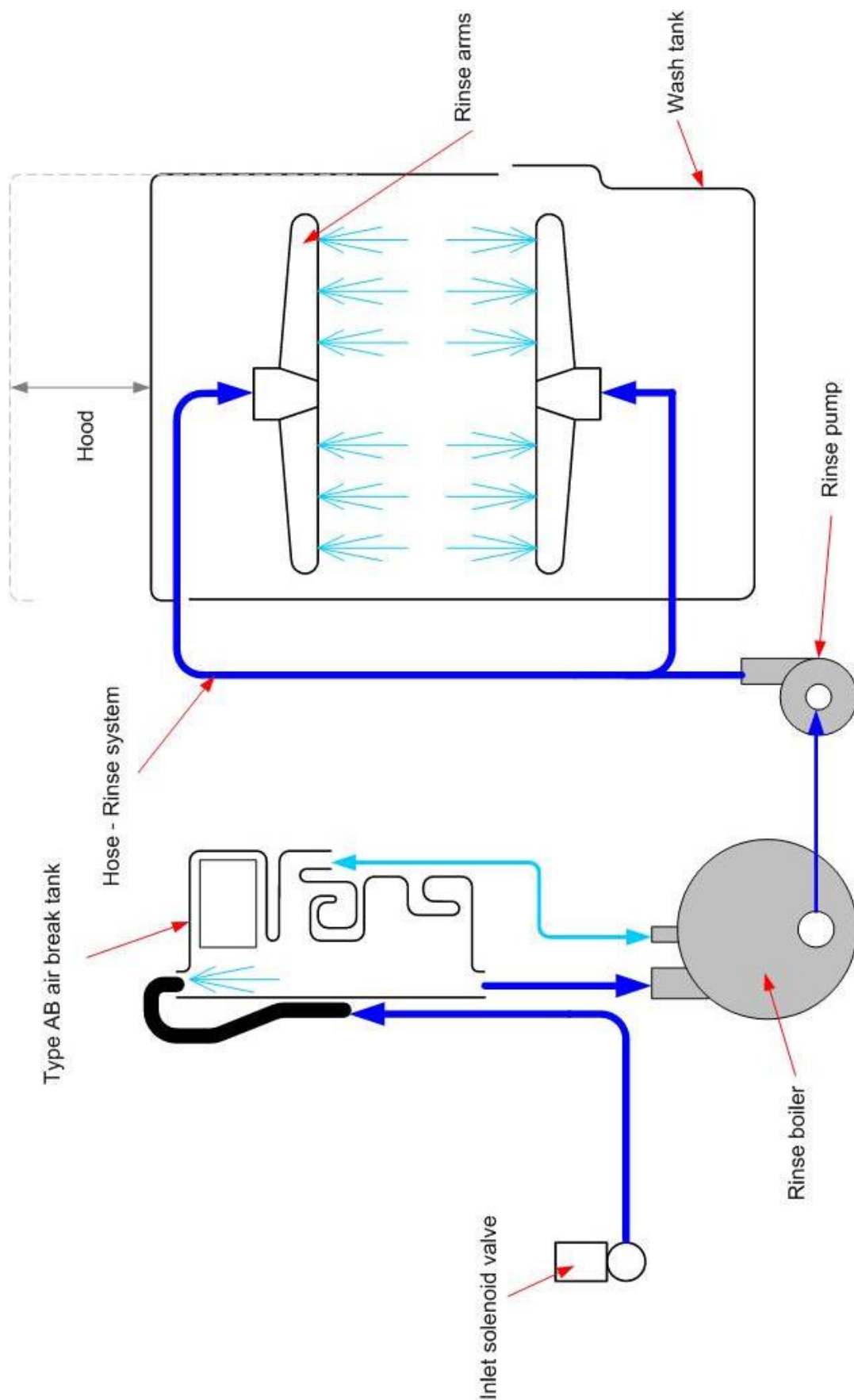
Machine type	3 phase + Neutral - Electrical data (380 - 415v AC)			
	kW Total	Amps per phase (rating)	Supply cable size	Min. breaker size per phase
H857	6.84	13	2.5mm ²	16 A
H957	9.48	17	2.5mm ²	20 A
H957AS	12.84	22	6.0mm ²	25 A

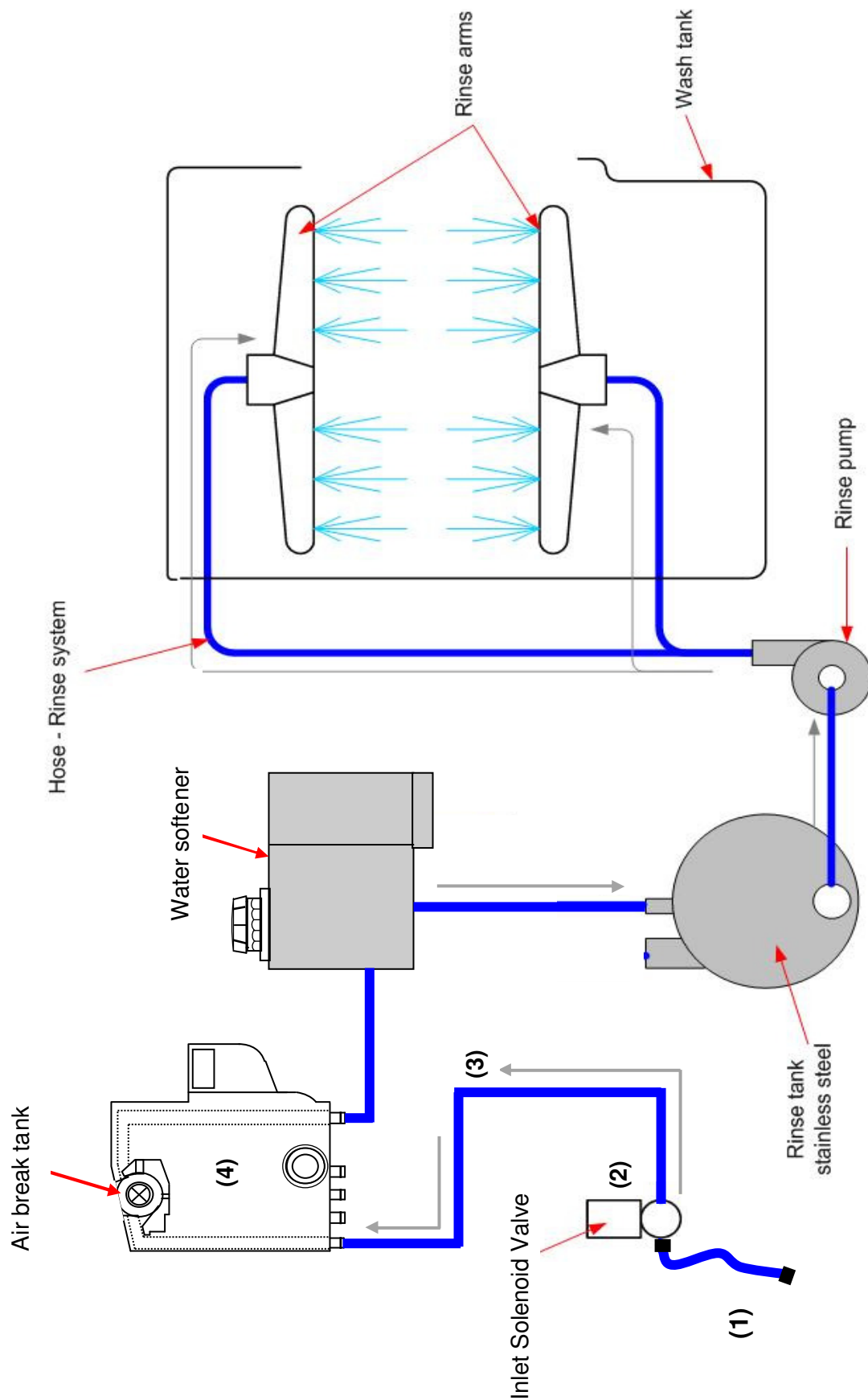
Water Systems

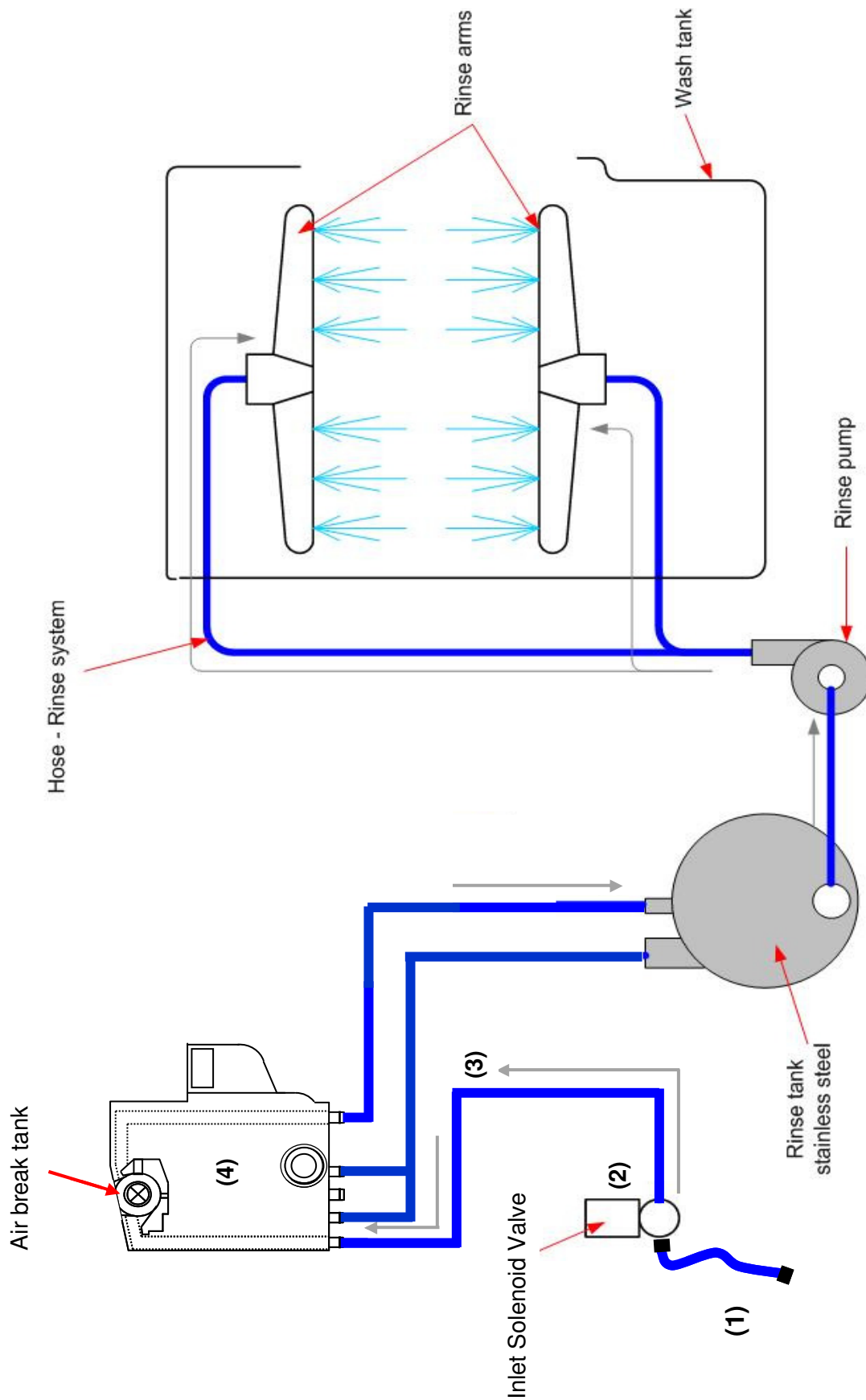
Rinse system (Pressurise machine):

