

PT550P Series
PT570 Series
PT573 Series
PT680-24 Series
Medium Duty Pan/Tilt

Maintenance/
Service Manual

C325SM (3/99)



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REVISION HISTORY

<u>Manual #</u>	<u>Date</u>	<u>Comments</u>
C323SM	10/98	Original version.
	3/99	Revised Figure 3 preset pinouts, pins 2 and 9, for up/down and right/left functions.

1.0 GENERAL

1.1 IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by qualified service personnel and conform to all local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. The weight of the camera, lens, and enclosure shall not exceed 40 lb (18.16 kg) for the PT550, PT570, and PT573 Series or 50 lb (22.7 kg) for the PT680 Series.
4. Only use replacement parts recommended by Pelco.
5. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.
6. The installation method and materials should be capable of supporting four times the weight of the enclosure, pan/tilt, camera and lens combination.

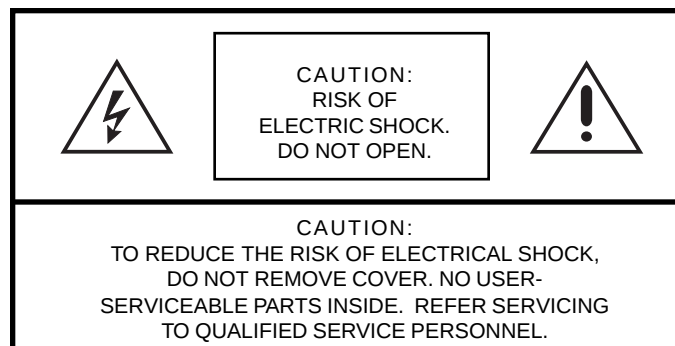
The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

2.0 DESCRIPTION

Pan/tilts in the PT550P Series are designed to remotely position a TV camera in both the horizontal and vertical attitudes. Pan (horizontal) and tilt (vertical) movements are caused by activating small DC motors in the pan/tilt unit. All Pelco units are equipped with adjustable limits for both pan and tilt, and all motors are equipped with electrical filtering circuits to suppress RF interference.

The PT573R and the PT573-24R are medium duty, indoor/outdoor pan/tilts designed for V330APT retrofit applications. Both units feature rugged worm gear final drives to minimize backlash and prevent wind drift, and are fully adjustable for wear.

The PT570P Series and the PT570-24P Series have been engineered to provide medium duty, indoor/outdoor pan and tilt operation. All units feature rugged worm gear final drives to minimize backlash and prevent wind drift, and are fully adjustable for wear.

The pan/tilt units of the PT680-24 Series are designed for medium-duty, indoor/outdoor use. They are factory pre-wired for pan and tilt control functions, motorized zoom lens operation, camera power, and video. All connections are made at the input/output connectors, eliminating the need for wiring harnesses. This greatly reduces installation time, while increasing reliability and serviceability.

2.1 MODELS

PT550P	Medium duty pan/tilt, 115 VDC
PT550P/FGP	Medium duty pan/tilt, 115 VDC, with special speed gearing for pan (9°/sec pan speed)
PT550P/HB	Medium duty pan/tilt, 115 VDC, with blanket heater in cover. 75 watts total. 120 VAC.
PT550P/PP	Medium duty pan/tilt, 115VDC, with position feedback modification. Requires preset control or control having AZL option (position indication meter).
PT550P/RAD	Medium duty pan/tilt, 115 VDC, with radiation resistant wiring and white epoxy paint. Low level radiation resistant up to 10 ⁶ rads
PT570P	Medium duty pan/tilt, 120 VAC operation.
PT570P/PP	Medium duty pan/tilt, 120 VAC operation with preset position option (PP).
PT570P/RAD	Same as PT570P except supplied with radiation resistant white epoxy paint (resistant up to 10 ⁶ rads)
PT570-24P	Medium duty pan/tilt, 24 VAC operation.
PT570-24P/PP	Medium duty pan/tilt, 24 VAC operation with preset position option (PP)
PT570P-24P/RAD	Same as PT570-24P except supplied with radiation resistant white epoxy paint (resistant up to 10 ⁶ rads)
PT573R	Medium-duty, indoor/outdoor, 120 VAC.
PT573-24R	Medium-duty, indoor/outdoor, 24 VAC.
PT680-24P	Medium-duty, indoor/outdoor, 24 VAC.
PT680-24P/PP	PT680-24P with preset positioning capabilities.
PT680-24SL	PT680-24P with 360° pan rotation.
PT680-24SL/PP	PT680-24SL with preset positioning capabilities.

2.2 OPTIONS

FG/570	Special high speed gears — 9°/4.5° per sec pan/tilt speed. (Reduces load to 20 lb or 9.08 kg)
FGP/570	Special high-speed gearing for pan — 9°/sec pan speed.
FGT/570	Special high-speed gearing for tilt — 4.5°/sec tilt speed. (Reduces load to 20 lb or 9.08 kg)
HB/570	Blanket heater in cover. Allows operation to -50°F (-46°C). 75 watts total. 120 VAC, 50/60 HZ.
HB/680	Blanket heater in cover. Allows operation to -50°F (-46°C). 75 watts total. 120 VAC, 50/60 HZ.

3.0 MAINTENANCE

3.1 SERVICING DRIVE CHAIN ASSEMBLIES

Inspect the pan/tilt unit every six months to ensure trouble-free operation and an extended product life. Harsh environments and/or continuous motion applications may require more frequent maintenance.

Please read all of the instructions that follow before servicing the pan/tilt.

To begin, remove the three screws on the front of the pan/tilt housing and lift the cover to gain access to the pan and tilt motor assemblies.

3.1.1 Tightening Drive Chains

Check the pan and tilt drive chains for tension. A movement of 1/32 of an inch to 3/32 of an inch in the chains is acceptable. If the movement of a chain exceeds 3/32 of an inch, adjust the chain as follows:

1. Loosen the screws securing the motor to the mounting frame.
2. Pry on the motor to apply tension to the chain. Do not over-tension the drive chain.
3. Keep tension on the chain while tightening the screws.

3.1.2 Chain Drive Lubrication

Sprockets, chains, and gears should be well greased. If necessary, lubricate the pan and tilt gears, sprockets, and chains as follows with a high-quality grease capable of withstanding temperatures from -50° to 170°F (-46° to 77°C). Do the following:

1. Liberally apply grease to the pan and tilt gears, chains, and sprockets (refer to Figure 1).
2. Operate the pan and tilt motors to spread the grease across the parts.

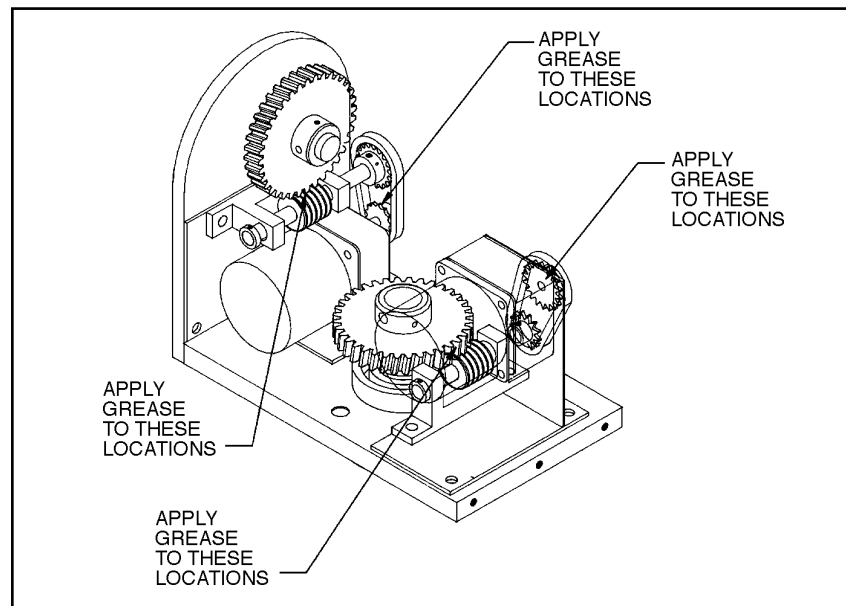


Figure 1. Servicing the Pan/Tilt

3. Apply additional grease if necessary.
4. Reinstall the cover. If the pan/tilt is installed outdoors in an inverted position, apply RTV silicone sealant as shown in Figure 2.

3.2 RESETTING POTENTIOMETERS

IMPORTANT: Be very careful when resetting potentiometer switches. Be sure that the pan/tilt has been centered between maximum pan and tilt travel, regardless of the adjustable limit stops. Failure to observe caution when resetting potentiometers could result in damage to the preset positioning ability of the pan/tilt.



WARNING: NEVER reposition the pan fixed limit stop. Doing so WILL DAMAGE the wiring harness and, if the pan/tilt has preset positioning, COULD cause the pan potentiometer to BREAK.

Models with Preset Positioning (PP)

Models with preset positioning (PP) use potentiometer switches that are factory set to the full range of pan and tilt travel. Under normal operating conditions and at routine service intervals they do not need adjusting.

Should your pan/tilt require any work on the drive mechanism other than routine maintenance, perform the following procedure to reset the potentiometers.

To begin, remove the three screws on the front of the pan/tilt housing and lift the cover to gain access to the pan and tilt motor assemblies.

1. Remove the potentiometer gears and position the pan/tilt to the middle of its maximum pan and tilt travel, regardless of the position of the adjustable limit stops. That is, the tilt table should be level and the fixed limit stop should be opposite the limit switch.
2. Turn a potentiometer all the way in one direction until it stops, then observing the number of turns, turn it back the other way until it stops. Rotate the potentiometer half the number of turns the other way to reach the center.
3. Replace the potentiometer gear.
4. Perform steps 2 and 3 for the other potentiometer.

