

24 VAC					
SY1	SY2	SY3	SY4	SY5	
Amps	Amps	Amps	Amps	Amps	Amps
1.8	3	3	6	6.5	
MAX Distance between Actuator and Supply (feet)					
18	55	55			
16	87	87	43	40	
14	140	140	70	65	
12	214	214	107	99	
10	364	364	182	168	
8	543	543	271	250	

110 VAC											
SY1	SY2	SY3	SY4	SY5	SY6	SY7	SY8	SY9	SY10	SY11	SY12
Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
0.5	1	1	1.3	1.5	1.8	3.2	4	3.2	4	3	4
MAX Distance between Actuator and Supply (feet)											
18	758	758	583	505	421	237	189	237	189	253	189
16	1190	1190	916	794	661	372	298	372	298	397	298
14	1923	1923	1479	1282	1068	601	481	601	481	641	481
12	2941	2941	2262	1961	1634	919	735	919	735	980	735
10	5000	5000	3846	3333	2778	1563	1250	1563	1250	1667	1250
8	7463	7463	5741	4975	4146	2332	1866	2332	1866	2488	1866

220 VAC											
SY1	SY2	SY3	SY4	SY5	SY6	SY7	SY8	SY9	SY10	SY11	SY12
Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
0.3	0.5	0.5	0.6	0.7	0.8	1.6	2	1.6	2	1.6	2.2
MAX Distance between Actuator and Supply (feet)											
18	3030	3030	2525	2165	1894	947	758	947	758	947	689
16	4762	4762	3968	3401	2976	1488	1190	1488	1190	1488	1082
14	7692	7692	6410	5495	4808	2404	1923	2404	1923	2404	1748
12	11765	11765	9804	8403	7353	3676	2941	3676	2941	3676	2674
10	20000	20000	16667	14286	12500	6250	5000	6250	5000	6250	4545
8	29851	29851	24876	21322	18657	9328	7463	9328	7463	9328	6784

The NEC mandates that 24 VAC over 100 VA power requires CLASS 1 wiring conduit. Local codes may vary. Do NOT mix CLASS 1 & CLASS 2 circuits in the same conduit. Generally, 24 VAC actuators over 100 VA should be changed to 120 VAC models.

