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## 3FCM-PHILIPS MCS COUPLER

### PHILIPS MCS COUPLER INSTALLATION - INSTRUCTIONS FOR USE

This document describes how to attach a Philips MCS Coupler to a Flexvision adapter on a large monitor mount, and install the unit on a Skytron powered height adjustable arm.

This document covers the following topics:

- Pre-installation safety
- Recommended tools
- Installing the coupler
- Installing the flexvision adapter
- Routing and attaching the cable
- Powered height arm adjustment

#### 1-1. Pre-Installation Safety

##### **NOTICE**

Keep the workplace clean and keep it free of unnecessary tools.



##### **CAUTION**

**Avoid Electrical Injuries by observing a Lockout/Tag Out Policy.**

**Avoid exposure to electrical hazards an unexpected Energizing or startup of the equipment by disconnecting the equipment from the energy source, with the means of power connection being under the exclusive control of the employee performing the maintenance or repair.**

**The placement of a lock and tag on the electrical source in accordance with established procedure indicating that the energy isolating device shall not be operated until the removal of the lock/tag is recommended.**

#### 1-2. Recommended Tools

- Digital level
- Phillips screwdriver
- Wire puller (fish tape)
- 5 mm Allen wrench
- 6 mm Allen wrench
- 8 mm Allen wrench
- Lift capable of supporting up to 800 lbs.
- Blue Loctite® 242
- Electrical tape
- Hook and pick set

### 1-3. MCS Coupler Assembly

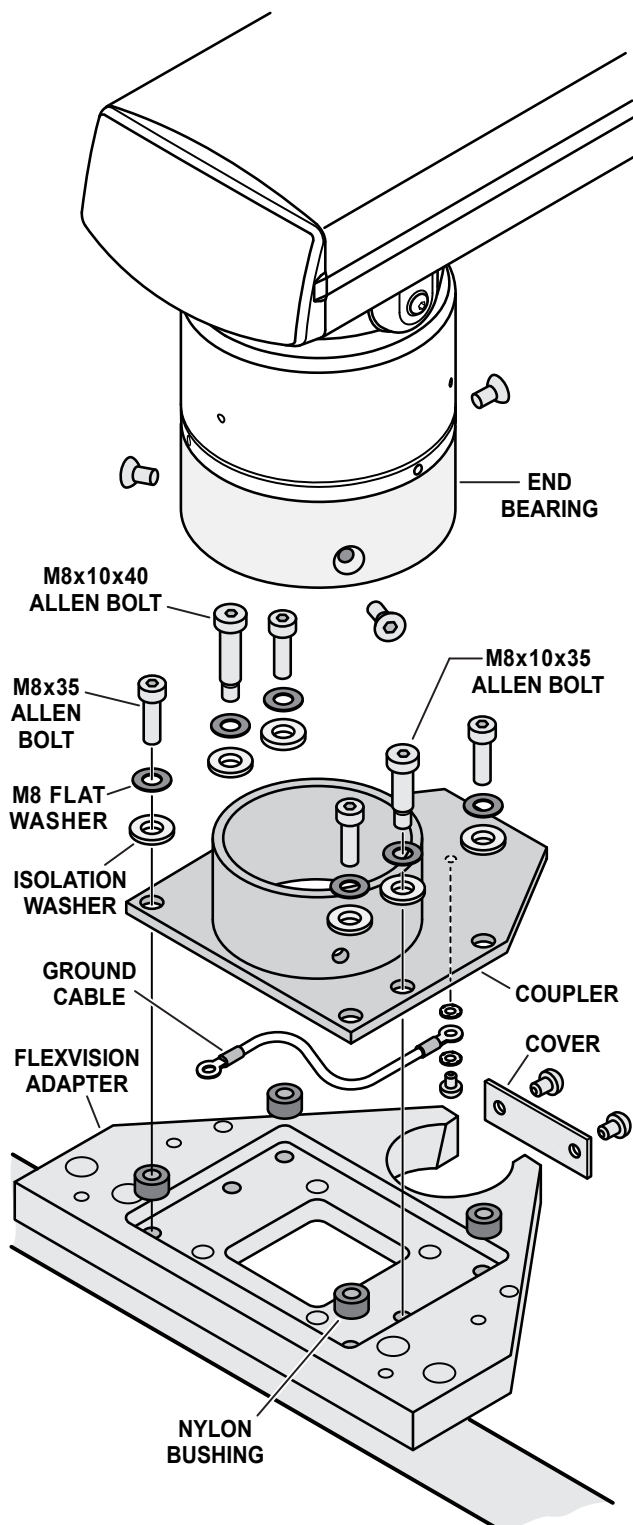
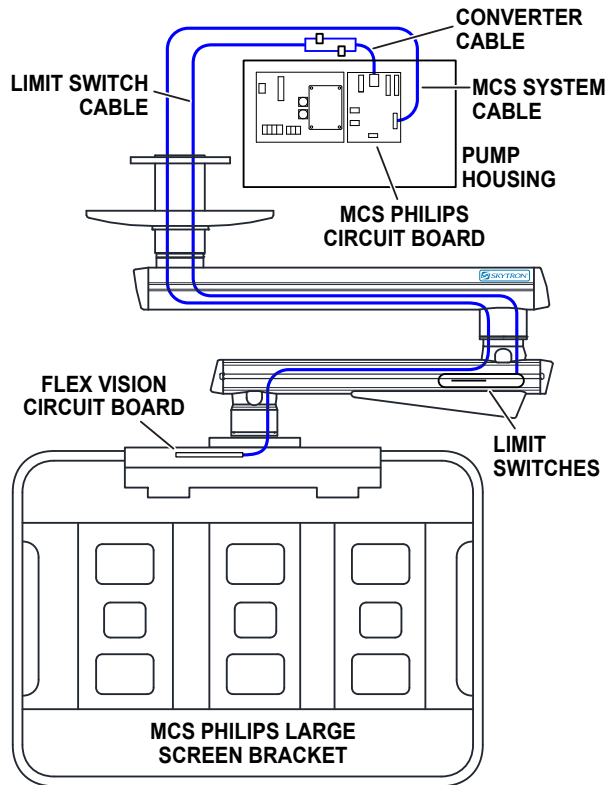