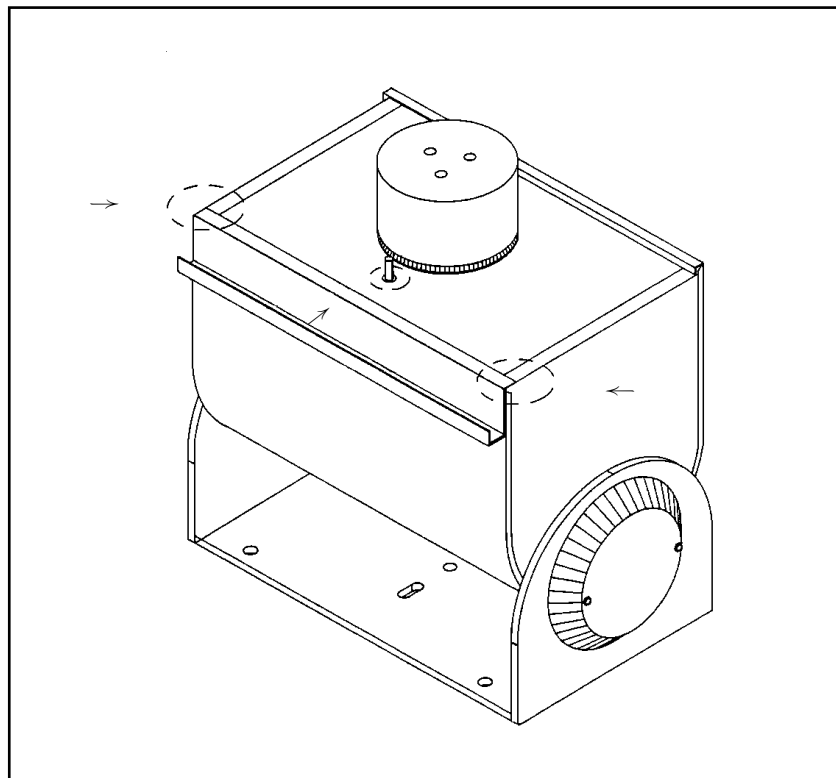


Figure 2. Sealant Locations

4.0 EXPLODED ASSEMBLY DIAGRAMS

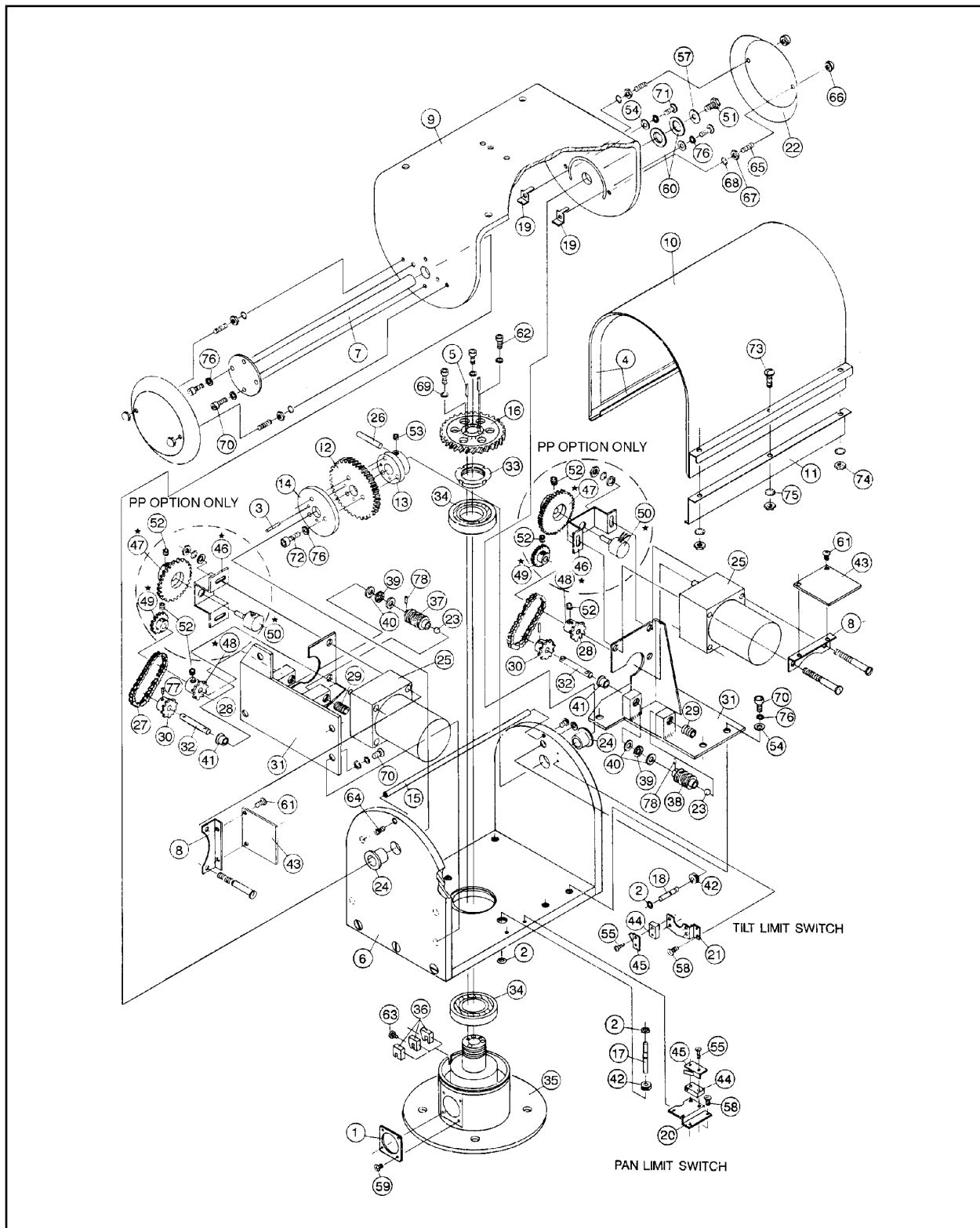


Figure 3. PT550P Series Exploded Assembly Diagram

Table A. PT550P Series Parts List

Item	Qty	Description	Part Number
1	1	Gasket Conn PT1000L-1	105010010
2	4	Ring, Snap #Q2-18	15510000
3	2	Pin Dowel 1/8" x 5/8" Hardened Steel	15510001
4	4	Gasket 1/8" x 1/2" #G207N x Feet	15510002
5	2	Pin Dowel 1/8" x 1/2" Hardened Steel	15510003
6	1	Body assembly	1551008COMP
7	1	Tilt shaft assembly	1551009COMP
8	2	Bracket, PC board filter	1554000COMP
9	1	Tilt table	1554037COMP
10	1	Cover	1554041COMP
11	1	Pull up bar	1554042COMP
12	1	Gear, tilt	1554044COMP
13	1	Hub tilt gear	1554045COMP
14	1	Plate backup, tilt gear	1554046COMP
15	1	Spacer, body sides	1554047COMP
16	1	Gear, pan	1554048COMP
17	1	Pin, pan limit	1554049COMP
18	1	Pin, tilt limit	1554049TCOMP
19	2	Tilt limit stop	1554050COMP
20	1	Bracket, pan limit	1554051COMP
21	1	Bracket, tilt limit	1554052COMP
22	2	Cover plate, tilt shaft	1554053COMP
23	2	Bearing, ball, 5/16 dia.	1556000
24	2	Bearing	1556004
25	2	Motor, gearhead, 115 VDC	1558004A
26	1	Pin, #3 Taper x 1 1/4"	17510001
27	2	Chain motor assembly	1751002COMP
28	2	Sprocket	17512004
29	2	Screw, worm shaft thrust adjust	1754005COMP
30	2	Sprocket	1754022COMP
31	2	Plate, motor	1754062COMP
32	2	Shaft, worm gear	1754063COMP
33	1	Locknut, No. 5	2504012COMP
34	2	Bearing, pan spindle	2506000
35	1	Spindle, base assembly	5501021COMP
36	3	Limit stop, pan	58010006
37	1	Gear, tilt	7712006
38	1	Gear, pan	7712007
39	2	Bearing, cage only	776001
40	4	Bearing, washer only	776002
41	2	Bearing	776003
42	2	Grommet, neoprene	GRO2172N
43	2	PC Board pan/tilt filter	PCB5500126B
44	4	Switch	SWI1SM1
45	4	Switch actuator with insulator	SWIJS138B
46	2	Bracket, AZL pot (PT550P/PP only)	1754000COMP
47	2	Gear, PP pot shaft (PT550P/PP only)	1754003COMP
48	2	Sprocket, motor (PT550P/PP only)	1754004COMP
49	2	Gear (PT550P/PP only)	1754006COMP
50	2	Pot, Model 534, 5K ohm	POT005.0K10534
51	1	Bolt, 1/4 - 20 x 5/8" hex cad	ZH1/420X.625CH
52	6	Set screw, 10-32 x 5/16" soc knur black	ZH10-32X.187S
53	1	Set screw, 10-32 x 5/16" soc knur black	10-32X.312S
54	10	Washer, flat #10	ZH204X436X60
55	8	Screw, 2.56 x 1/2" pan phil SS	ZH2-56X.500SPP
56		Not Used	
57	1	Washer, flat 3/16" VSS SPL - size plt D	ZH260X562X65C
58	4	Screw 4-40 x 3/8" pan phil SS	ZH4-40X.250SPP
59	4	Screw 4-40 x 3/8" pan phil SS	ZH4-40X.375SPP
60	2	Washer, flat 1/2 AN - 960-816	ZH515X.875X62
61	4	Screw, 6-32 x 1/4" pan phil SS	ZH6-32X.250SPP

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Table A. PT550P Series Parts List (continued)

Item	Qty	Description	Part Number
62	3	Screw, 6-32 x 3/8" soc cad	ZH6-32X.375CS
63	3	Screw, 6-32 x 3/8" pan slot SS	ZH6-32 X.375SPS
64	2	Screw, 6-32 x 5/8" flat slot SS	ZH6-32X.625SFS
65	4	Set screw, 6-32 x 3/4" SS	ZH6-32X.750SS
66	4	Nut, 6-32 a corn brass chrome	ZH6-32XNUTCA
67	4	Nut, hex 6-32 SS	ZH6-32XNUTSH
68	4	Washer, internal star #6 SS	ZH6LWSIS
69	3	Washer, split lock #6 SS	ZH6LWSSL
70	12	Screw, 8-32 x 1/2" soc cad	ZH8-32X.500CS
71	2	Screw, 8-32 x 1/2" pan slot SS	ZH8-32X.500SPS
72	3	Screw, 8-32 x 5/8" soc cad	ZH8-32X.625CS
73	3	Screw, 8-32 x 3/4" pan slot SS	ZH8-32X.750SPS
74	3	Nut, Hex 8-32 SS	ZH8-32XNUTSH
75	3	Washer, internal #8" SS	ZH8LWSIS
76	15	Washer, split lock #8" SS	ZH8LWSSL
77	2	Pin, roll 3/32 x 1/2"	ZHPIN3/32X1/2R
78	2	Pin, roll 3/32 x 3/8"	ZHPIN3/32X3/8R