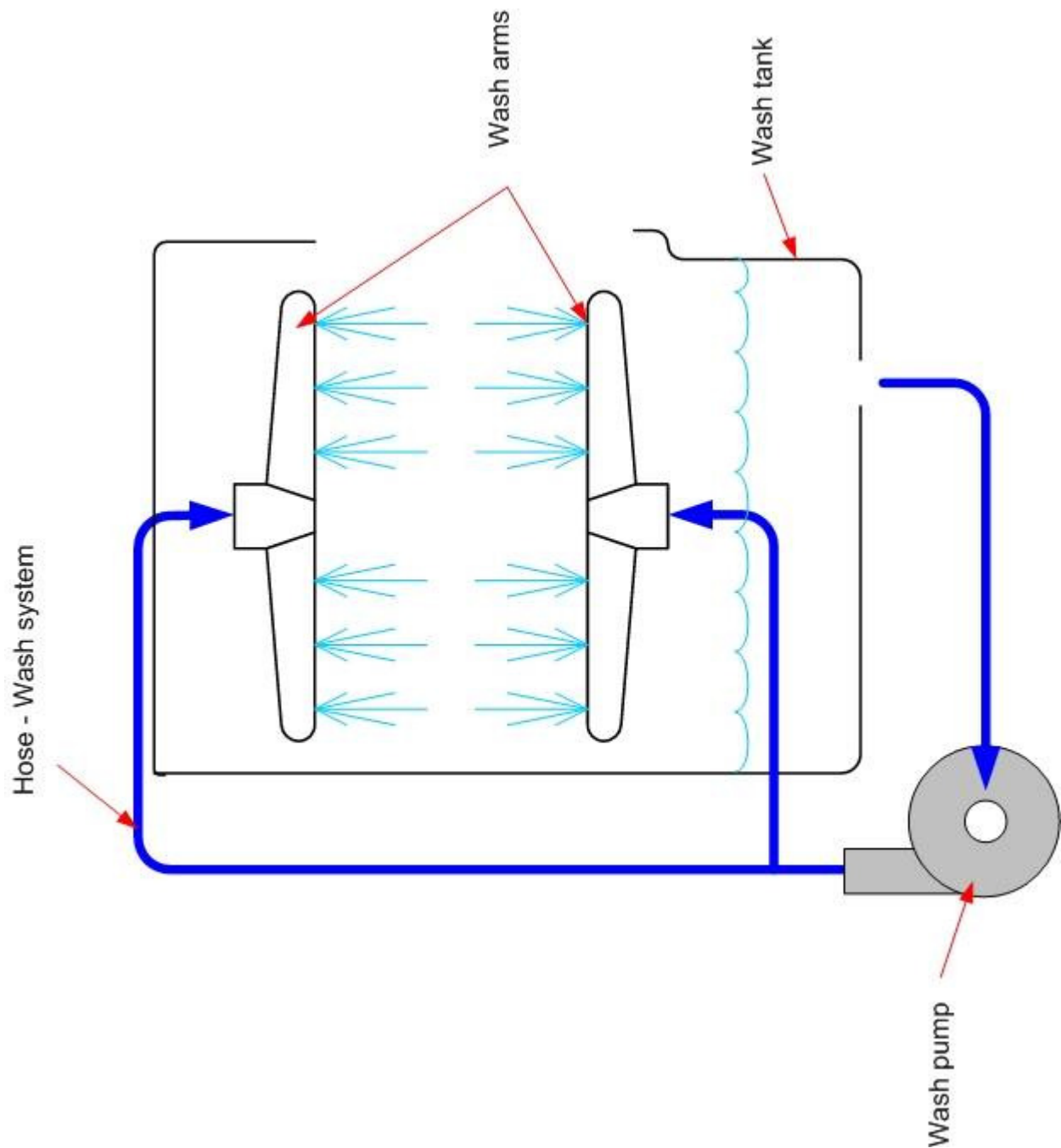


Rinse system (Air Break machine):



Rinse system (All Water softener)

Rinse system (AS Machine)

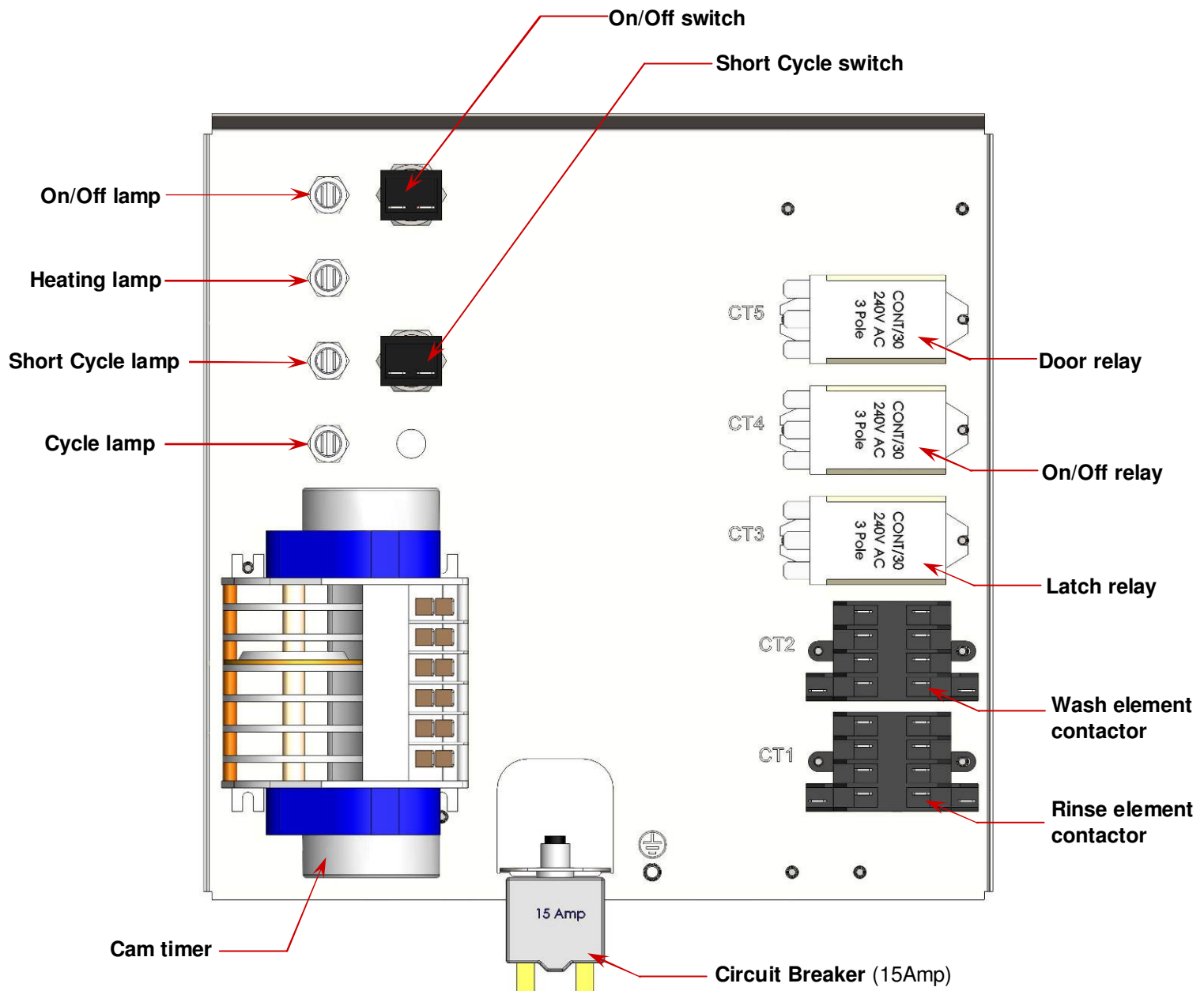
Wash system (all machines):

Electrical Component Data

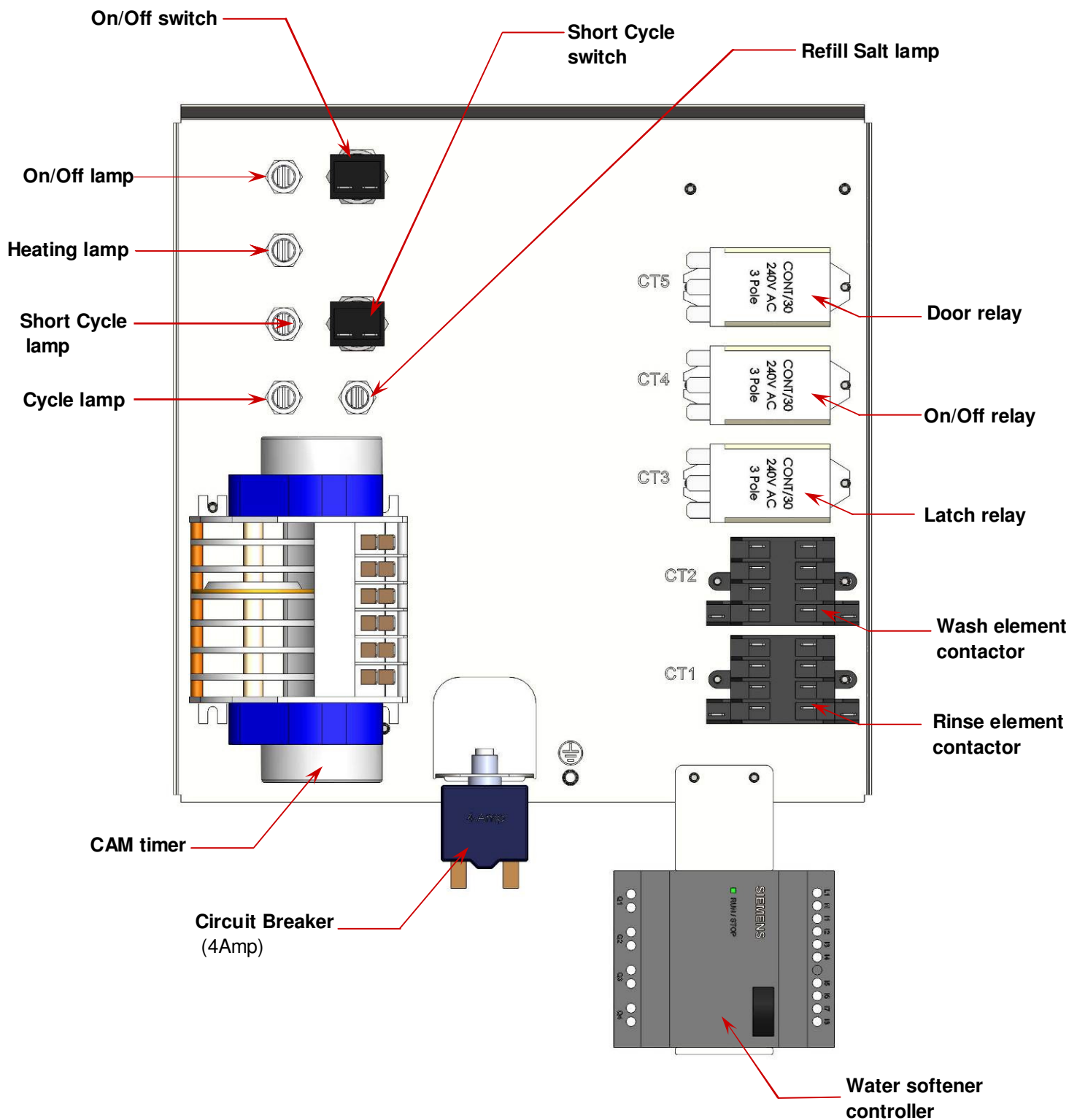
Component		Volts	Hertz	Amps	Watts	Ohms
Inlet solenoid valve (4 ltrs/min)	Hard water solenoid valve Y3/Y1 All machines	220 ~ 240v	50~60 Hz	-	-	-
Water softener	Solenoid valve Y5 (Brine to Resin valve)	220 ~ 240v	50~60 Hz	-	-	-
	Solenoid valve Y4 / Y6 (Waste brine valve)	220 ~ 240v	50~60 Hz	-	-	-
Siemens controller	8 inputs 4 outputs	220 ~ 240v	50~60 Hz	-	-	-
Rinse element	3 x 2.00 kW	220 ~ 240v	-	8.69 A per leg 26.09 A total	2,000w per leg 6,000w total	26.45 Ω per leg 8.82 Ω total
	3 x 2.88 kW (Hydro 957 only)	220 ~ 240v	-	12.52 A per leg 37.57 A total	2,880w per leg 8,640w total	18.37 Ω per leg 6.12 Ω total
Rinse pump		220 ~ 240v	50 Hz	1.17 A running	270 w	196 Ω
Wash element	1 x 2.00 kW (Under counter machines)	220 ~ 240v	-	8.69 A	2,000w total	26.45 Ω total
	3 x 1.35 kW (Hydro 857 & Hydro 957)	220 ~ 240v	-	5.87 A per leg 17.60 A total	1,350w per leg 4,050w total	39.18 Ω per leg 13.06 Ω total
Wash pump		220 ~ 240v	50 Hz	3.3 A running	720w	72.72 Ω
Drain pump		220 ~ 240v	50 Hz	0.13 A	30w	1,763 Ω
CAM timer	2 minute (Duo 3, Eco 3)	220 ~ 240v	50 Hz	-	-	-
	3 minute (Duo 750, Hydro 750)	220 ~ 240v	50 Hz	-	-	-
	1 ½ & 3 minute (Hydro 857 & Hydro 957)					
Contactors (Siemens)	3 pole Normally Open 1 pole Normally Closed Contactor	220 ~ 240v	50~60 Hz	-	-	-
Relays (Finder)	3 pole change over relay	220 ~ 240v	50~60 Hz	-	-	-
Rinse aid pump		220 ~ 240v	50~60 Hz	0.02 A	5.5w	9,918 Ω
Detergent pump		220 ~ 240v	50~60 Hz	0.02 A	5.5w	9,918 Ω
Indicator lamps	Amber	220 ~ 240v	50~60 Hz	-	-	-
	Blue	220 ~ 240v	50~60 Hz	-	-	-
	Green	220 ~ 240v	50~60 Hz	-	-	-
	Red	220 ~ 240v	50~60 Hz	-	-	-
	White	220 ~ 240v	50~60 Hz	-	-	-