Figure 1. FCM-Philips Assembly

1. Slide the flange of the coupler into a vertical support tube (VST) or the powered arm end bearing (Figure 1).
2. Secure the coupler with three screws. Use Loctite 242- on threads to prevent the screws from loosening.
3. Install the ground cable on the bottom of the coupler and connect the ground cable to the upper arm.
4. Install the cover at the rear of the Flexvision adaptor.
5. Place four nylon bushings on the adapter aligned with the holes at the four corners of the indentation.
6. Position flexvision adapter so that the four bushings align with the matching four corner holes in the coupler.
7. Place a plastic isolation washer into each of the four holes on the coupler, and place a M8 flat washer on each isolation bushing.
8. Insert a M8x35 Allen bolt in each of the four holes. Tighten to a torque of 25.8 ft lb (19 N•m).
9. Place one plastic isolation bushing into the two remaining holes on the side of the coupler, and place one washer on both.
10. Mount one M8x10x40 shoulder head Allen bolt on the right hand side. Tighten to a torque of 25.8 ft lb (19 N•m). This is an extra long bolt for security purposes and will leave a slight gap.
11. Mount one M8x10x35 shoulder head Allen bolt on the left hand side. Tighten to a torque of 25.8 ft lb (19 N•m). This is also an extra long bolt for security purposes and will leave a slight gap.

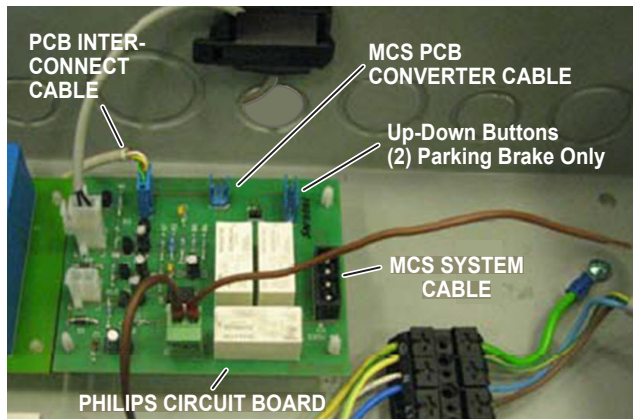
## 1-4. Cable Installation

1. Feed the MCS System cable cable through conduit in the arm(s). If necessary, run the Limit Switch cable through the arm (Figure 2).



**Figure 2. PCB MCS Converter Cable**

2. Connect the MCS PCB Converter cable to the Limit Switch cable.
3. Connect the MCS Converter cable and the MCS System cable to the Philips circuit board inside the pump housing (Figure 3).