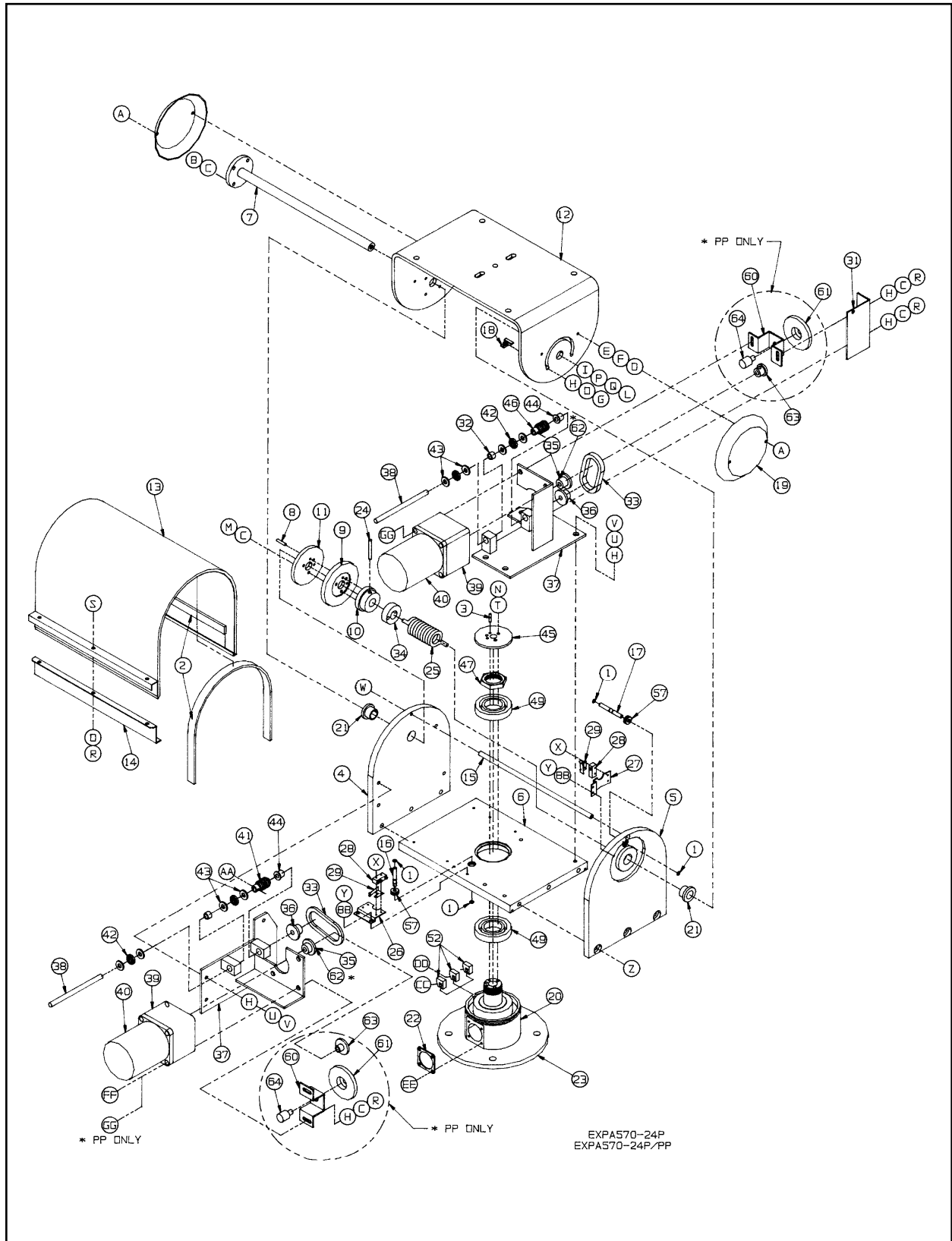


Figure 4. PT570P/PT570-24P Series Exploded Assembly Diagram

Table B. PT570P/PT570-24P Series Mechanical Parts List

Item	Qty	Description	Part Number
1	4	Ring, snap	15510000
2	4	NP Gasket, Poron 1/8" x 1/2", Blk, x ft	EH550010030
3	2	Pin, dowel 1/8" x 1/2", hardened steel	15510003
4	1	Plate, side tilt	1554038COMP
5	1	Plate, side pan	1554039COMP
6	1	Bottom plate	1554055COMP
7	1	Tilt shaft assembly	1551009COMP
8	2	Pin, dowel 1/8" x 5/8", hardened steel	15510001
9	1	Gear tilt	1554144COMP
10	1	Hub tilt gear	6804049COMP
11	1	Plate, backup tilt gear	1554046COMP
12	1	Tilt table	1554037COMP
13	1	Cover	1554041COMP
14	1	Pull up bar	1554042COMP
15	1	Spacer, body sides	1554047COMP
16	1	Pin, pan limit	1554049COMP
17	1	Pin, tilt limit	1554049TCOMP
18	2	Tilt limit stop	1554050COMP
19	2	Cover plate, tilt shaft	1554053COMP
20	1	Spindle	1554054ACOMP
21	2	Bearing	1556004
22	1	Gasket	105010010
23	1	Flange	PM102A4196COMP
24	1	Pin #3, taper x 1-1/4"	17510001
25	1	Spring, tilt	17510040
26	1	Bracket, pan limit	1554051COMP
27	1	Bracket, tilt limit	1554052COMP
28	4	Switch	SWI1SM1
29	4	Switch actuator with insulator	SWIJS138B
30	1	Term strip, 9 pin (not shown)	TRS2009
31	1	Bracket, spring	1754061COMP
32	2	Bearing, #B46-2	5806005
33	2	Chain assembly	1751002COMP
34	1	Collar, spring	1754020COMP
35	2	Sprocket	17512004
36	2	Sprocket	1754022COMP
37	2	Motor plate	1751062WA
38	2	Shaft gear train	1754064COMP
39	2	Motor, gear head	1758006
40	2	Motor only, 120 VAC	1758005
		Motor only, 24 VAC	5708007
41	1	Worm tilt	7712006
42	4	Bearing, cage only	776001
43	4	Bearing, washer only	776002
44	2	Bushing, 1/4" tilt shaft	PT250010005
45	1	Gear pan	1554048COMP
46	1	Worm pan	7712007
47	1	Nut spindle	25010002
49	2	Bearing, pan spindle	2506000
52	3	Limit stop, pan	58010006
54	2	Cap, 60MF 200V Ax Bulk (not shown)	CAPU0060.0/200N
55	1	Conn, 9 Pos Recp (not shown)	CON206705-1
56	9	Conn, CPC Pin Crimp (not shown)	CON66103-2
57	2	Grommet, neoprene	GRO2172N
60	2	Bracket, AZL pot	1754000COMP
61	2	Gear, PP pot shaft	1754003COMP
62	2	Sprocket, motor, PP	1754004COMP
63	2	Gear, PP	1754006COMP
64	2	Pot, 5K ohm	POT005.0K10534

Table C. PT570P/PT570-24P Series Hardware List

Item	Qty	Description	Part Number
A	4	Nut, 6-32, acorn brass chrome	ZH6-32NUTCA
B	4	Screw, 8-32 x 1/2", soc cad	ZH8-32X.500CS
C	10	Washer, split lock, #8	ZH8LWSSL
D	4	Set screw, 6-32 x 3/4", SS	ZH6-32X.750SS
E	4	Nut, hex 6-32, SS	ZH6-32NUTSH
F	4	Washer, internal star, #6	ZH6LWSIS
G	2	Screw, 6-32 x 1/2", pan phil, SS	ZH8-32X.500SPP
H	10	Washer, flat, #10, AN960C-10X064SS	ZH204X436X60C
I	2	Washer, flat, 1/2 AN960-816 cad	ZH515X875X62
K	1	Washer, split lock, 1/4", SS	ZH1/4LWSSL
L	1	Bolt, 1/4 - 20 x 5/8", hex cad	ZH1/420X.625CH
M	3	Screw, 8-32 x 5/8", soc cad	ZH8-32X.625CS
N	3	Screw, 6-32 x 3/8", soc cad	ZH6-32X.375CS
O	5	Washer, internal star, #8, SS	ZH8LWSIS
P	1	Washer, flat 3/16", VSS	ZH260X562X65C
Q	1	Washer, internal star 1/4", SS	ZH1/4LWSIS
R	6	Nut, hex, 8-32, SS	ZH8-32NUTSH
S	3	Screw, 8-32 x 3/4", pan phil, SS	ZH8-32X.750SPP
T	3	Washer, split lock, #6, SS	ZH6LWSSL
U	9	Washer, split lock, #10, SS	ZH10LWSSL
V	10	Screw, 10-32 x 1/2", soc cad	ZH10-32X.500CS
W	2	Screw, 6-32 x 3/4", flat slot, SS	ZH6-32X.750SFS
X	8	Screw, 2.56 x 7/16", pan phil, SS	ZH2-56X.437SPP
Y	4	Screw, 4-40 x 3/8", pan phil, SS	ZH4-40X.375SPP
Z	6	Bolt, 1/4-20 x 3/4", flat slot, SS	ZH1/420X.750SFS
AA	1	Pin, spring roll, 3/32" x 3/8"	ZHPIN3/32X3/8R
BB	4	Washer, internal star, #4, SS	ZH4LWSIS
CC	2	Screw, 6-32 x 3/8", pan phil, SS	ZH6-32X.375SPP
DD	1	Set screw, 6-32 x 3/16", soc, knurl blk	ZH6-32X.187S
EE	4	Screw, 4-40 x 3/8", pan phil, SS	ZH4-40X.375SPP
FF	3	Screw, 8-32 x 2 1/4", round slot	ZH8-32X2.25CRC

Figure 5. PT573 Series Exploded Assembly Diagram

Table D. PT573 Series Parts List

Item	Qty	Description	Part Number
1	1	Gasket	105010010
2	1	Frame scan circuit board (Model PT573R)	12501007ACOMP
		Frame scan circuit board (Model PT573-24R)	12501007BCOMP
3	4	Snap ring	15510000
4	2	Dowel pin, 1/8" x 5/8"	15510001
5	2	Dowel pin, 1/8" x 1/2"	15510003
6	1	Plate, tilt side	1554038COMP
7	1	Plate, pan side	1554039COMP
8	1	Bottom plate	1554055COMP
9	1	Tilt shaft assembly	1551009COMP
10	1	Tilt table	1554037COMP
11	1	Pull-up bar	1554042COMP
12	1	Back-up plate, tilt side	1554046COMP
13	1	Spacer	1554047COMP
14	1	Pan gear	1554048COMP
15	1	Pan limit pin	1554049COMP
16	1	Tilt limit pin	1554049TCOMP
17	2	Tilt limit stop	1554050COMP
18	1	Pan limit bracket	1554051COMP
19	1	Tilt limit bracket	1554052COMP
20	2	Tilt shaft cover plate	1554053COMP
21	1	Spindle	1554054ACOMP
22	1	Cover	1554056BWA
23	1	Tilt gear	1554144COMP
24	2	Bearing	1556004
25	1	Taper pin	17510001
26	2	Chain assembly	1751002COMP
27	1	Tilt spring	17510040
28	2	Motor plate	1751062WA
29	2	Sprocket	17512004
30	1	Collar spring	1754020COMP
31	2	Sprocket	1754022COMP
32	1	Bracket spring	1754061COMP
33	2	Gear train shaft	1754064COMP
34	2	120 VAC motor (Model PT573R)	1758005
		24 VAC motor (Model PT573-24)	5708007
35	2	Motor gearhead	1758006
36	1	Spindle nut	25010002
37	2	Pan spindle bearing	2506000
38	1	Plastic protector for circuit board	57310001
39	1	Mounting flange	5734000COMP
40	1	Bottom bracket for circuit board	5734001COMP
41	1	Side bracket for circuit board	5734002COMP
42	3	Pan limit stop	58010006
43	2	Bearing	5806005
44	1	Tilt gear hub	6804049COMP
45	1	Tilt worm	7712006
46	1	Pan worm	7712007
47	4	Bearing cage	776001
48	8	Bearing washer	776002
49	2	Capacitor, 60 MFD, 200 V (PT573-24R) (not shown)	CAPU0060.0/200N
	2	Capacitor, 1.8 MFD, 250 V (PT573R) (not shown)	CAPU0001.8/250
	1	Capacitor, 1.0 MFD, 600 V (PT573R) (not shown)	CAPU0001.0/600
50	8	Crimp pin (not shown)	CON66400-1
51	4	Gasket, 1/8" x 1/2" x foot	EH550010030
52	2	Neoprene grommet	GRO2172N
53	2	Tilt shaft bushing	PT250010005
54	8	PVC sleeving in inches (not shown)	SLV16105N
55	4	Switch	SW1SM1
56	4	Switch actuator with insulator	SWIJS138B
57	1	7-pin terminal strip	TRS2007

Continued on next page

Table D. PT573 Series Parts List (continued)