Control Panel Layouts

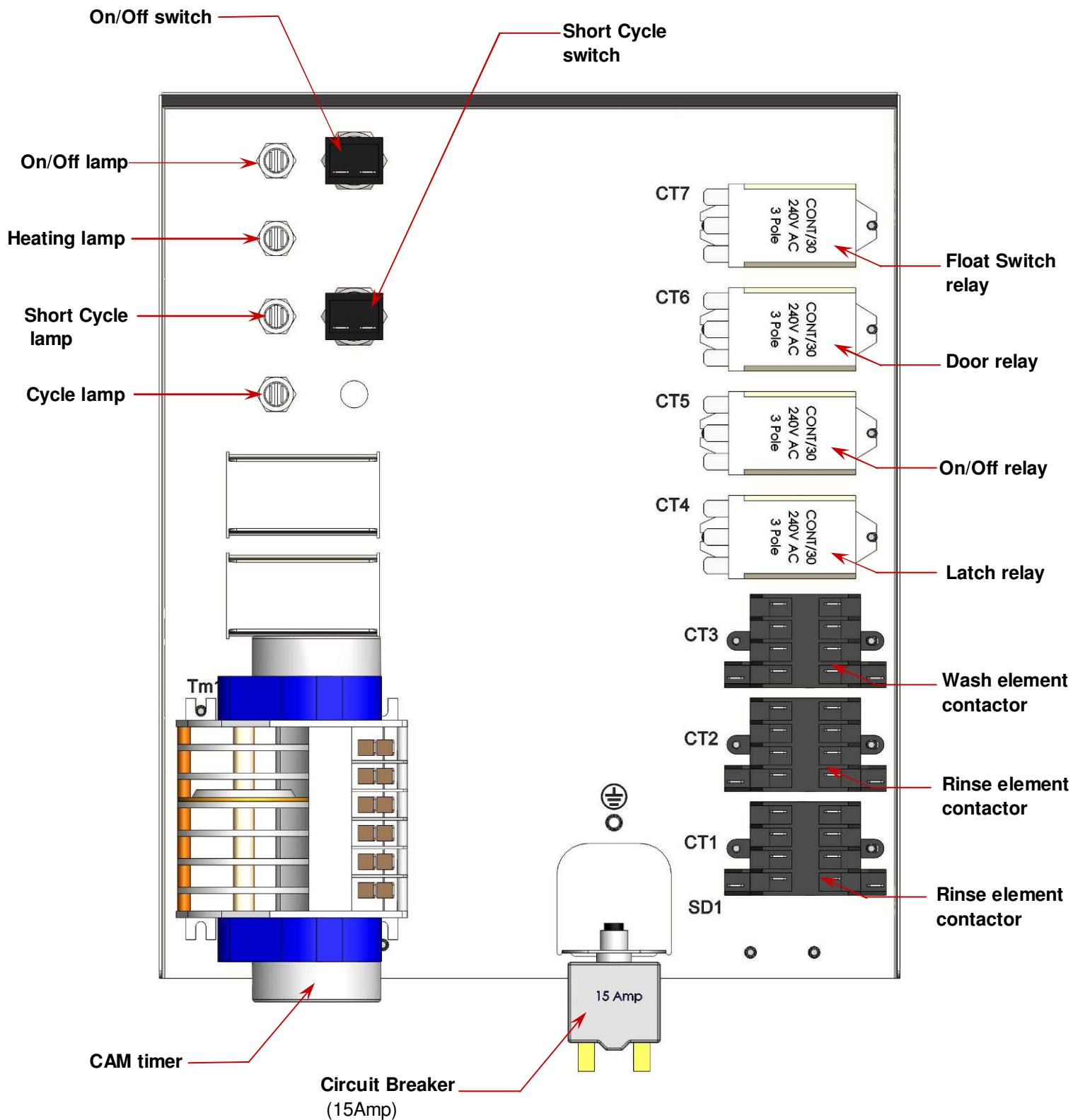
Standard Machines:



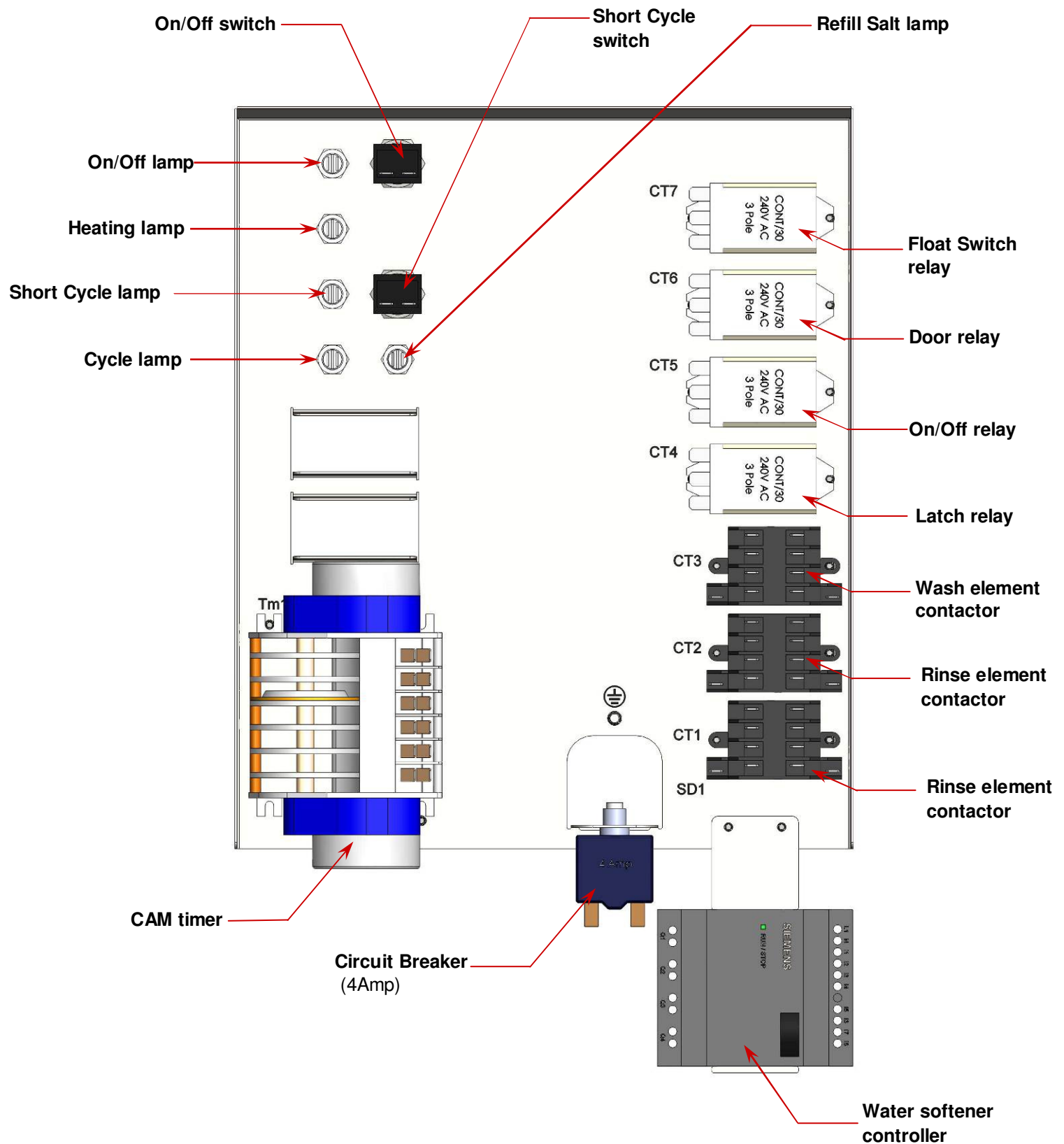
Water Softener machines:



H957 AS machine:

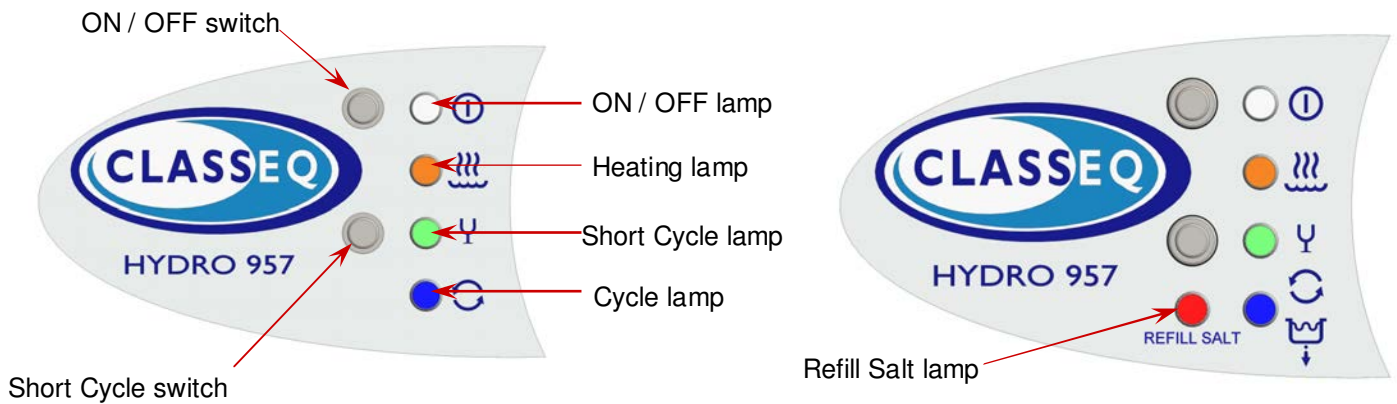


H957 AS / WS machine:

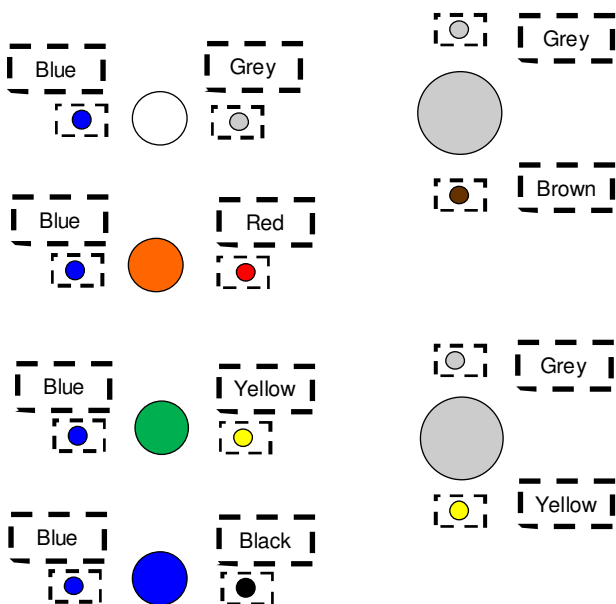


Switch Panels:

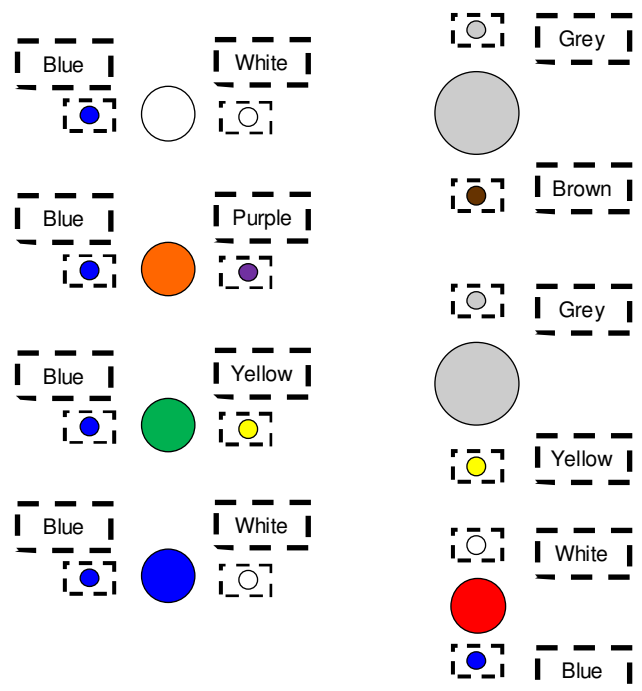
LM-P3-STD-09:

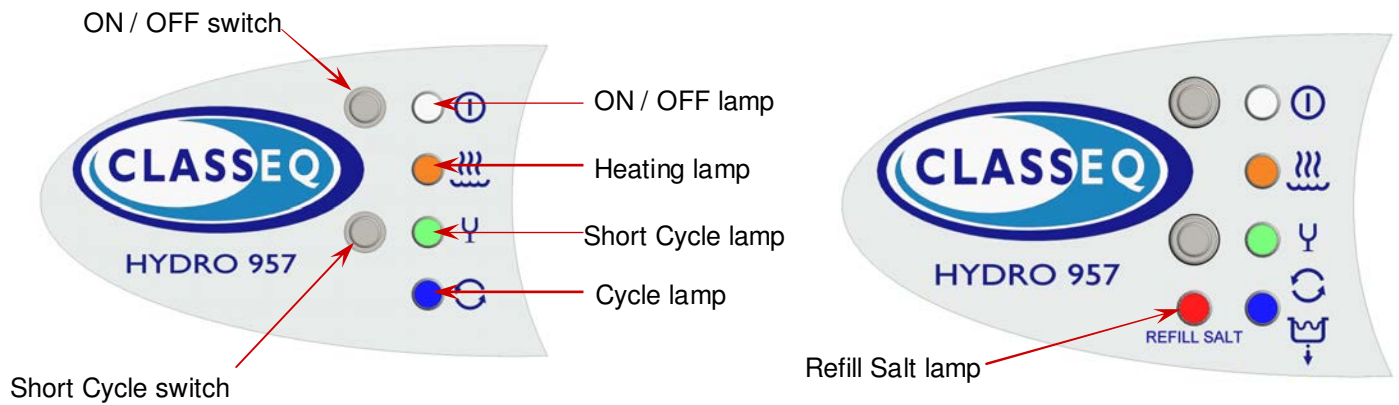
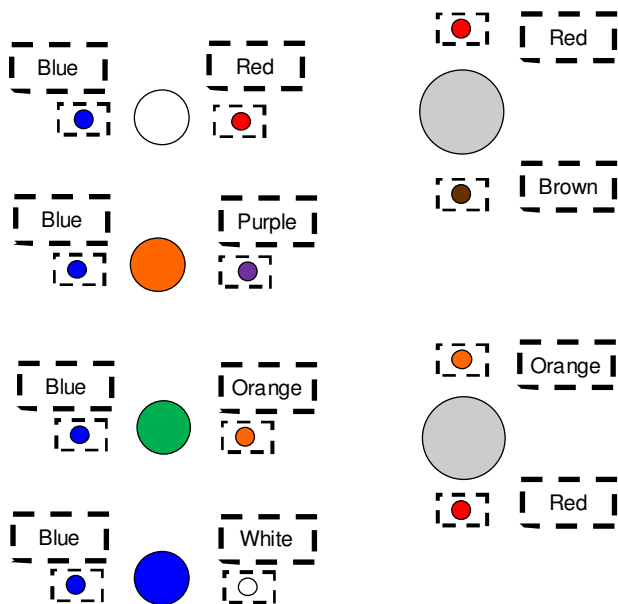
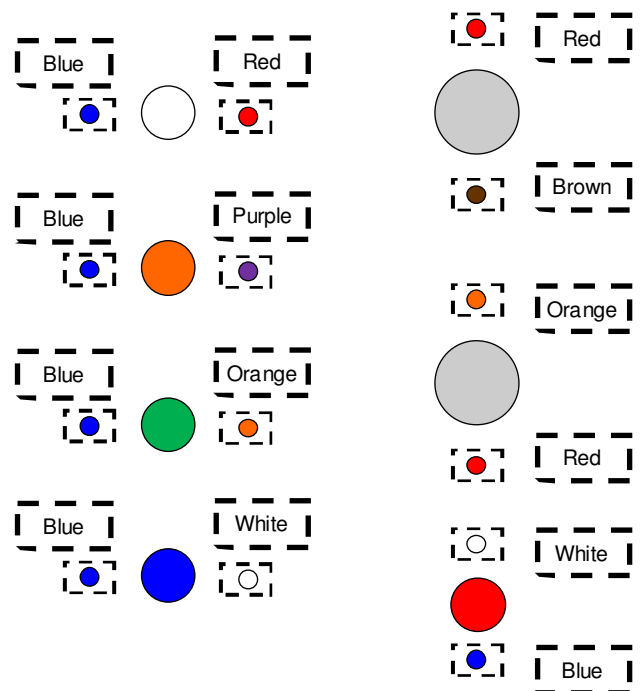


Standard machines



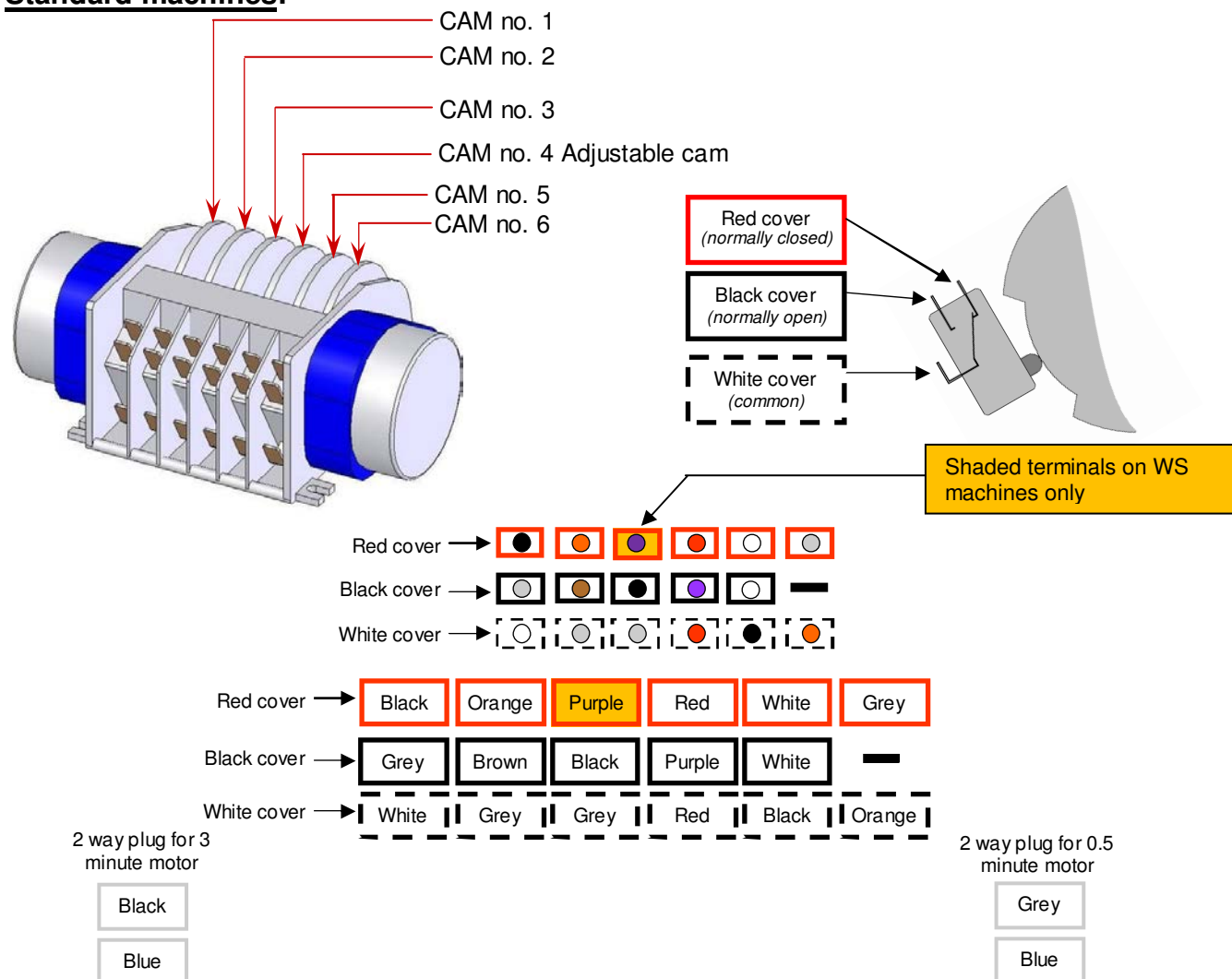
Water softener machines



LM-P3-H957AS:**Standard AS machines****Water softener AS machines**

Cam Timers

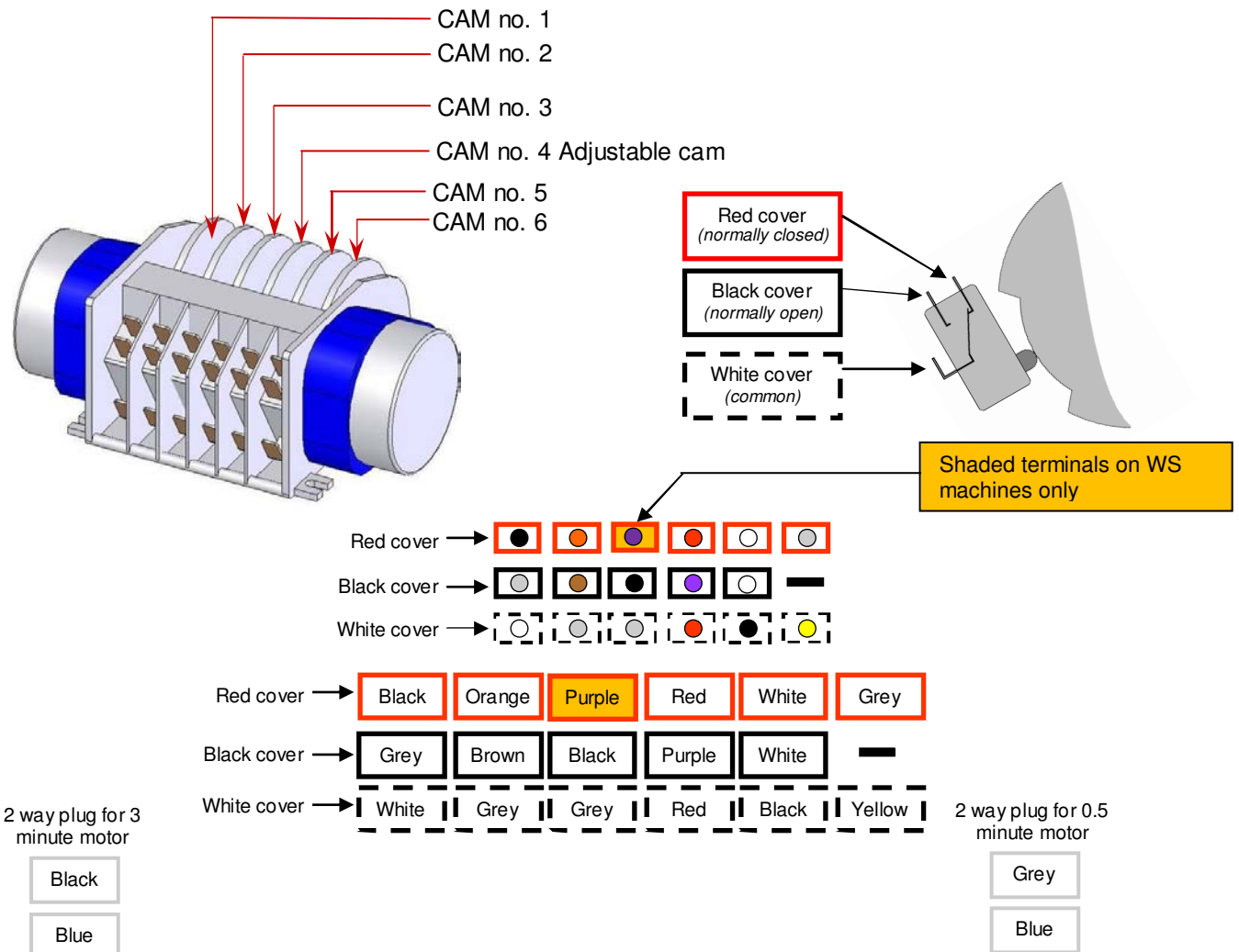
Standard machines:



→ Incoming 220-240V Live Hood open	→ Incoming 220~240V Live Wash APS (14) High + m/c On	Out going → 220-240v live ESO6 - I1 (Cycle count)	→ Incoming 220~240V Live On/off switch	→ Incoming 220~240V Live On/Off relay (Interlock)	→ Incoming 220~240v Live Short cycle motor
→ Incoming 220~240V Live Hood closed	→ Incoming 220~240V Live Direct from TCB	Out going → 220~240V Live Run Drain pump (m/c off) Run wash pump (m/c on)	→ Incoming 220~240V Live Wash APS (12) Low	→ Incoming 220~240V Live Cam 1 (11)	
Out going → 220~240V Live Start Cycle	Out going → 220~240V Live Cycle timer run	→ Incoming 220~240V Live Cycle run	Out going → 220~240V Live Run Rinse Pump	Out going → 220~240V Live Run Cycle Timer	Out going → 220~240v Live Short Cycle Switch

→ Incoming 220~240v Live Run cycle, signal from latch contactor (12)	Neutral 220~240v Neutral Terminal block
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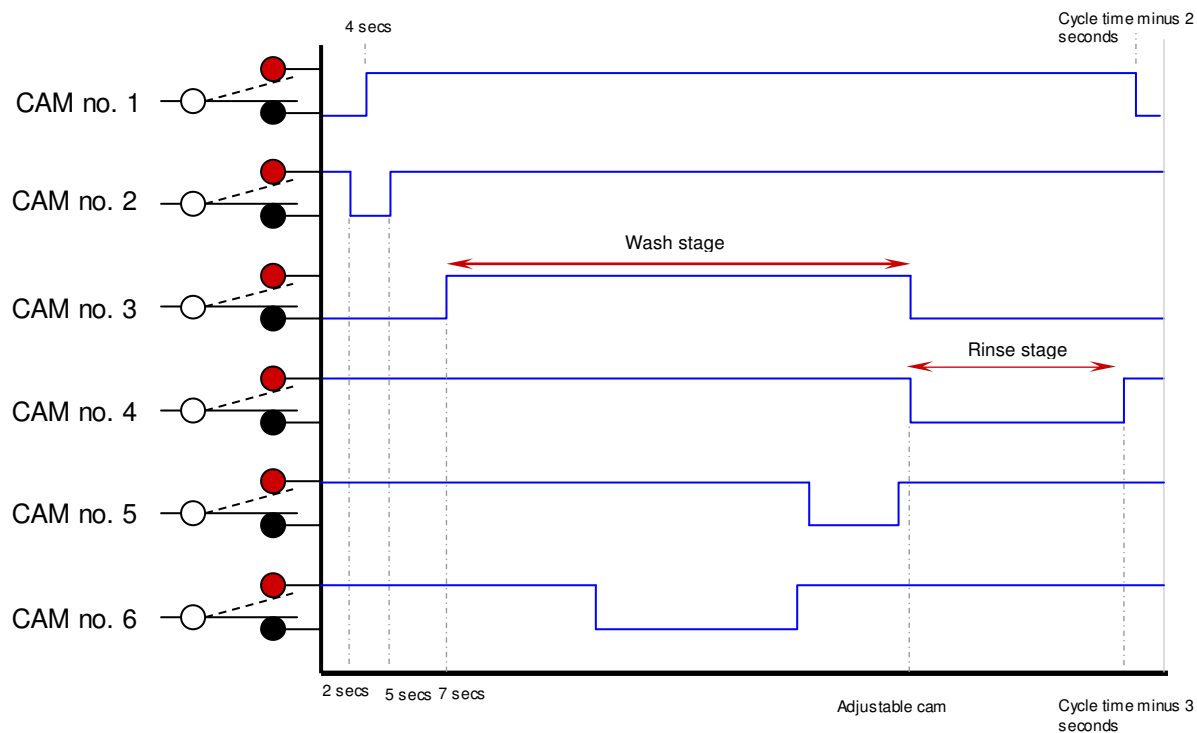
→ Incoming 220~240v Live Short cycle, signal from cam 6	Neutral 220~240v Neutral Terminal block
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AS machines:

→ Incoming	→ Incoming	Out going →	→ Incoming	→ Incoming	→ Incoming
220-240V Live Hood open	220~240V Live Wash APS (14) High + m/c On	220-240v live ESO6 - I1 (Cycle count)	220~240v Live On/off switch	220~240V Live On/Off relay (Interlock)	220~240v Live Short cycle motor
→ Incoming	→ Incoming	Out going →	→ Incoming	→ Incoming	
220~240V Live Hood closed	220~240V Live Direct from TCB	220~240V Live Run Drain pump (m/c off) Run wash pump (m/c on)	220~240v Live Wash APS (12) Low	220~240V Live Cam 1 (11)	
Out going →	Out going →	→ Incoming	Out going →	Out going →	Out going →
220~240v Live Start Cycle	220~240v Live Cycle timer run	220~240v Live Cycle run	220~240v Live Run Rinse Pump	220~240v Live Run Cycle Timer	220~240v Live Short Cycle Switch

→ Incoming	Neutral
220~240v Live Run cycle, signal from latch contactor (12)	220~240v Neutral Terminal block

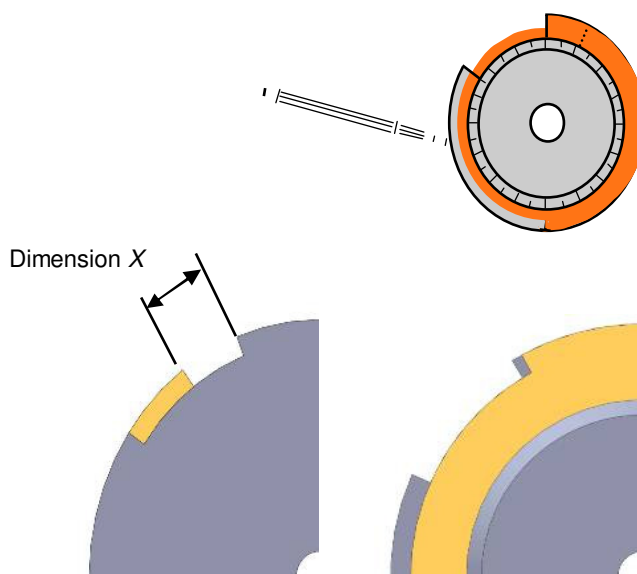
→ Incoming	Neutral
220~240v Live Short cycle, signal from cam 6	220~240v Neutral Terminal block



Adjusting Cam 4

Cam 4 can be adjusted to increase and decrease the length of the rinse cycle for the optimal finished quality without wasting water. To do this use an Allen key to turn the screw on the orange section to adjust "Dimension X" as follows:

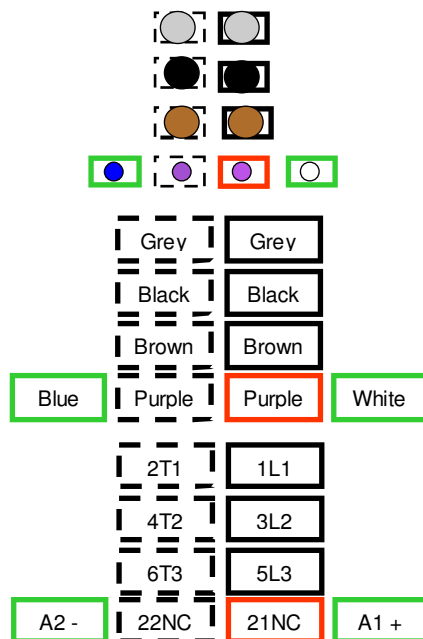
Defaults to give 2.75 litre rinse volume	
MACHINE	Dimension X
Hydro 857 / 957	Fully open
Hydro 857A / 957A / 957AS / 957WS / 957AS/WS	7mm



Contactors & Relays

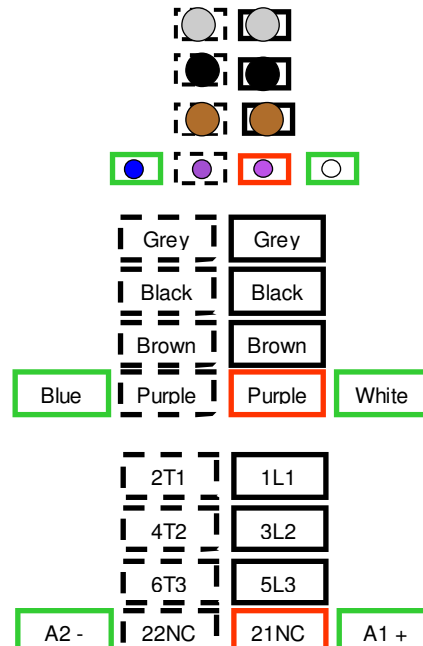
LM-P3-STD-09

Rinse Element contactor CT1

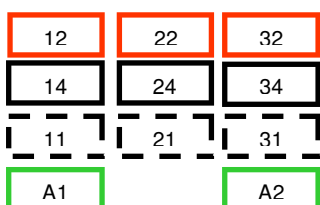
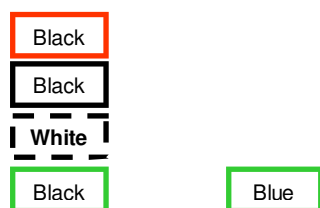
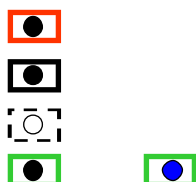
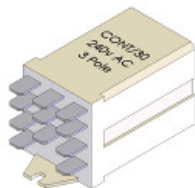


→5L3 220~240V Neutral Terminal Block	6T3→ 220~240V Neutral Rinse Element		
→3L2 220~240V Live Terminal Block	4T2→ 220~240V Live Rinse Element		
→1L1 220~240V Live Terminal Block	2T1→ 220~240V Live Rinse Element		
→A1 220~240V Live Rinse APS1 High (Air break machines Only) Rinse thermostat (Pressurised machines Only)	→21NC 220~240V Live Wash thermostat (2)	22NC → 220~240V Live Wash element contactor 22NC + Heating lamp	A2 220~240V Neutral Rinse Element (through rinse safety thermostat)

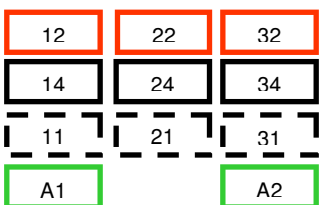
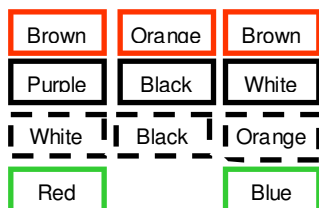
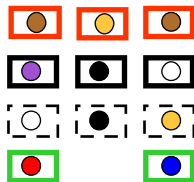
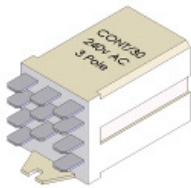
Wash Element contactor CT2