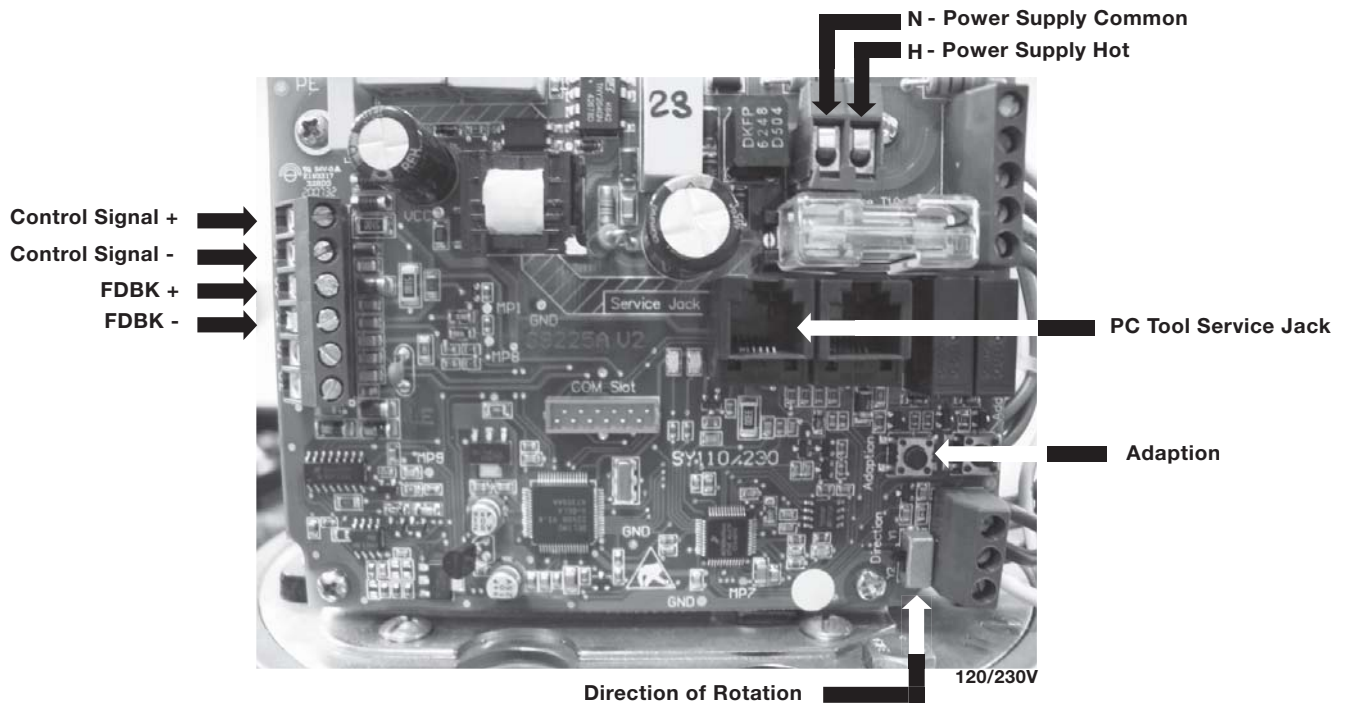
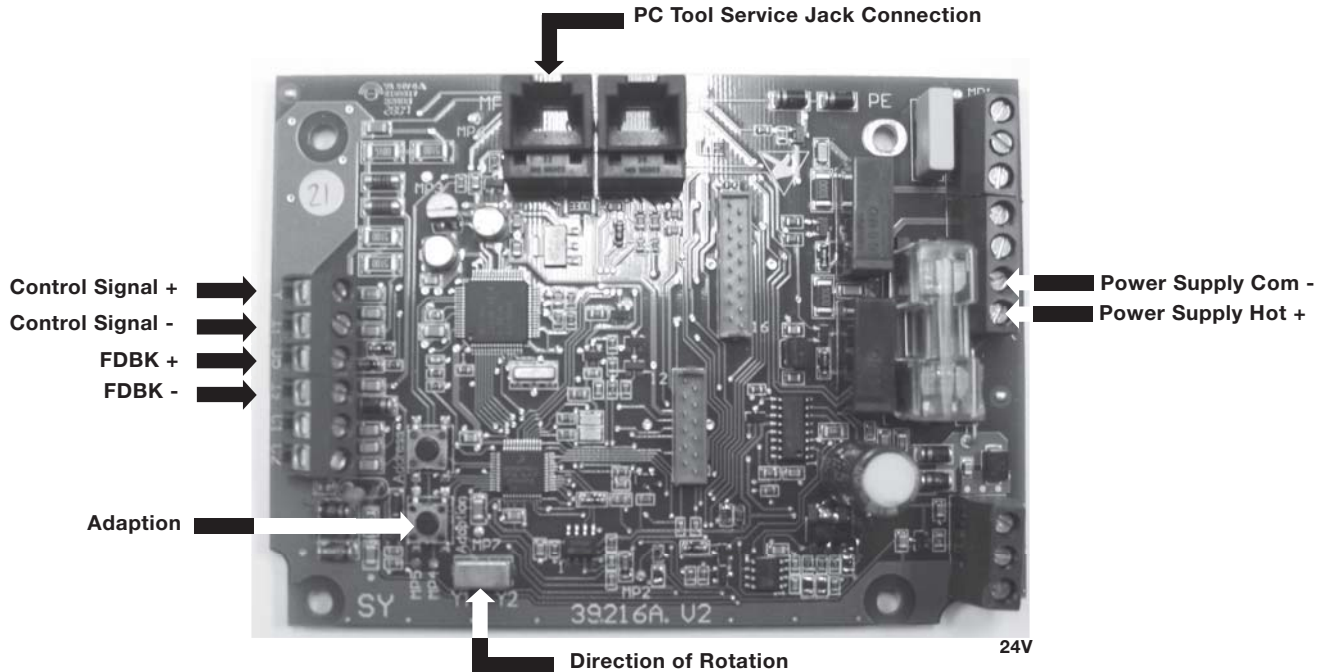
Actuators: SYx-MFT

INSTALLATION NOTES

CAUTION

Notes:

1. Motor CAMS have been factory calibrated and should not be moved.
2. An adaption must be performed if any limit switch is adjusted. This will calibrate the beginning and end stopping points. Press the adaption button for 3 seconds and release.



L30039 - 01/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring for Damper Actuators and Control Valves

Proportional, 24V, 120/230V



Actuators: SY2...5-24MFT SY2...12-120MFT SY2...12-230MFT

Hazard Identification

Warnings and Cautions appear at appropriate sections throughout this manual. Read these carefully.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

Indicates an action or condition that may cause irreversible damage to the actuator(s) or associated equipment.

Equipment damage!
Power consumption and input impedance must be observed.

NOTES SY2...5-24MFT

33 Each actuator should be powered by a single, isolated control transformer.

- Power supply Com/Neutral and Control Signal "-" wiring to a common is prohibited.

INSTALLATION NOTES

Observe Class 1 and Class 2 wiring restrictions.