Item	Qty	Description	Part Number
A	1	Bolt, 1/4-20 x 5/8-inch	ZH1/420X.625CH
B	9	Screw, 1/4-20 x 3/4-inch, flat head, Phillips	ZH1/420X.750SFS
C	1	Internal star washer, 1/4-inch	ZH1/4LWSIS
D	1	Split lock washer, 1/4-inch (not shown)	ZH1/4LWSSL
E	3	Set screw, 10-32 x 3/16-inch	ZH10-32X.187S
F	10	Allen screw, 10-32 x 1/2-inch	ZH10-32X.500CS
G	9	Split lock washer, #10	ZH10WSSL
H	10	Flat washer, #10	ZH204X436X60C
I	1	Flat washer, 3/16-inch	ZH260X562X65C
J	-	Not used	
K	8	Screw, 2-56 x 7/16-inch, pan head, Phillips	ZH2-56X.437SPP
L	18	Screw, 4-40 x 3/8-inch, pan head, Phillips	ZH4-40X.375SPP
M	3	Hex nut, 4-40 (not shown)	ZH4-40NUTSH
N	4	Internal star washer, #4	ZH4LWSIS
O	2	Flat washer	ZH515X875X62
P	1	Set screw, 6-32 x 3/16-inch	ZH6-32X.187S
Q	3	Allen screw, 6-32 x 3/8-inch	ZH6-32X.375CS
R	2	Screw, 6-32 x 3/8-inch, pan head, Phillips	ZH6-32X.375SPP
S	2	Screw, 6-32 x 3/4-inch, flat head	ZH6-32X.750SFS
T	4	Set screw, 6-32 x 3/4-inch	ZH6-32X.750SS
U	4	Acorn nut, 6-32	ZH6-32NUTCA
V	4	Hex nut, 6-32	ZH6-32NUTSH
W	4	Internal star washer, #6	ZH6LWSIS
X	3	Split lock washer, #6	ZH6LWSSL
Y	4	Allen screw, 8-32 x 1/2-inch	ZH8-32X.500CS
Z	2	Screw, 8-32 x 1/2-inch, pan head, Phillips (not shown)	ZH8-32X.500SPP
AA	1	Allen screw, 8-32 x 5/8-inch	ZH8-32X.625CS
BB	3	Screw, 8-32 x 3/4-inch, pan head, Phillips	ZH8-32X.750SPP
CC	3	Screw, 8-32 x 2.25-inch, round head	ZH8-32X.2.25CRC
DD	6	Hex nut, 8-32	ZH8-32NUTSH
EE	5	Internal star washer, #8	ZH8LWSIS
FF	10	Split lock washer, #8	ZH8LWSSL
GG	2	Roll pin	ZHPIN3/32x1/2R
HH	2	Spring roll pin	ZHPIN3/32X3/8R

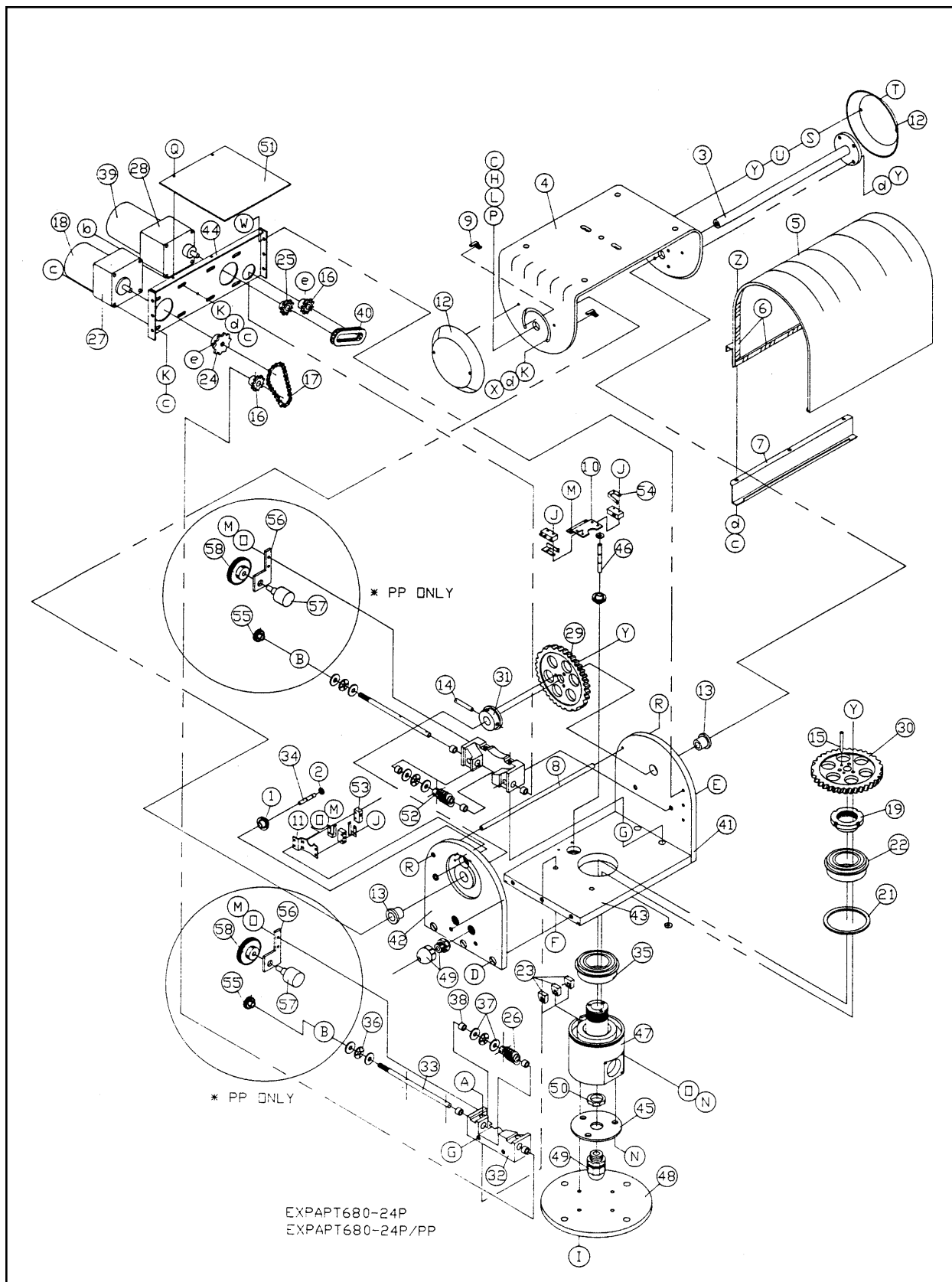


Figure 6. PT680-24P and PT680-24P/PP Exploded Assembly Diagram

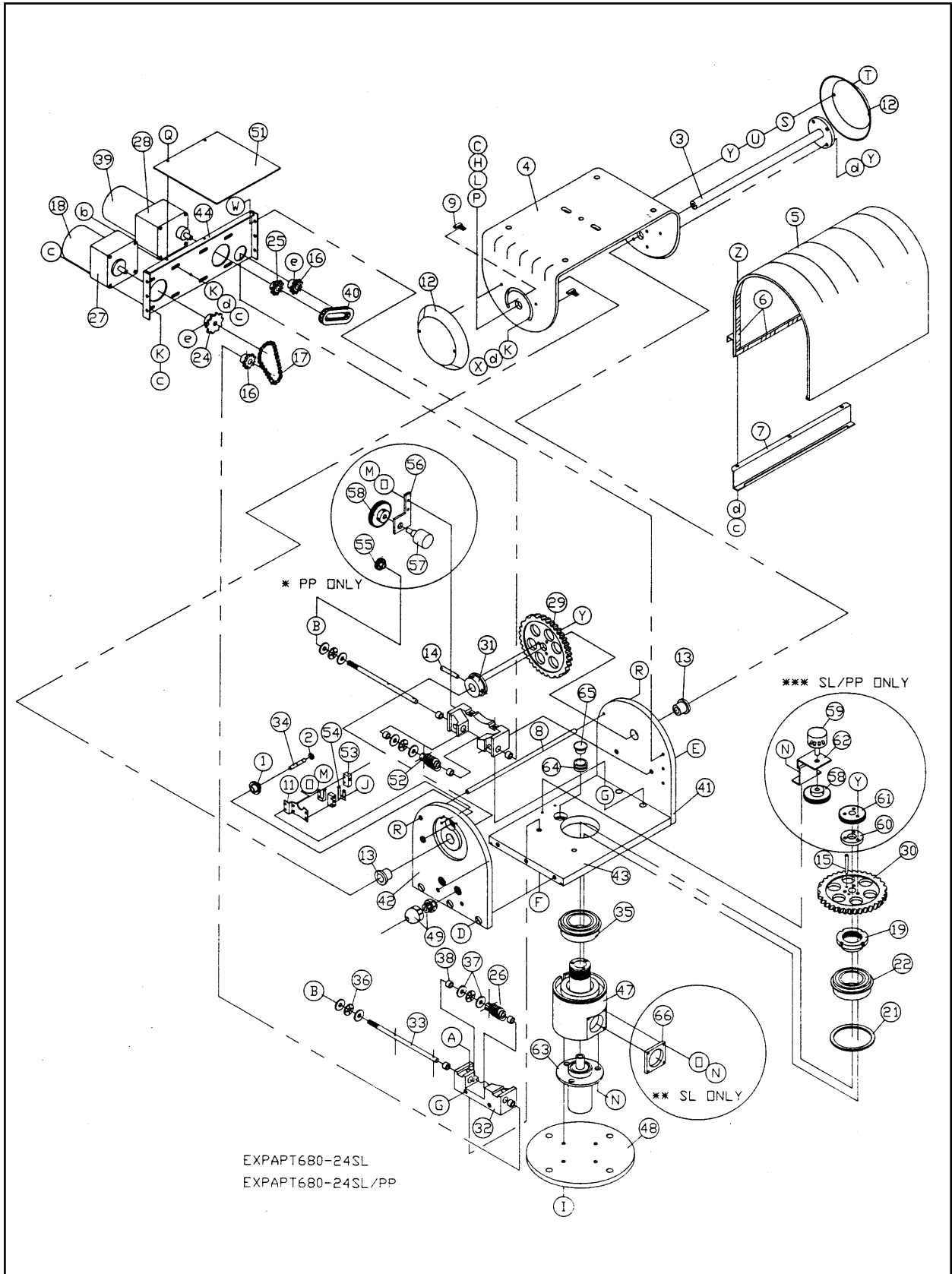


Figure 7. PT680-24SL and PT680-24SL/PP Exploded Assembly Diagram

Table E. PT680-24P and PT680-24P/PP Mechanical Parts List

Item	Qty	Description	Part Number
1	2	Neoprene grommet	GRO2172
2	4	Snap ring	15510000
3	1	Tilt shaft	1551009COMP
4	1	Tilt table	1554037COMP
5	1	Cover	1554056BWA
6	4	Gasket, 1/8" x 1/2" x foot	EH550010030
7	1	Pull-up bar	1554042COMP
8	1	Spacer	1554047COMP
9	2	Tilt limit stop	1554050COMP
10	1	Pan limit bracket	1554051COMP
11	1	Tilt limit bracket	1554052COMP
12	2	Tilt shaft cover plate	1554053COMP
13	2	Bearing	1556004
14	1	Taper pin	17510001
15	2	Dowel pin	15510001
16	2	Sprocket	1754022COMP
17	1	Pan chain assembly	2701004COMP
18	1	24 VAC motor	5708007
19	1	Nut lock	58010001
20	-	Not used	
21	1	Bearing retainer ring	58010008
22	1	Pan spindle bearing with retainer ring	5806000
23	3	Pan limit stop	58010006
24	1	Sprocket	90010028
25	1	Sprocket	5804022COMP
26	1	Pan worm	5804040COMP
27	1	Pan motor gearhead	5804044COMP
28	1	Tilt motor gearhead	5804045COMP
29	1	Tilt gear	6804047COMP
30	1	Pan gear	5804048COMP
31	1	Tilt gear hub	6804049COMP
32	2	Gear train bracket	5804062COMP
33	2	Worm gear shaft	5804063COMP
34	1	Tilt limit pin	1554049TCOMP
35	1	Pan spindle bearing with retainer ring	5806000
36	4	Bearing	5806002
37	8	Bearing washer	5806003
38	8	Bearing	5806005
39	1	Motor	5808000
40	1	Tilt chain assembly	6801002COMP
41	1	Body, tilt side	6804038COMP
42	1	Body, pan side	6804039COMP
43	1	Bottom plate	6804055COMP
44	1	Motor plate	6804000COMP
45	1	Spindle mount strain relief	6804001COMP
46	1	Pan limit pin	1554049COMP
47	1	Spindle	6804007COMP
48	1	Spindle flange	6804008COMP
49	3	Gland	EH400010003
50	1	Nut	EH400010004
51	1	Circuit board	PCB9000225ASSY
52	1	Worm	PS304013COMP
53	4	Switch	SW1SM1
54	4	Switch actuator with insulator	SWIJS138B
55	2*	Gear	5804012COMP
56	2*	Potentiometer mounting bracket	5804090COMP
57	2*	Potentiometer, 5K ohm	POT005.0K10534
58	2*	Potentiometer gear	PT350010002