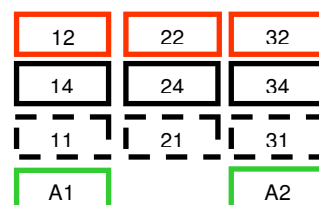
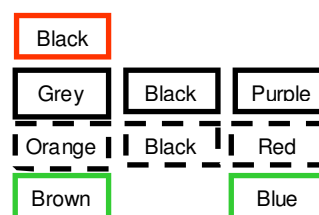
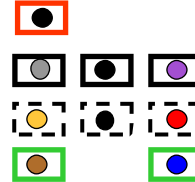
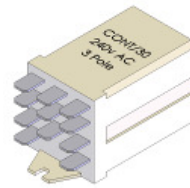
→5L3 220~240V Neutral Terminal Block	6T3→ 220~240V Neutral Wash Element		
→3L2 220~240V Live Terminal Block	5T2→ 220~240V Live Wash Element		
→1L1 220~240V Live Terminal Block	2T1→ 220~240V Live Wash Element		
→A1 220~240v Live Wash thermostat	→21NC 220~240V Live Rinse element contactor A1	22NC → 220~240v Live Rinse element contactor 22NC + Heating lamp	A2 220~240v Neutral Wash Element (through rinse safety thermostat)

Latch / Cycle Relay CT3

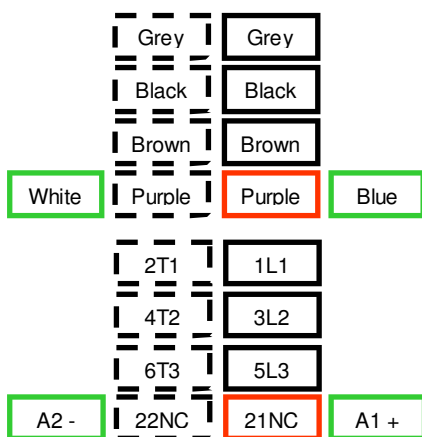
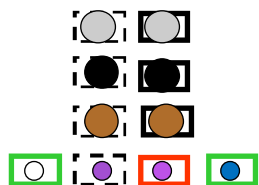
→12		
220~240V Live Cam timer (51)		
→14		
220~240V Live Cam timer (34)		
11→		
220~240V Live Cycle lamp		
→A1		A2
220~240V Live Cam timer (34)		220~240V Neutral Terminal block

On/Off Relay CT4

→12	22→	→32
220~240V Live Circuit breaker	220~240V Live Drain pump	220~240V Live Circuit breaker
→14	24→	→34
220~240V Live Interlock achieved	220~240V Live Wash pump via door relay	220~240V Live Wash APS (14)
11→	→21	31→
220~240V Live OK to run cycle	220~240V Live Cycle timer (34)	220~240V Live Run Cycle
→A1		A2
220~240V Live On / Off switch		220~240V Neutral Terminal block

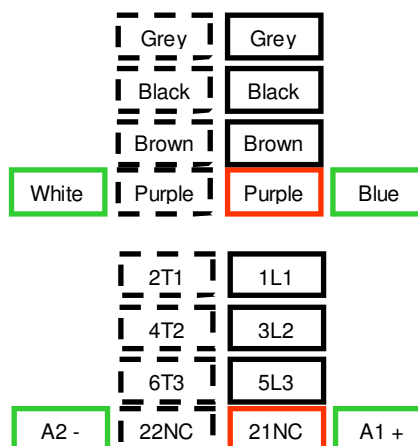
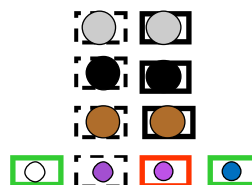
Door Relay CT5

12	22	32→
220~240V Live Start cycle		
14→	24→	34→
220~240V Live Door closed run cam timer	220~240V Live Run Wash pump	220~240V Live Run rinse pump
→11	→21	→31
220~240V Live OK to run cycle	220~240V Live CT4 (24)	220~240V Live Cam timer (41)
→A1		A2
220~240V Live Door switch		220~240V Neutral Terminal block

LM-P3-H957AS:Rinse Element contactor CT1

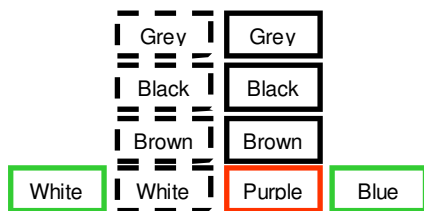
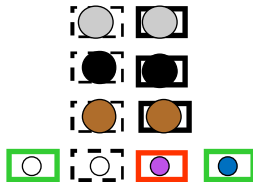
→5L3 220~240V Neutral Terminal Block	6T3→ 220~240V Neutral Rinse Element
→3L2 220~240V Live Terminal Block	4T2→ 220~240V Live Rinse Element
→1L1 220~240V Live Terminal Block	2T1→ 220~240V Live Rinse Element

→A1 220~240V Live Rinse thermostat	→21NC 220~240V Live Live Wash thermostat (2)	22NC → 220~240V Live Live Wash element contactor 22NC + Heating lamp	A2 220~240V Neutral Terminal block
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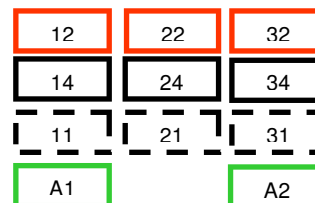
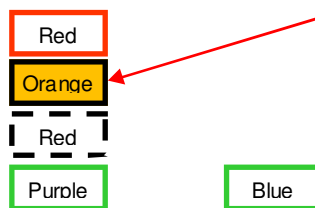
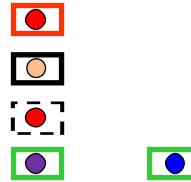
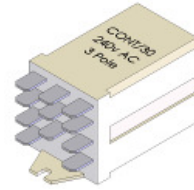
Rinse Element contactor CT2

→5L3 220~240V Neutral Terminal Block	6T3→ 220~240V Neutral Wash Element
→3L2 220~240V Live Terminal Block	4T2→ 220~240V Live Wash Element
→1L1 220~240V Live Terminal Block	2T1→ 220~240V Live Wash Element

→A1 220~240V Live Rinse thermostat	→21NC 220~240V Live Wash thermostat (2)	22NC → 220~240V Live Live Wash element contactor 22NC + Heating lamp	A2 220~240V Neutral Terminal block
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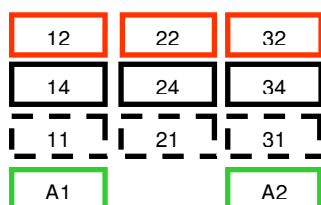
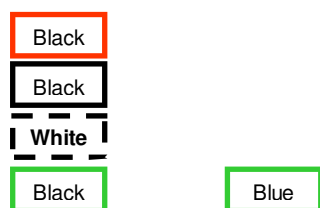
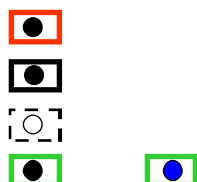
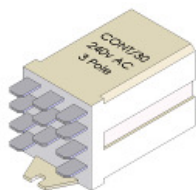
Wash Element contactor CT3

→5L3		6T3→	
220~240V Neutral Terminal Block		220~240V Neutral Wash Element	
→3L2		4T2→	
220~240V Live Terminal Block		220~240V Live Wash Element	
→1L1		2T1→	
220~240V Live Terminal Block		220~240V Live Wash Element	
→A1	→21NC	22NC →	A2
220~240V Live Wash thermostat	220~240V Live Rinse thermostat (2)	220~240V Live Rinse element contactor 22NC + Heating lamp	220~240V Neutral Terminal block

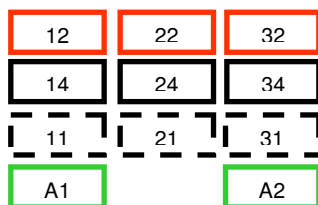
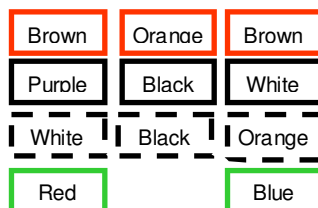
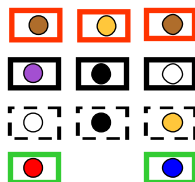
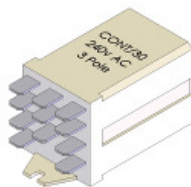
Float Switch Relay CT7

NOTE:
WS Machines Only:
Orange wire with white
cover is from WS loom
from input I5 that would
normally go to the APS
terminal 24 on other
WS machines.

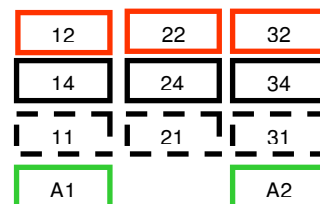
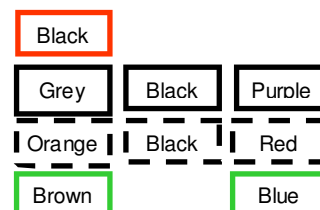
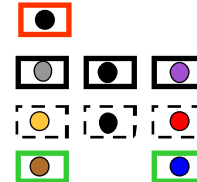
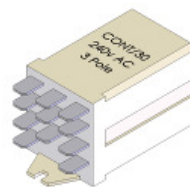
12→		
220~240V Live Solenoid valve		
→14		
220~240V Live ES-06 – I5 (rinse boiler full)		
→11		
220~240V Live On/Off switch		
→A1		A2
220~240V Live Float switch high		220~240V Neutral Terminal block

Latch / Cycle Relay CT4

→12 220~240V Live Cam timer (51)		
→14 220~240V Live Cam timer (34)		
11→ 220~240V Live Cycle lamp		
→A1 220~240V Live Cam timer (34)		A2 220~240V Neutral Terminal block

On/Off Relay CT5

→12 220~240V Live Circuit breaker	22→ 220~240V Live Drain down	→32 220~240V Live Circuit breaker
→14 220~240V Live Interlock achieved	24→ 220~240V Live Wash pump via door relay	→34 220~240V Live Wash APS (14)
11→ 220~240V Live OK to run cycle	→21 220~240V Live Cycle timer run	31→ 220~240V Live Run Cycle
→A1 220~240V Live On / Off switch		A2 220~240V Neutral Terminal block

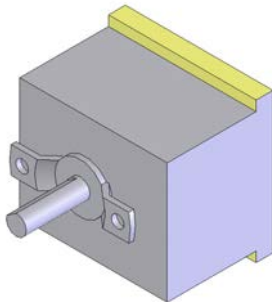
Door Relay CT6

12 220~240V Live Start cycle	22 220~240V Live Run wash pump	32→ 220~240V Live Run rinse pump
14→ 220~240V Live Door closed run cam timer	24→ 220~240V Live Run wash pump	34→ 220~240V Live Run rinse pump
→11 220~240V Live OK to run cycle	→21 220~240V Live CT5 (24)	→31 220~240V Live Cam timer (41)
→A1 220~240V Live Door switch		A2 220~240V Neutral Terminal block

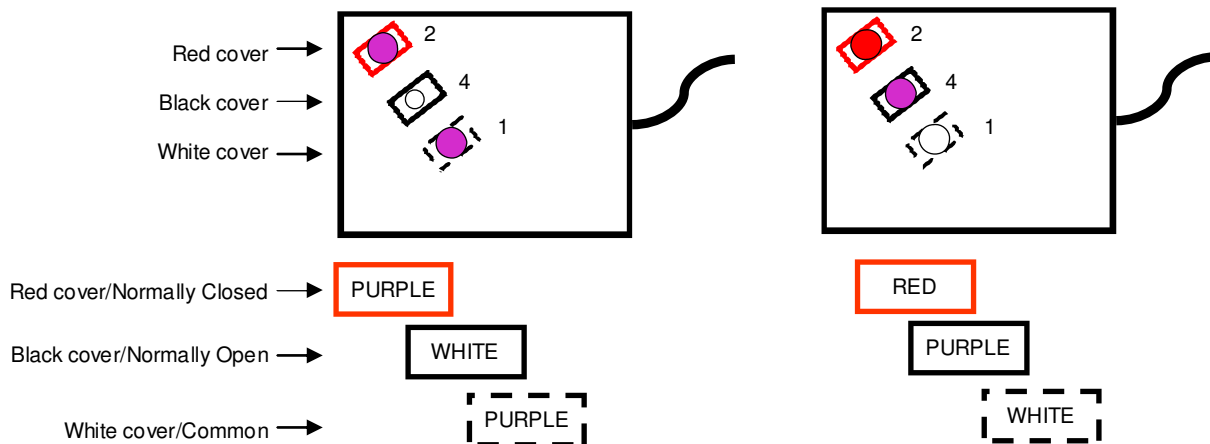
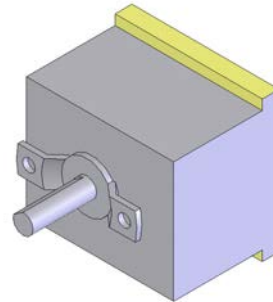
Thermostats Wiring