**Figure 3. MCS Philips Circuit Board**

4. Connect the Skytron MCS System cable to the Flexvision circuit board port (Figure 4).



**Figure 4. Flexvision Circuit Board**

### NOTICE

Philips system must be powered to test up/down function.

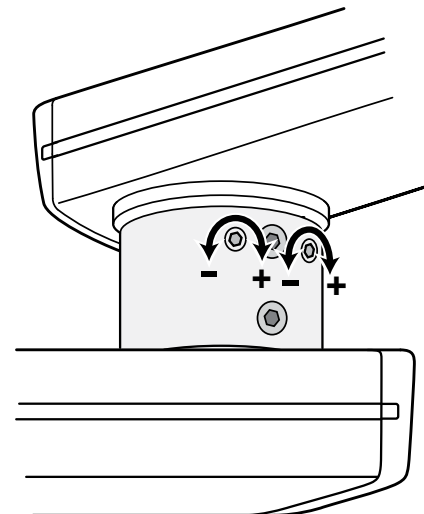
## 1-5. Powered Height Arm Adjustment

The following arm adjustments must be made to Ergon arms after any accessory or equipment has been installed.

### a. Brake Adjustment

Each boom bearing has a friction brake to limit the turning speed of the bearings. The ideal setting for the friction brake prevents the boom arm from drifting, but the boom arms are still easy to move.

Adjust brake friction on Ergon upper and lower arms using two brake screws (Figure 5):



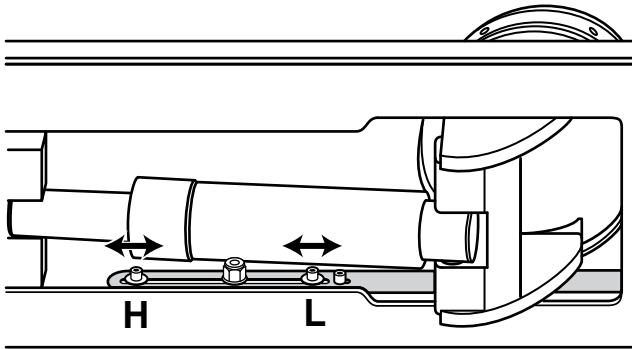
**Figure 5. Brake Adjustment**

- Turning both brake screws uniformly in a clockwise direction will increase brake friction.
- Turning both brake screws uniformly in a counterclockwise direction will decrease brake friction.

#### b. Height Adjustment.

The powered height adjustable arm has an upper, lower, and self-collision limit switch for establishing the range of motion that it will travel when it is raised or lowered. There is no adjustment for the self-collision switch. Use the following procedure to adjust the position of the upper and lower limit switches (Figure 6).

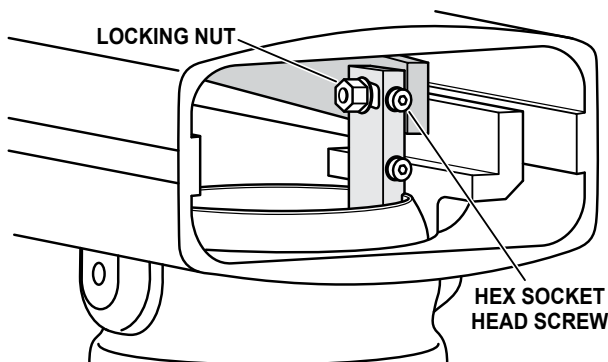
1. Loosen bolt "L" and slide the bolt to adjust the lowest position of the hydraulic arm.
2. Loosen bolt "H" and slide the bolt to adjust the highest position of the hydraulic arm.



**Figure 6. Height Limit Switches**

#### c. Plumb Adjustment.

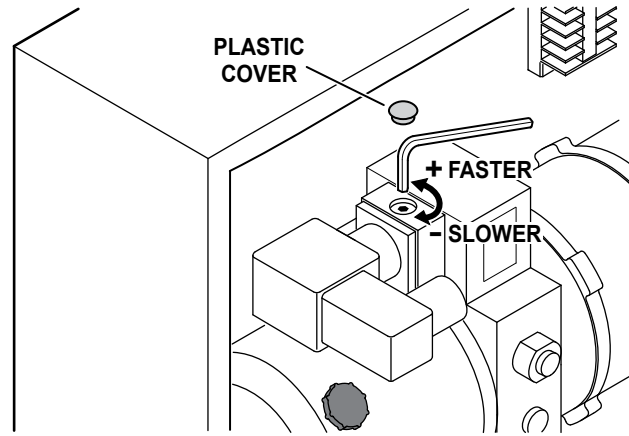
When a powered height adjustable arm is properly plumbed, the monitor should be perpendicular to the floor. Plumb adjustments are made at a cam adjuster located on the carrier end of the powered height arm (Figure 7).