* Model PT680-24PP only

Table F. PT680-24SL and PT680-24SL/PP Mechanical Parts List

Item	Qty	Description	Part Number
1	1	Neoprene grommet	GRO2172
2	2	Snap ring	15510000
3	1	Tilt shaft	1551009COMP
4	1	Tilt table	1554037COMP
5	1	Cover	1554056BWA
6	4	Gasket, 1/8" x 1/2" x foot	EH550010030
7	1	Pull-up bar	1554042COMP
8	1	Spacer	1554047COMP
9	2	Tilt limit stop	1554050COMP
10	-	Not used	
11	1	Tilt limit bracket	1554052COMP
12	2	Tilt shaft cover plate	1554053COMP
13	2	Bearing	1556004
14	1	Taper pin	17510001
15	2	Dowel pin	15510001
16	2	Sprocket	1754022COMP
17	1	Pan chain assembly	2701004COMP
18	1	24 VAC motor	5708007
19	1	Nut lock	58010001
20	-	Not used	
21	1	Bearing retainer ring	58010008
22	1	Pan spindle bearing with retainer ring	5806000
23	-	Not used	
24	1	Sprocket	90010028
25	1	Sprocket	5804022COMP
26	1	Pan worm	5804040COMP
27	1	Pan motor gearhead	5804044COMP
28	1	Tilt motor gearhead	5804045COMP
29	1	Tilt gear	6804047COMP
30	1	Pan gear	5804048COMP
31	1	Tilt gear hub	6804049COMP
32	2	Gear train bracket	5804062COMP
33	2	Worm gear shaft	5804063COMP
34	1	Tilt limit pin	1554049TCOMP
35	1	Pan spindle bearing with retainer ring	5806000
36	4	Bearing	5806002
37	8	Bearing washer	5806003
38	8	Bearing	5806005
39	1	Motor	5808000
40	1	Tilt chain assembly	6801002COMP
41	1	Body, tilt side	6804038COMP
42	1	Body, pan side	6804039COMP
43	1	Bottom plate	6804055COMP
44	1	Motor plate	6804000COMP
45	-	Not used	
46	-	Not used	
47	1	Spindle	6804007COMP
48	1	Spindle flange (Model PT680-24SL)	6804008COMP
	1	Spindle flange (Model PT68024SL/PP)	6804010COMP
49	2	Gland	EH400010003
50	-	Not used	
51	1	Circuit board	PCB9000225ASSY
52	1	Worm	PS304013COMP
53	2	Switch	SWI1SM1
54	2	Switch actuator with insulator	SWIJS138B
55	1*	Gear	5804012COMP
56	1*	Potentiometer mounting bracket	5804090COMP
57	1*	Potentiometer, 5K ohm	POT005.0K10534
58	2*	Potentiometer gear	PT350010002
59	1*	Potentiometer, dual arm, 10K ohm	POTDARM010.0K
60	1*	Spacer	6804011COMP

Continued on next page

Table F. PT680-24SL and PT680-24SL/PP Mechanical (continued)

Item	Qty	Description	Part Number
61	1*	Gear	6804012COMP
62	1*	Potentiometer mounting bracket	6804300COMP
63	1	Slip ring (Model PT680-24SL)	SR18
		Slip ring (Model PT68024SL/PP)	250010000
64	1	Neoprene grommet	GRO2172
65	1	Hole plug	ZH3091
66	1	Spacer	6804002COMP

*Model PT680-24SL/PP only

Table G. PT680-24 Series Hardware List

Item	Qty	Description	Part Number
A	4	Hex nut, 1/4-20	ZH1/420NUTCHN
B	2	Lock nut, 1/4 28	58010007
C	1	Bolt, 1/4-20 x 5/8-inch	ZH1/420X.625CH
D	6	Screw, 1/4-20 x 3/4-inch, flat head, Phillips	ZH1/420X.750SFS
E	2	Allen screw, 1/4-20 x 1.5-inch	ZH1/420X1.50CX
F	2	Allen bolt, 1/4-20 x 1.75-inch	ZH1/420X1.75CS
G	4	Allen screw, 1/4-20 x 2.25-inch, nylon	ZH1/420X2.25BSN
H	1	Internal star washer	ZH1/4LWSIS
I	4	Allen screw, 10-32 x 1/2-inch	ZH10-32X.500CS
J	8	Screw, 2-56 x 7/16-inch, pan head, Phillips	ZH2-56X.437SPP
K	10	Flat washer, #10	ZH204X436X60C
L	1	Flat washer, 3/16	ZH260X562X65C
M	8	Screw, 4-40 x 1/4-inch, pan head, Phillips	ZH4-40X.250SPP
N	7	Screw, 4-40 x 3/8-inch, pan head, Phillips	ZH4-40X.375SPP
O	15	Internal star washer, #4	ZH4LWSIS
P	2	Flat washer, 1/2	ZH515X875X62
Q	2	Screw, 6-32 x 3/8-inch, pan head, Phillips	ZH6-32X.375SPP
R	2	Screw, 6-32 x 1/2-inch, flat head, Phillips	ZH6-32X.500SFS
S	4	Set screw, 6-32 x 3/4-inch	ZH6-32X.750SS
T	4	Acorn nut, 6-32	ZH6-32NUTCA
U	4	Hex nut, 6-32	ZH6-32NUTSH
V	4	Internal star washer, #6	ZH6LWSIS
W	6	Allen screw, 8-32 x 3/8-inch	ZH8-32X.375CS
X	2	Screw, 8-32 x 3/8-inch, pan head, Phillips	ZH8-32X.375SPP
Y	6	Allen screw, 8-32 x 1/2-inch	ZH8-32X.500CS
Z	3	Screw, 8-32 x 3/4-inch, pan head, Phillips	ZH8-32X.750SPP
a	4	Screw, 8-32 x 2.25-inch, pan head, Phillips	ZH8-32X2.25CRS
b	4	Screw, 8-32 x 2.5-inch, pan head, Phillips	ZH8-32X2.50CPS
c	8	Hex nut, 8-32	ZH8-32NUTSH
d	14	Split lock washer, #8	ZH8LWSSL
e	6	Roll pin, 3/32-inch x 1/2-inch	ZHPIN3/32X1/2R

5.0 WIRING DIAGRAMS

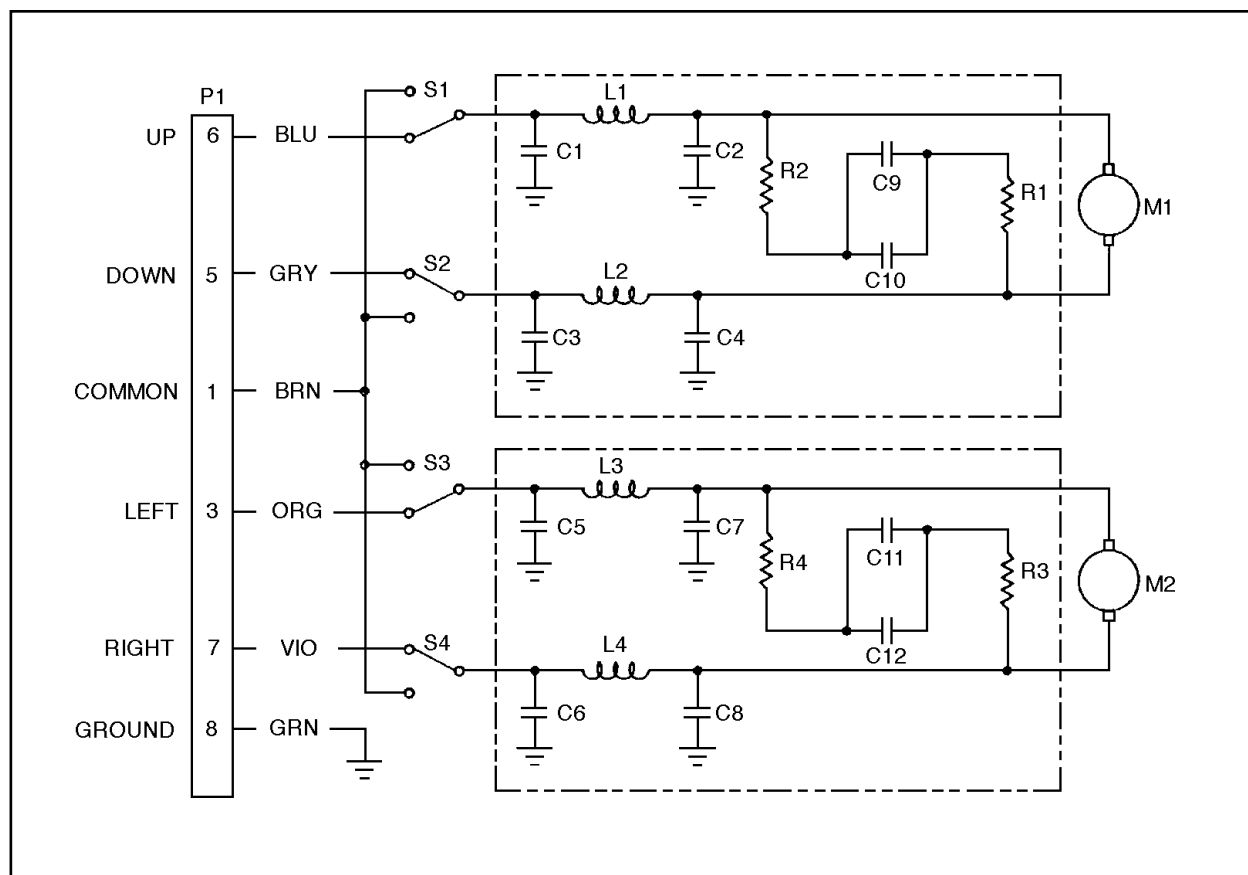


Figure 8. PT550P Wiring Diagram

Table H. PT550P Electrical Parts List

Quantity	Symbol	Description	Manufacturer	Part Number
8	C1-8	Capacitor .0047/1kv	CDE	CAPU0.0047/1000
4	C9-12	Capacitor .1/400V	Sprague	CAPU0000.1/400
4	L1-4	Choke 100mh	Miller	CHO5250
2	M1-2	Motor w/Gear Head	Pelco	1558004A
1	P1	Connector	AMP	CON206705-1
9	—	Connector Pin	AMP	CON66103-2
4	R1-4	Resistor 47ohm 1/4W	—	RES047.0-.25
2	—	P.C. Assembly	Pelco	1551016COMP
1	—	Mating Connector Assy.	AMP	1751000COMP
4	S1-S4	Switch	—	SWI1SM1