LM-P3-STD-09:

Wash Thermostat

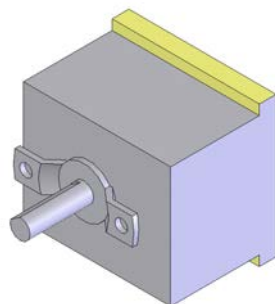


Rinse Thermostat

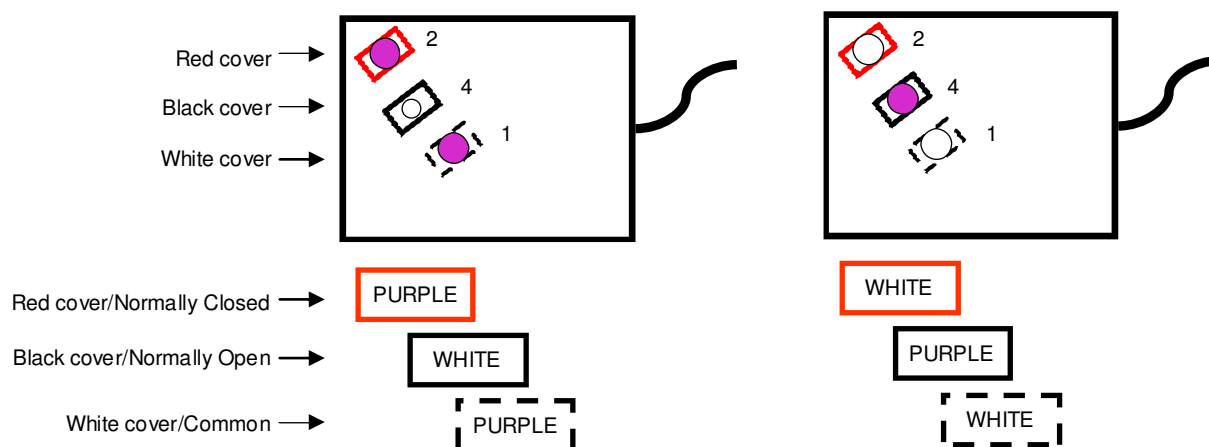
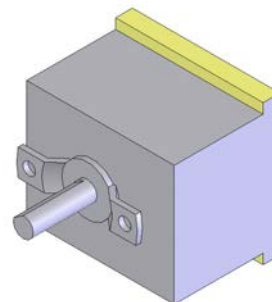


LM-P3-H957AS:

Wash Thermostat

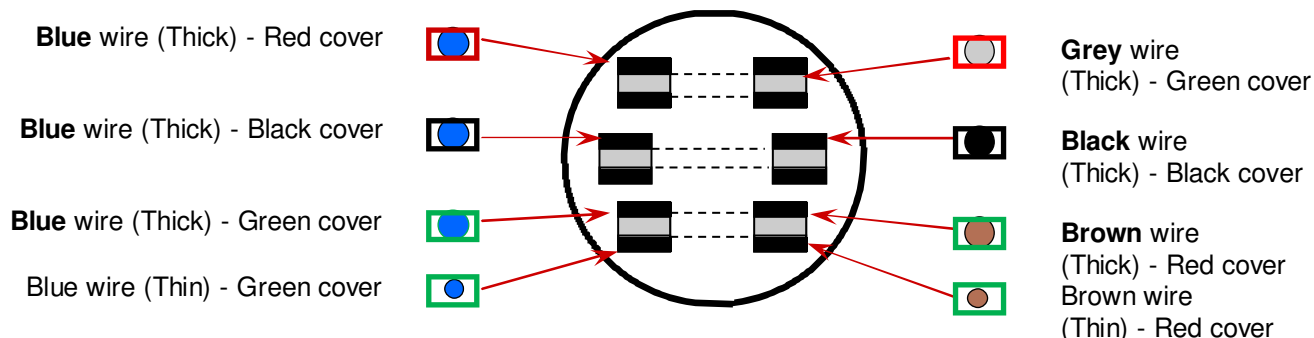


Rinse Thermostat

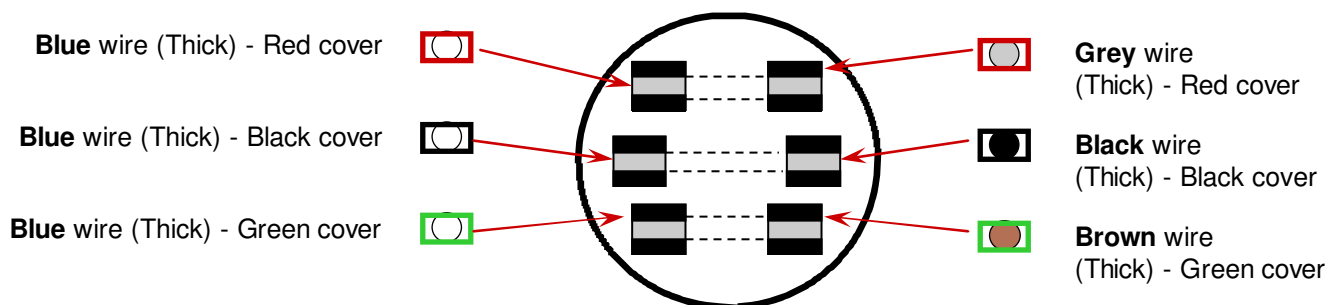


Element & Safety Thermostats Wiring

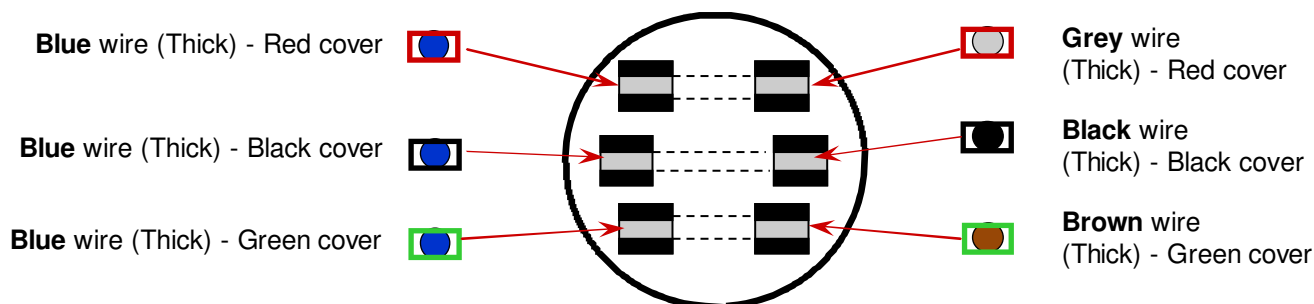
Rinse element wiring using loom LM-P3-STD-09



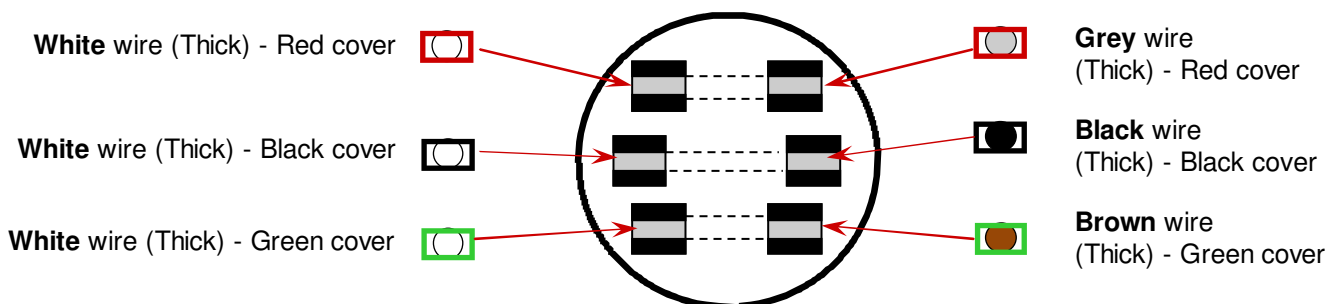
Rinse element wiring using loom LM-P3-H957AS



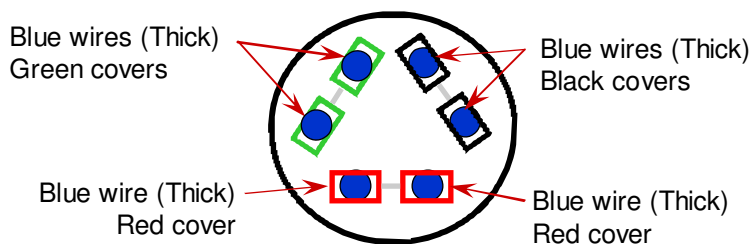
Wash elements wiring using loom LM-P3-STD-09



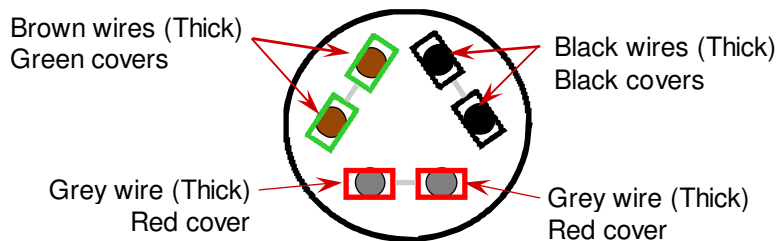
Wash elements wiring using loom LM-P3-H957AS



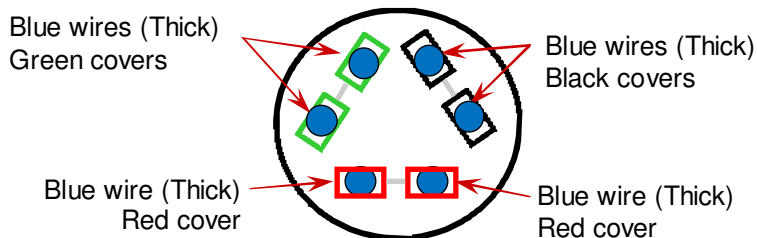
Rinse saftey thermostat LM-P3-STD-09



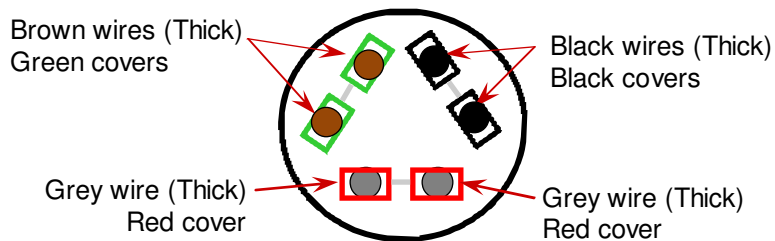
Rinse safety thermostat LM-P3-H957AS



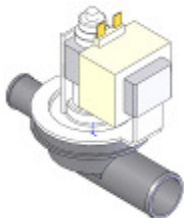
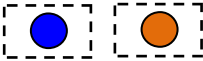
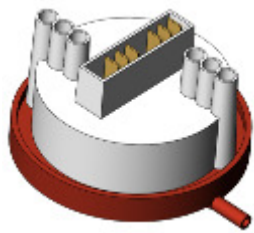
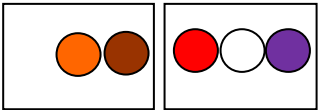
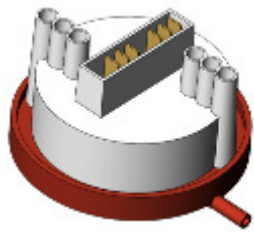
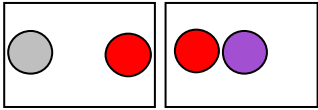

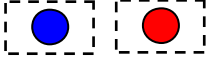

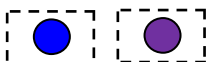

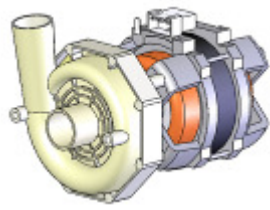
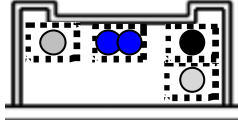
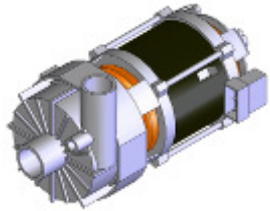
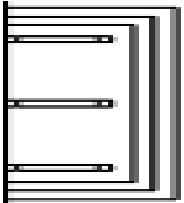
Wash safety thermostat LM-P3-STD-09