**Figure 7. Powered Height Arm Leveling**

1. Position the arm in the horizontal position during leveling.
2. Using a spirit (bubble) level, check the plumb of the monitor with the level.
3. If adjustment is necessary, loosen the locking nut and turn the hex socket head screw to move the leveling rod forward or backward.
4. Tighten the locking nut.

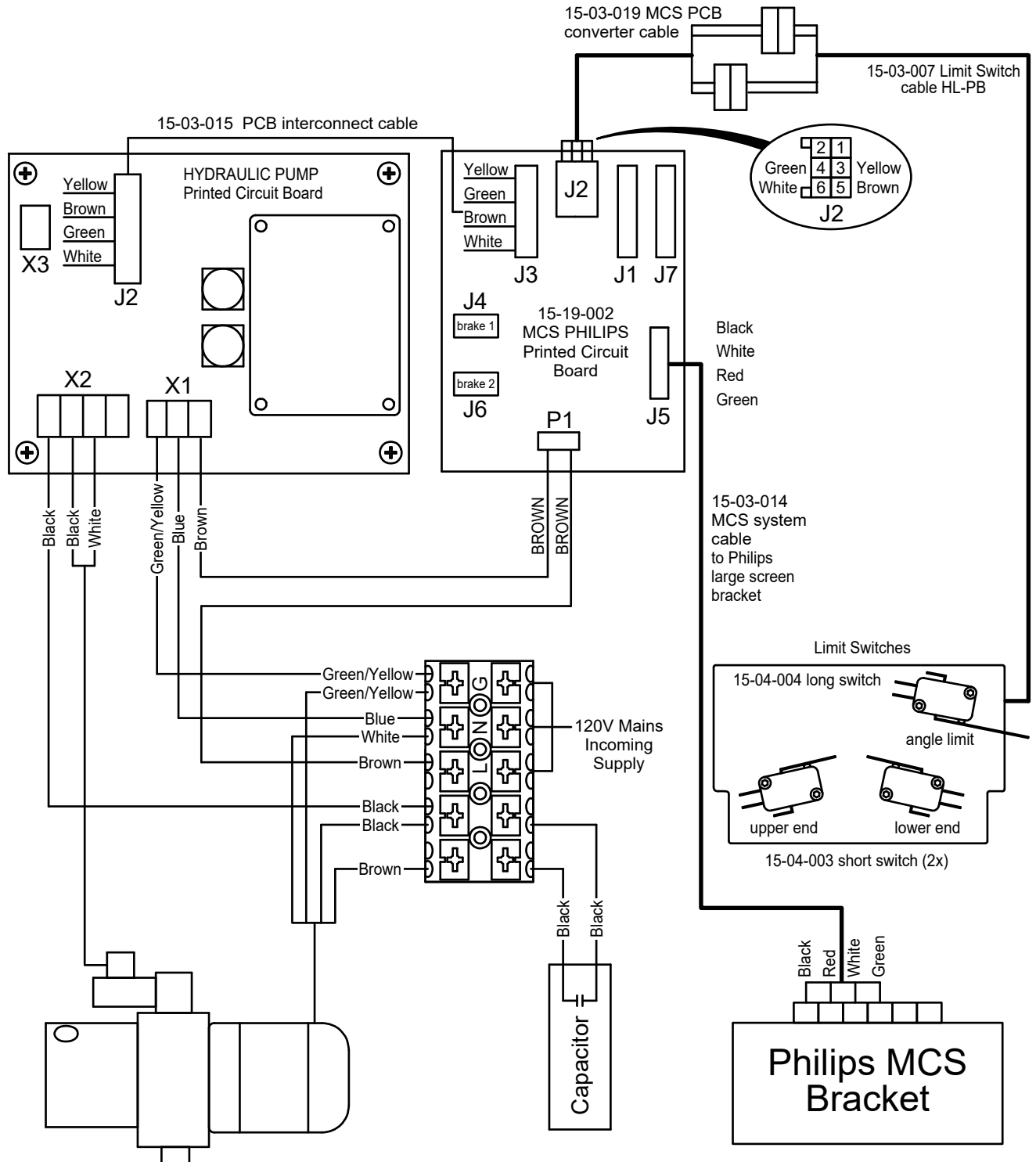
#### d. Adjustment of the speed at which the arm lowers.