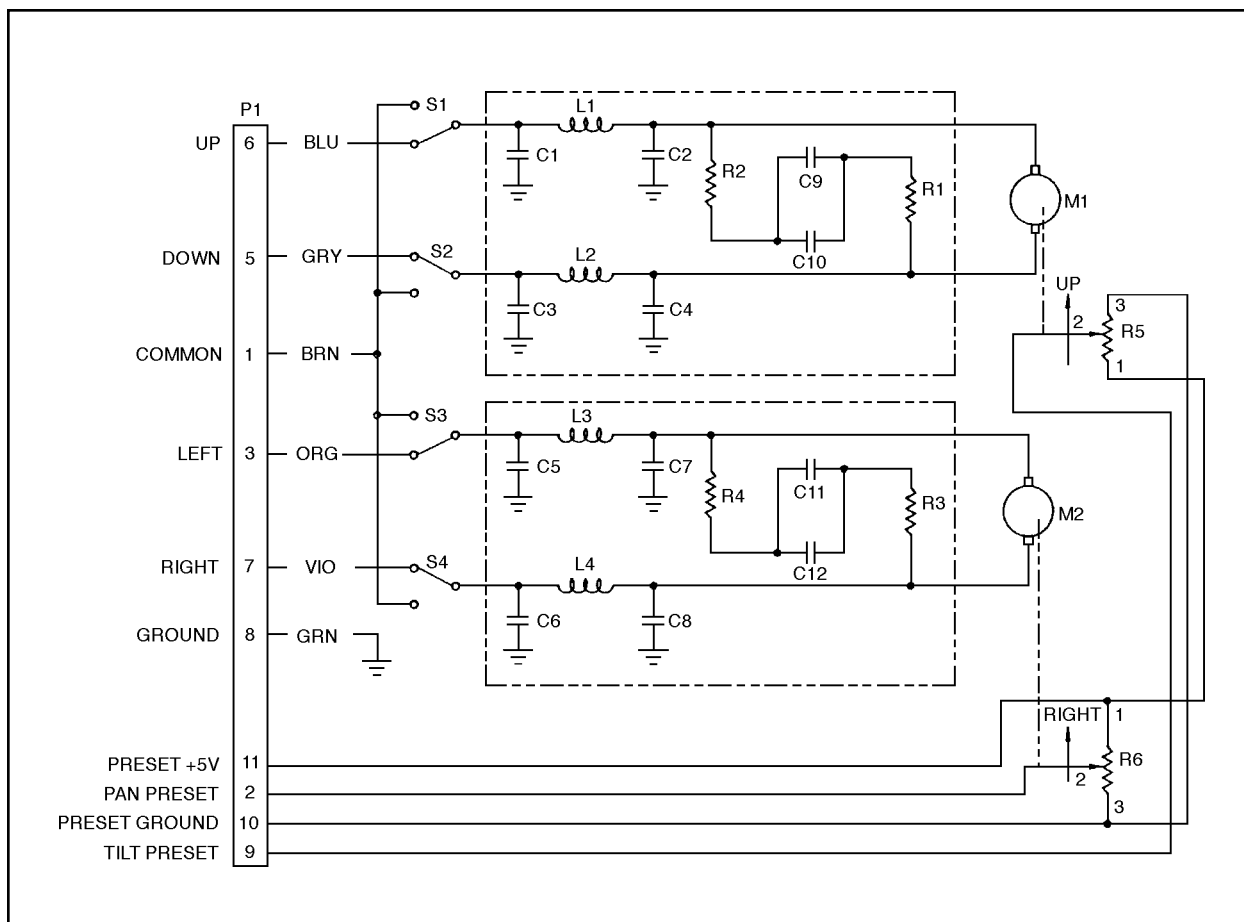


Figure 9. PT550P/PP Wiring Diagram

Table I. PT550P/PP Electrical Parts List

Quantity	Symbol	Description	Part Number
8	C1-8	Capacitor .0047/1kv	CAPU0.0047/1000
4	C9-12	Capacitor .1/400V	CAPU0000.1/400
4	L1-4	Choke 100mh	CHO5250
2	M1-2	Motor w/Gear Head	1558004A
1	P1	Connector	CON206036-1
4	R1-4	Resistor 47 ohm 1/4W	RES047.0-.25
2	R5-6	Pot 5K Ten Turn	POT005.0K10534
2	—	P.C. Assembly	1551016COMP
1	—	Mating Connector Assy.	CONA16S
4	S1-S4	Switch	SW11SM1
16	—	Connector Pin	CON66103-2

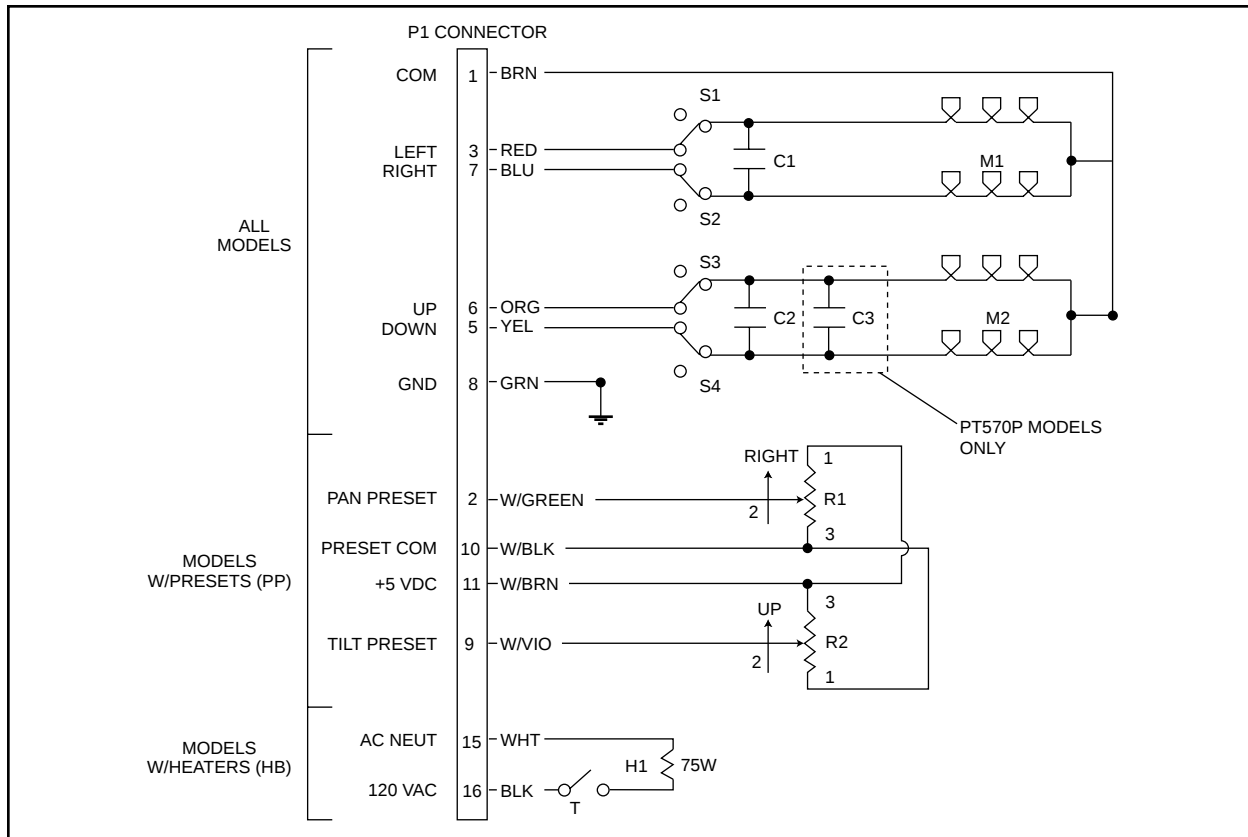


Figure 10. PT570P/PT570-24P Series Wiring Diagram

Table J. PT570P Series Electrical Parts List

Quantity	Symbol	Description	Manufacturer	Part Number
2	C1, C2	Capacitor, NP 1.8 MFD 250V	—	CAPU0001.8/250
1	C3	Capacitor 1.0 MFD, 600 V	—	CAPU0001.0/600
1	P1	Connector	AMP	CON206705-1
4	S1-S4	Switch	Microswitch	SWI1SM1
4	—	Actuator	Microswitch	SWIJS138B
2	M1, M2	Motor w/Gear Head	Pelco	1758005/1758006
1	H1	Blanket Heater	Benchmark	EH6610054
1	T	Thermostat	Elmwood	EH5510049A
2	R1, R2	POT 5K Ten Turn	AMP	POT005.0K10534
1	—	9-Pin Mating Connector Assy., or	Spectrol	1751000COMP
	—	16-Pin Mating Connector Assy.	Spectrol	CONA16S
9 (16)	—	Connector Pin	AMP	CON66399-1

Table K. PT570-24P Series Electrical Parts List

Quantity	Symbol	Description	Manufacturer	Part Number
2	C1, C2	Capacitor, NP 60 MFD 200V	Sprague	CAPU0060.0/200
1	P1	Connector	AMP	CON206063-1
4	S1-S4	Switch	Microswitch	SWI1SM1
4	—	Actuator	Microswitch	SWIJS138B
2	M1, M2	Motor w/Gear Head	Pelco	5708007/1758006
1	H1	Heater Blanket	Benchmark	EH110065A
1	T	Thermostat	Elmwood	EH5510049A
2	R1, R2	POT 5K Ten Turn	AMP	POT005.0K10534
1	—	9-Pin Mating Connector Assy., or	Spectrol	1751000COMP
	—	16-Pin Mating Connector Assy.	Spectrol	CONA16S
9 (16)	—	Connector Pin	AMP	CON66399-1