Transformer sizing = SY actuator draw X 1.25 (safety margin)
(Ex. SY2-24 requires 3.0A x 1.25 = 3.75A, 3.75A X 24 VAC = 90VA Transformer)

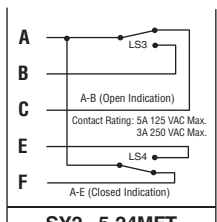
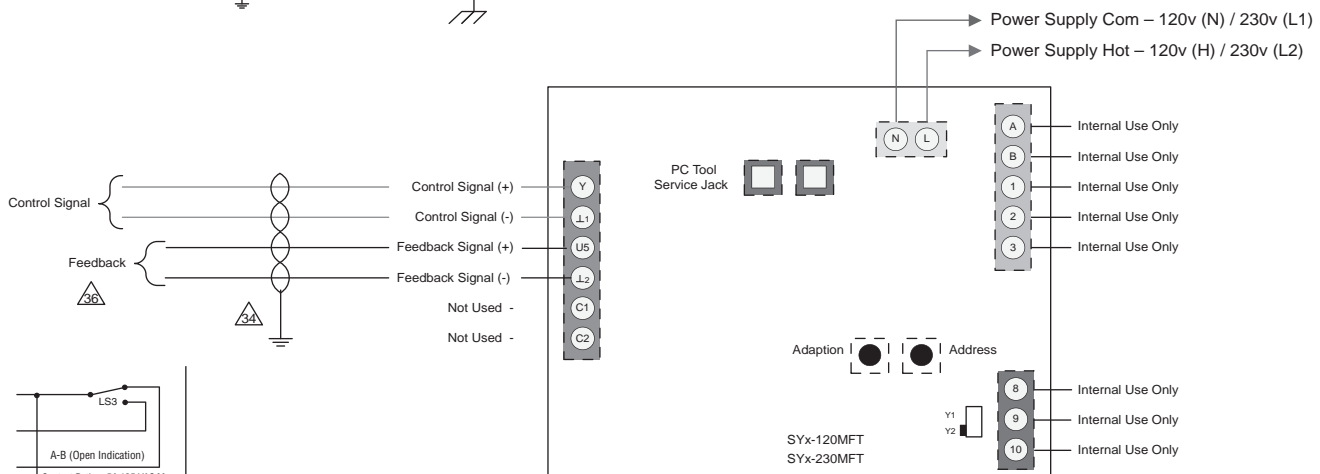
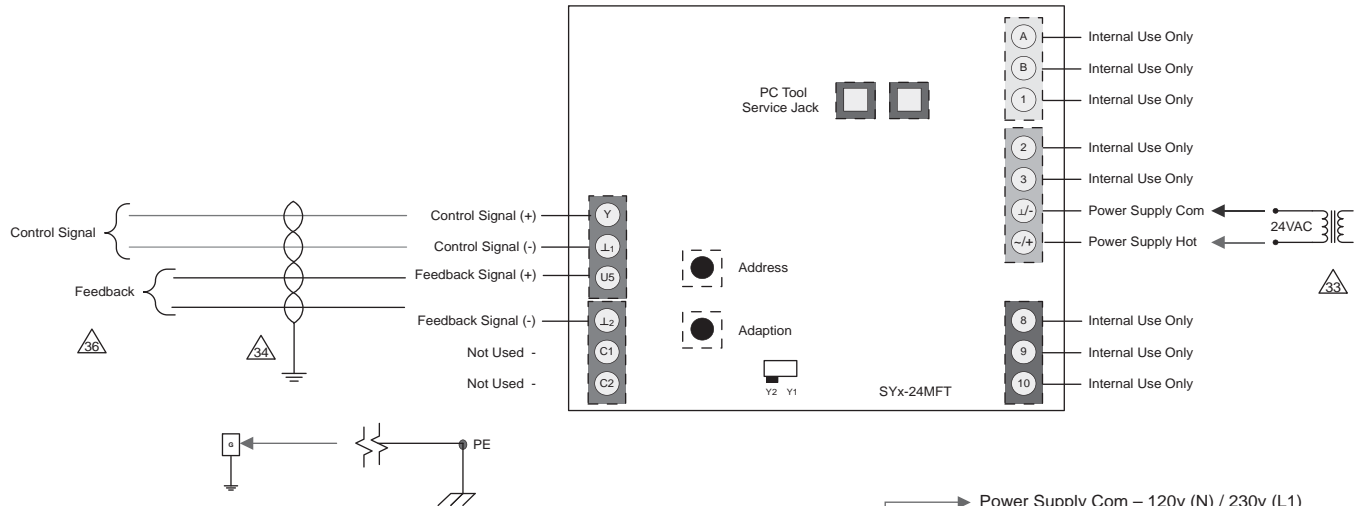
APPLICATION NOTES

34 Ground shielded wire at control panel chassis.
Tape back ground at actuator.

36 Use of feedback is optional.

NOTES SY2...12-120MFT (230SR/MFT)

- **Caution:** Power supply voltage.



SY2...5-24MFT

SY2...12-120MFT (230MFT)

W547-2

W549

L30039 - 01/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