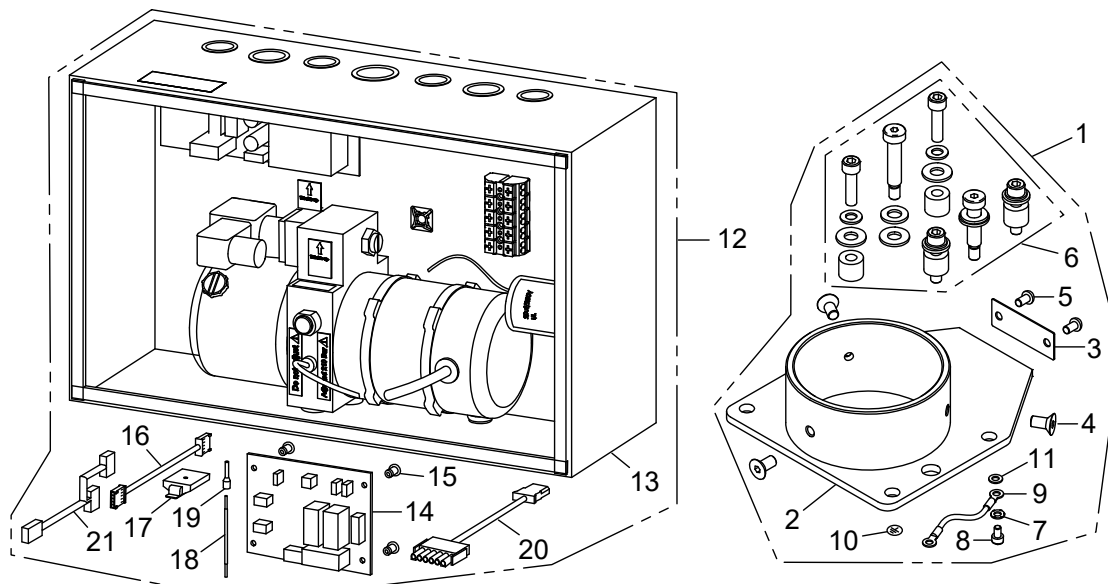
**Figure 8. Speed Adjustment Set Screw**

1. Remove the plastic cover at the topside of the pump (Figure 8).
2. Lower the arm and turn the adjusting set screw to set the desired speed.
3. Replace plastic cover after the speed is set.
4. Re-assemble the enclosure cover using the four screws removed in Step 1.

## 1-6. 3FCM-PHILIPS Power Height Adjustable Arm Electrical Diagram



## 1-7. 3CFM-PHILIPS Replacement Parts



Item	Part Number	Description	Qty	Remark
1	13-1011-00-1	Coupler Philips Assembly	1	S.N.
2	13-D2394-1	MCS Coupler Assembly	1	
3	13-D2391-1	Cover Plate	1	
4	51060.080.016	Hex Countersunk Screw M8x16	3	NAS
5	51030.060.010	Hex Button Head Screw M6x10	2	A/R
6	13-1173-00-1	Hardware set Philips	1	
7	37265.050.001	Contact washer M5	1	NAS
8	51050.050.008	Hex Socket Head Screw M5x8	1	NAS
9	03-M2005-0	Ground Cable Type M5-M5 L=2500	1	
10	89-01-0007	Sticker Ground Symbol	1	A/R
11	51420.050.001	Washer M5	1	NAS
12	13-1325-00-0	Hydraulic Pump + MCS PCB 120V	1	A/R
13	13-359-00-1	Hydraulic Pump Unit 120V-60Hz	1	A/R
14	15-19-002	Circuit Board MCS Philips	1	
15	30-12-001	PCB Spacer	4	
16	15-03-015	PCB Interconnect Cable	1	
17	FKH25A	Cable Fixture 25mm	1	
18	P039	Wire Brown 1,5mm <sup>2</sup>	1	NAS
19	73100.175.012	Ferrules 6mm <sup>2</sup> Black	1	
20	15-03-014	MCS System Cable	1	
21	15-03-019	MCS PCB Converter Cable	1	

NOTES

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## MCS Philips Coupler Installation IFU - REVISION HISTORY

Date	Revision	Summary of Changes
12/23/2015	0	Initial release
3/24/2017	1	Pg 3 - Added NOTICE. Pg 5 - Revised electrical schematic. Pg 6 - Revised parts list.
10/30/2017	2	Pg 5 - Revised electrical schematic.

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