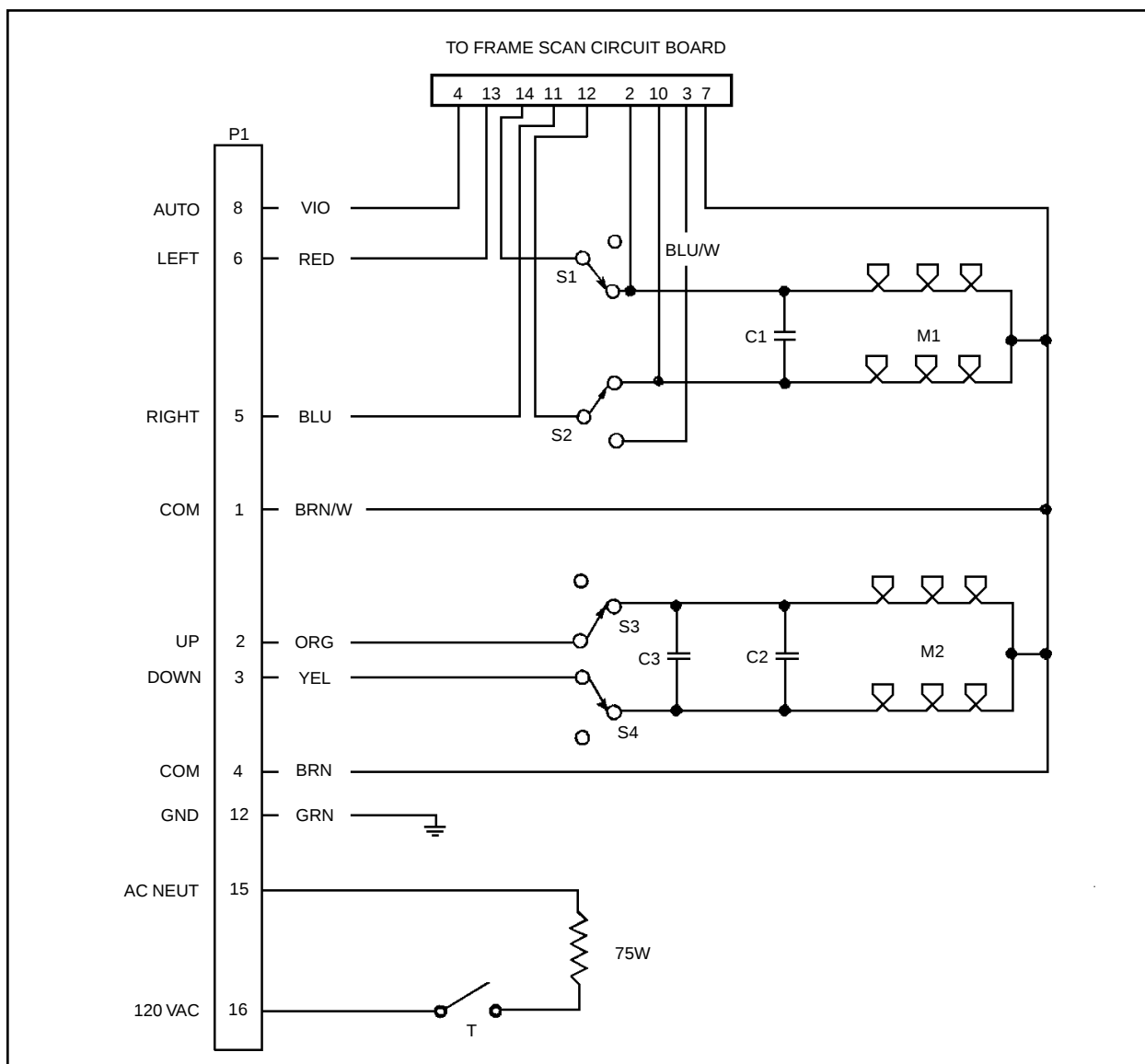


Figure 11. PT573 Series Wiring Schematic

Table L. PT573 Series Electrical Parts List

Symbol	Qty	Description	Part Number
-	1	Frame scan circuit board (Model PT573R)	12501007ACOMP
-	1	Frame scan circuit board (Model PT573-24R)	12501007BCOMP
C1, C2	2	Capacitor, 1.8 MFD, 250 V (Model PT573R)	CAPU0001.8/250
		Capacitor, 60 MFD, 200 V (Model PT573-24R)	CAPU0060.0/200N
C3	1	Capacitor, 1 MFD, 600 V (Model PT573R)	CAPU0001.0/600
M1, M2	2	Motor (Model PT573R)	1758005
		Motor (Model PT573-24R)	5708007
S1-S4	4	Switch	SWI1SM1
-	4	Switch Actuator with Insulator	SWIJS138B
-	1	Heater blanket	EH110065A
T	1	Thermostat	EH5510049A