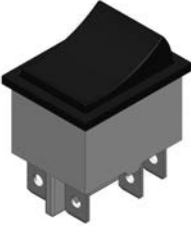











Wash safety thermostat LM-P3-H957AS

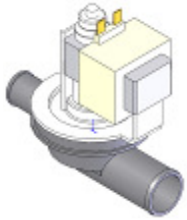
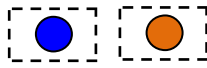
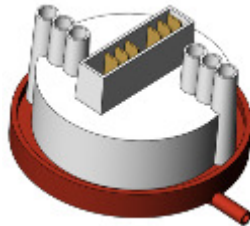
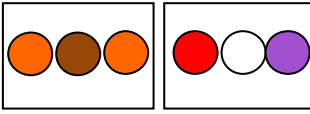

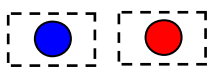

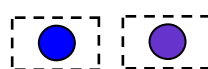
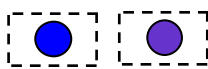
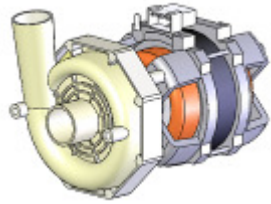
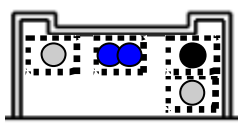
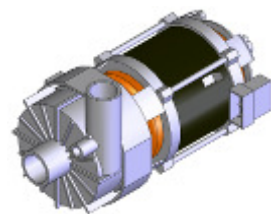
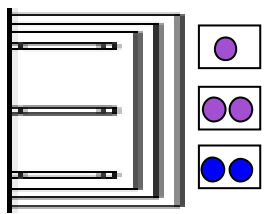
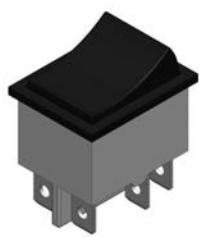











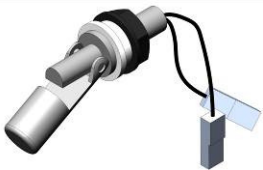


Components Wiring LM-P3-STD-09

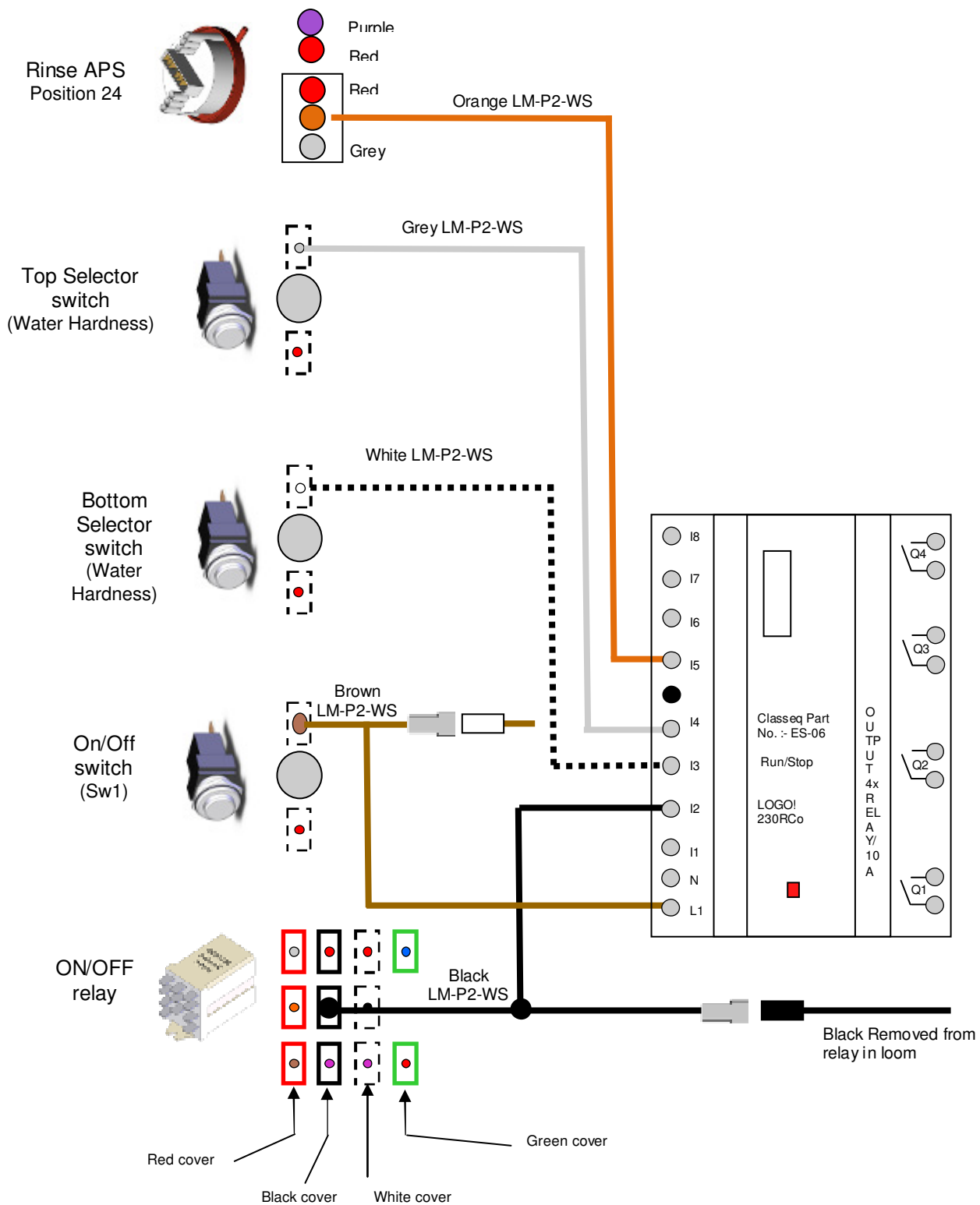
Component	Part number & description	Wiring configuration
	Drain Pump	 Blue Wire / White Crimp Orange Wire / White Crimp
	Wash Air pressure Switch	22 / 24 / 21 11 / 14 / 12 
	Rinse Air pressure Switch	22 / 24 / 21 11 / 14 / 12 
	Inlet Solenoid Valve	 Blue Wire / White Crimp Red Wire / White Crimp
	Rinse Aid & Detergent Pumps	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Detergent  Blue Wire / White Crimp Purple Wire / White Crimp </div> <div style="text-align: center;"> Rinse Aid  Black Wire / White Crimp Blue Wire / White Crimp </div> </div>
	Wash Pump	 Grey Blue Black Grey
	Rinse Pump	 Purple Double Purple Double Blue

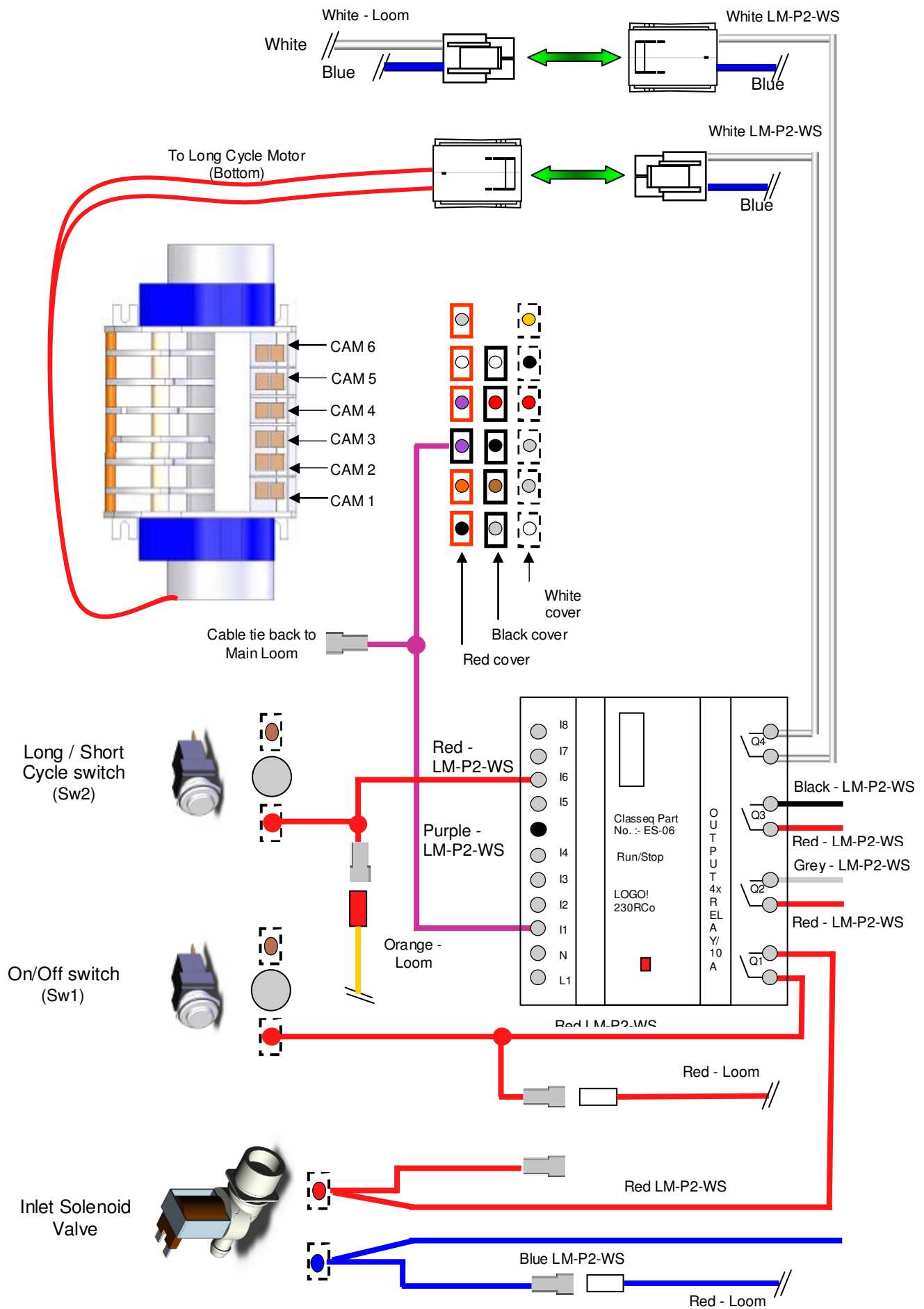
	Rinse Prime Switch	<div><div>A3</div><div></div><div>Red Wire / Red Crimp</div></div> <div><div>A2</div><div></div><div>White Wire / Black Crimp</div></div> <div><div>A1</div><div></div><div>Black Wire / White Crimp</div></div>
	Quick Start Thermostat	<div><div></div><div>Red Wire / White Crimp</div></div> <div><div></div><div>White Wire / White Crimp</div></div>
	Circuit Breaker	<div><div></div><div>Brown Wire / White Crimp</div></div> <div><div></div><div>Brown Wire / White Crimp</div></div>

Components Wiring LM-P3-H957AS

component	Part number & description	Wiring configuration
	Drain Pump	 Blue Wire / White Crimp Orange Wire / White Crimp
	Wash Air pressure Switch	22 / 24 / 21 11 / 14 / 12 
	Inlet Solenoid Valve	 Blue Wire / White Crimp Red Wire / White Crimp
	Rinse Aid & Detergent Pumps	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Detergent  Blue Wire / White Crimp Purple Wire / White Crimp </div> <div style="text-align: center;"> Rinse Aid  Blue Wire / White Crimp Purple Wire / White Crimp </div> </div>
	Wash Pump	 Grey Blue Black Grey
	Rinse Pump	
	Rinse Prime Switch	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> A3  Red Wire / Red Crimp </div> <div style="text-align: center;"> A2  Black Wire / White Crimp </div> <div style="text-align: center;"> A1  White Wire / Black Crimp </div> </div>

	Quick Start Thermostat	  Red Wire / White Crimp Red Wire / White Crimp
	Circuit Breaker	  Brown Wire / White Crimp Brown Wire / White Crimp
	Float Switch	  Red Wire / White Crimp Purple Wire / White Crimp





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