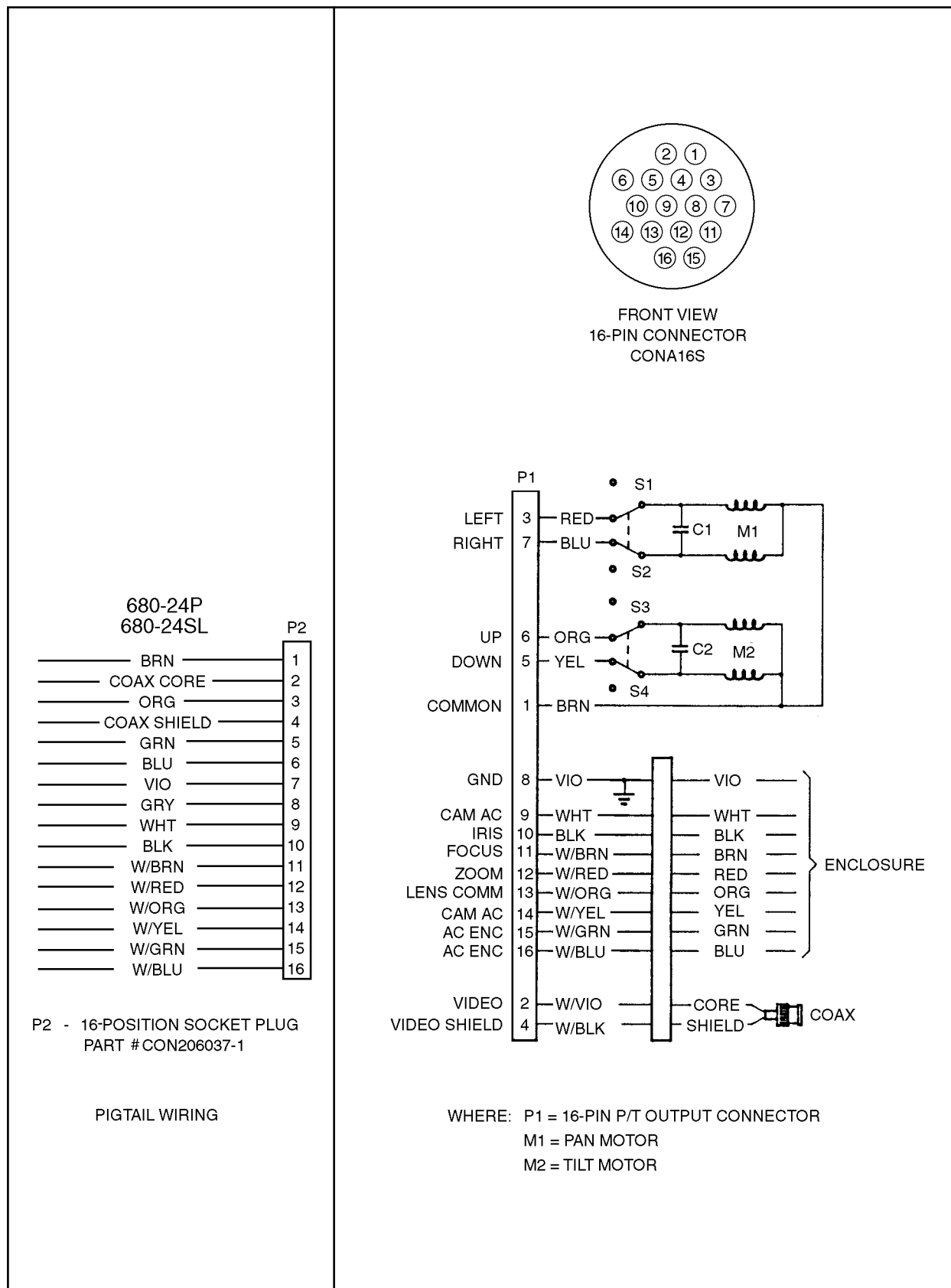


Figure 12. PT680-24P Wiring Schematic

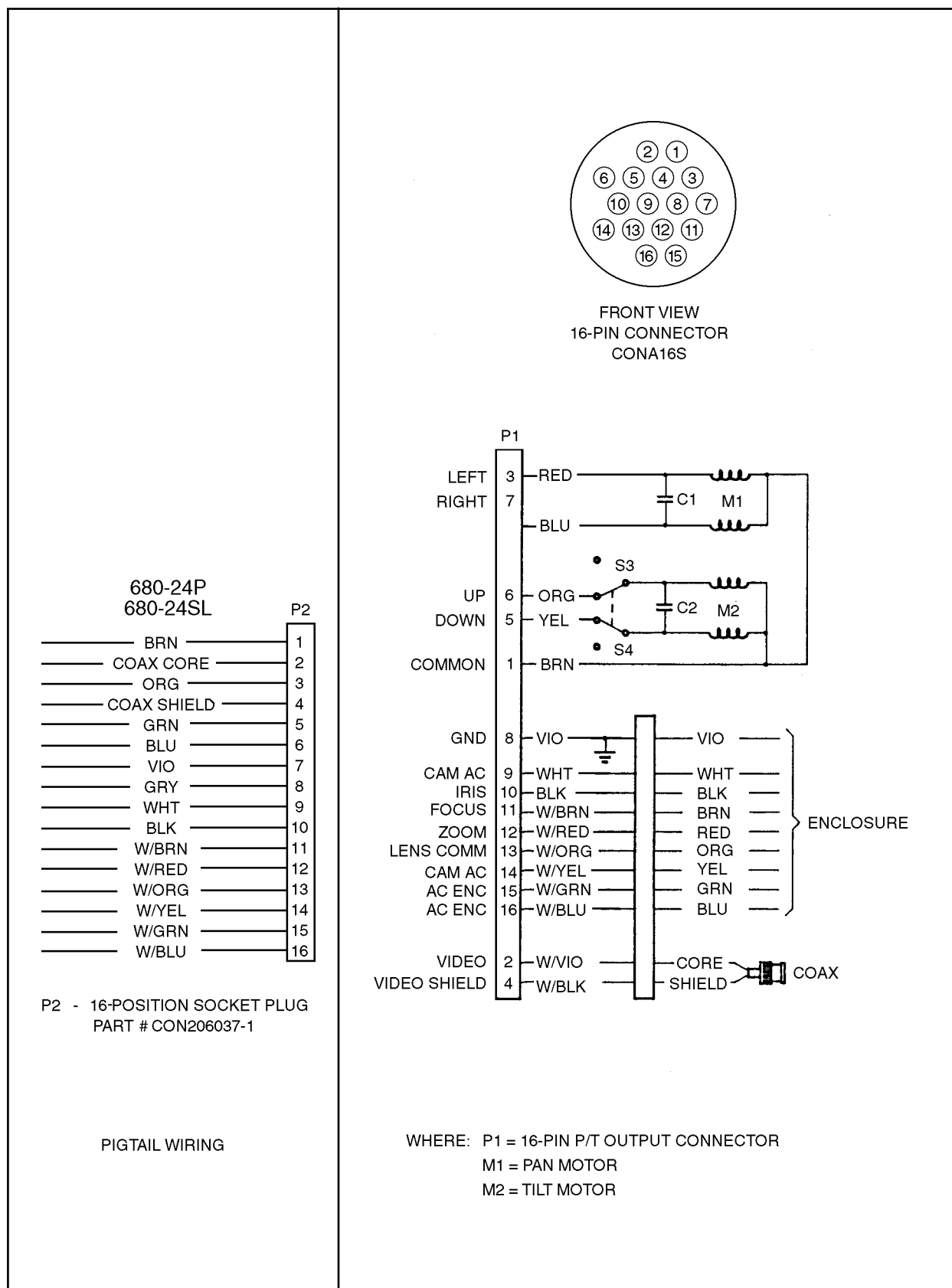


Figure 13. PT680-24SL Wiring Schematic

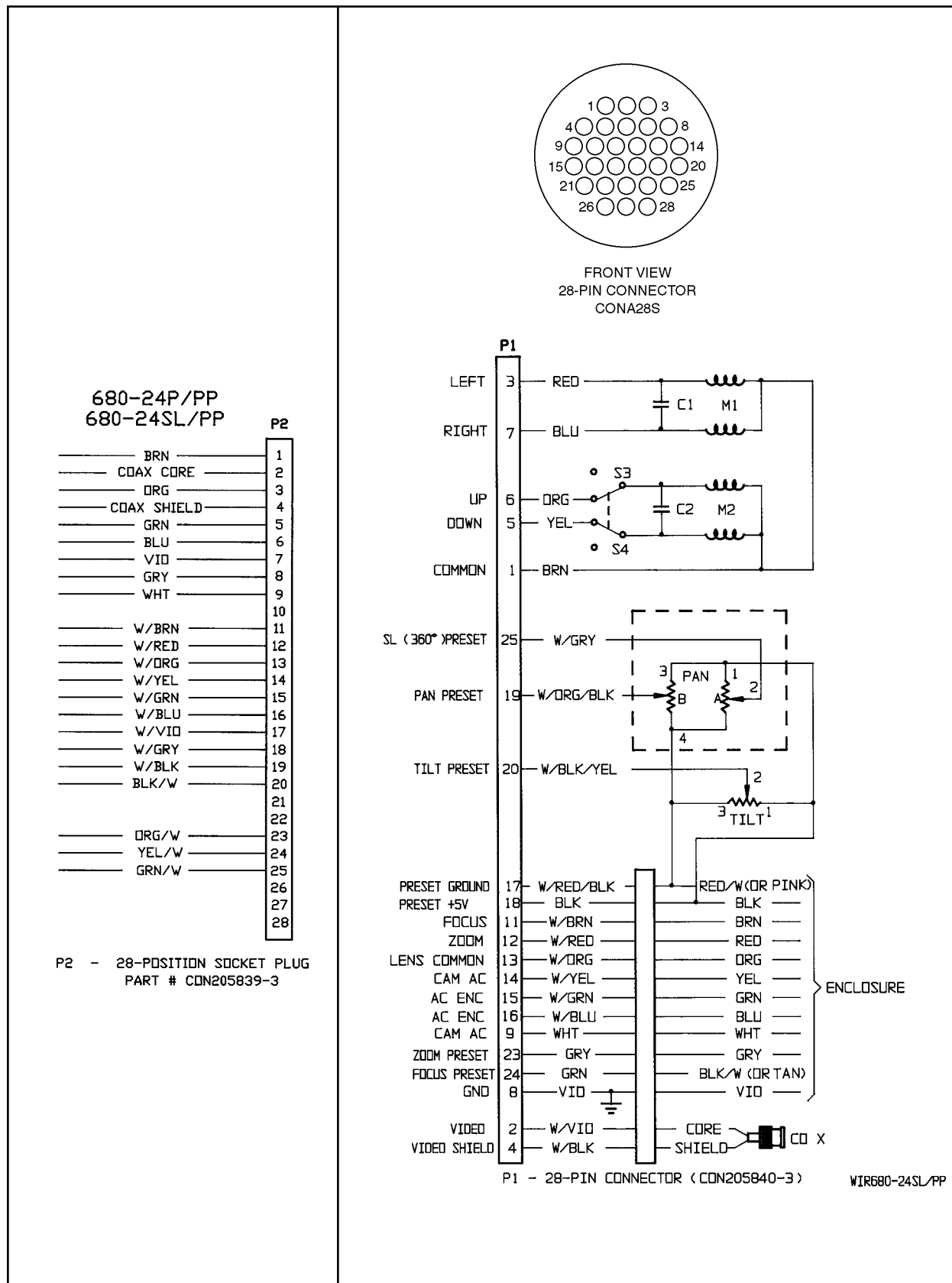


Figure 15. PT680-24SL/PP Wiring Schematic

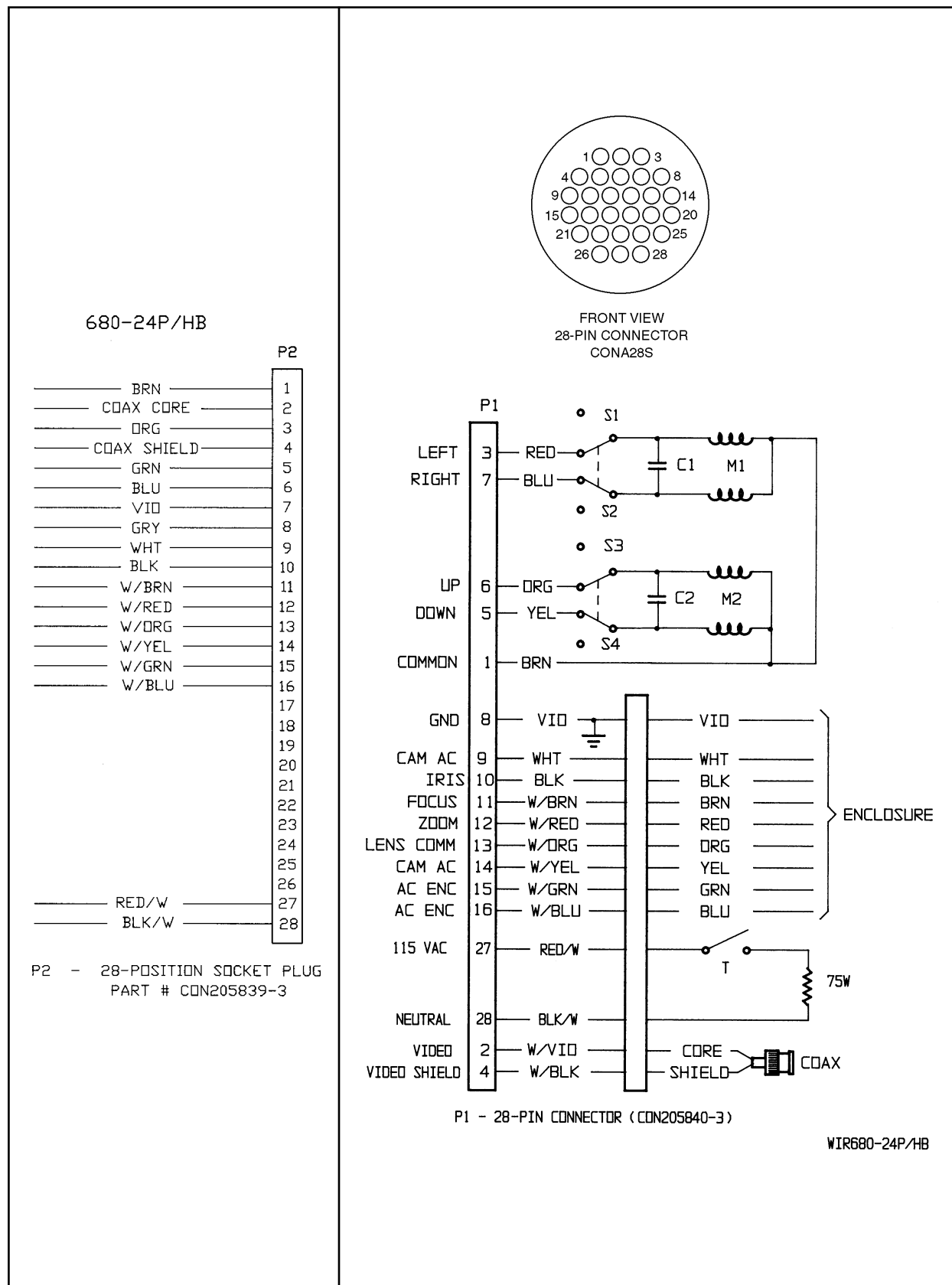


Figure 16. PT680-24P/HB Wiring Schematic

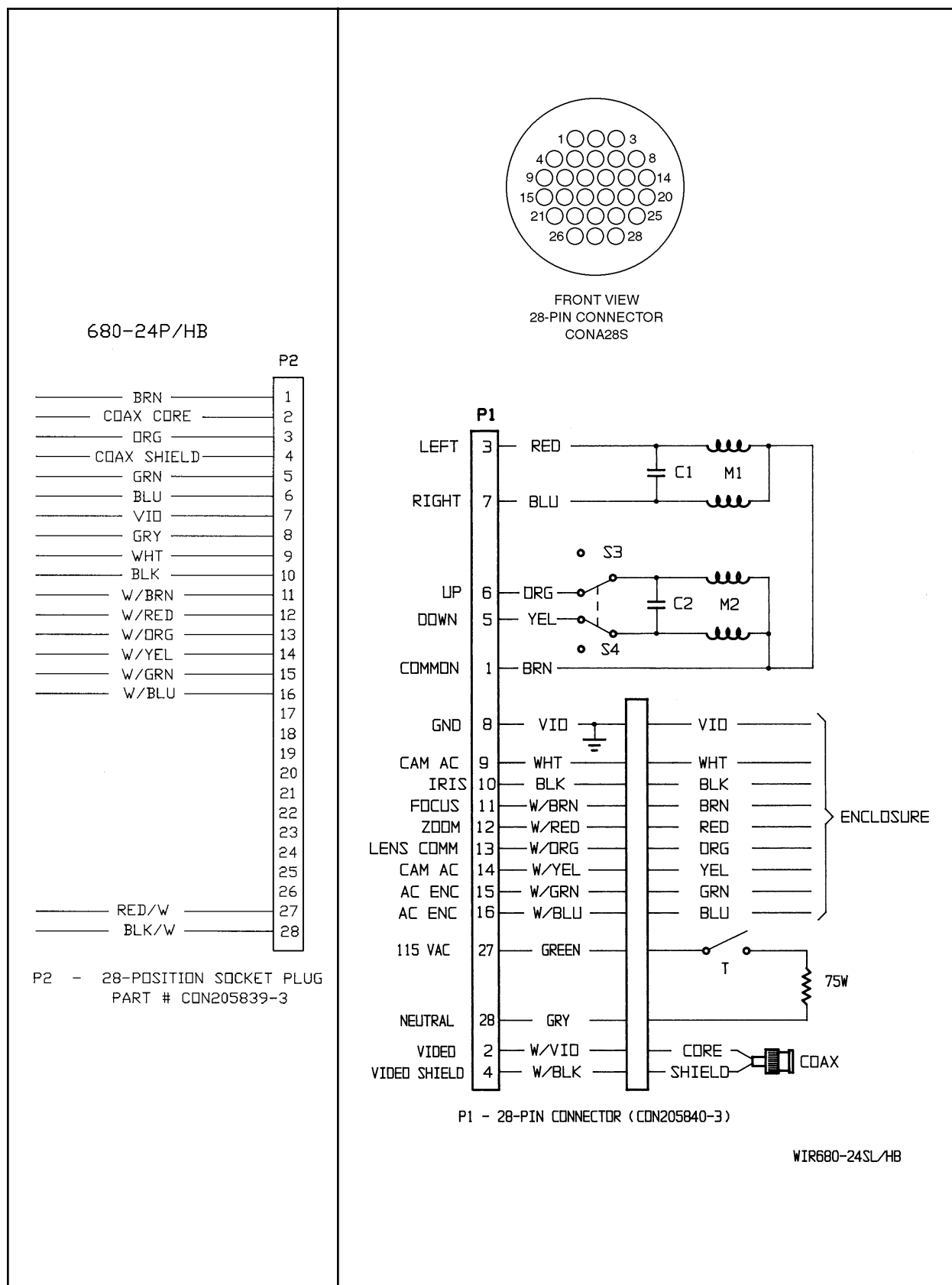


Figure 17. PT680-24SL/HB Wiring Schematic

6.0 WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment. Exceptions to this warranty are as noted below:

- Three years on Genex™ Series (multiplexers, server, and keyboard).
- Two years on all standard motorized and fixed focal length lenses.
- Two years on Esprit™, Legacy®, Intercept®, PV1000 Series, CM6700/CM8500/CM9500/CM9750/CM9760 Matrix, Spectra®, DF5 Series and DF8 Fixed Dome products.
- Two years on WW5700 series window wiper (excluding wiper blades).
- Two years on cameras.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Ship freight prepaid to: Pelco
300 West Pontiac Way
Clovis, CA 93612-5699

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair). Goods returned for repair or credit should be clearly identified with the assigned CA/RA number and freight should be prepaid. All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Ship freight prepaid to: Pelco
300 West Pontiac Way
Clovis, CA 93612-5699

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