VC-Feeder™
User Manual

Dimensions

180 (approx.)

180 (approx.)

164

180 (approx.)

36

68
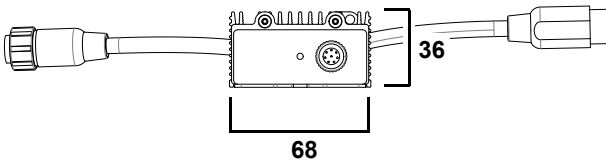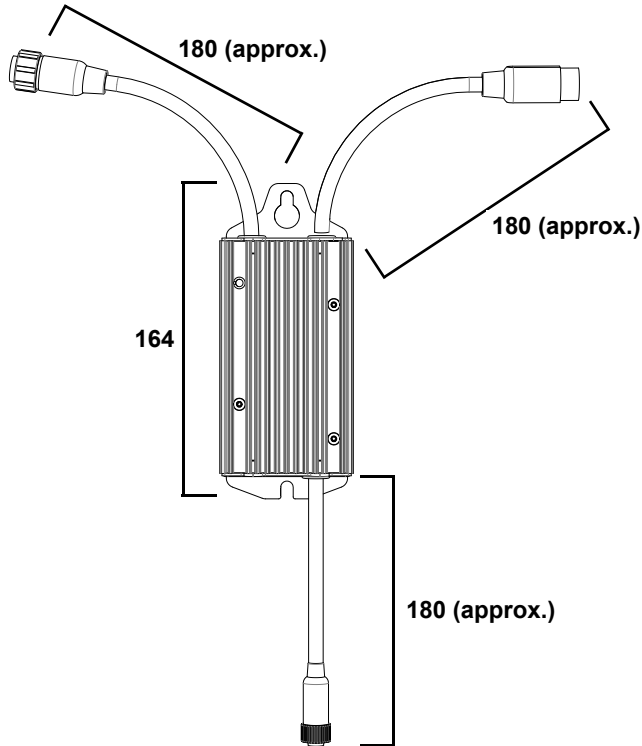
Variant with M16 connectors illustrated
All dimensions are in millimeters

Contents

Safety information

The following symbols are used to identify important safety information in this guide:

Warning!
Safety hazard.
Risk of personal injury.

Warning!
Fire hazard.

Warning!
Hazardous voltage. Risk of severe or lethal electric shock.

Warning!
Refer to user documentation.

Warning! Read this user manual before installing and operating the VC-Feeder.

Warning! The VC-Feeder is designed to integrate with other Martin® devices in a video display installation. Follow the safety precautions given not only in this user manual but also in the manuals of all the devices you connect to it. Observe all warnings given in the manuals and printed on devices. Install and operate devices only as described in the manuals and only in accordance with local laws and regulations. Keep this manual for future reference. Manuals are supplied with devices and also available for download from www.martin.com.

Warning! The VC-Feeder is not for household use. It presents risks of severe injury or death due to fire and burn hazards, electric shock and falls. It must be installed by qualified technicians only.

Warning! There are no user-serviceable parts inside the VC-Feeder. Refer any operation not described in this manual to Martin or its authorized service agents.

If you have any questions about how to operate the VC-Feeder safely, please contact your Martin supplier or call the Martin 24-hour service hotline on +45 8740 0000, or in the USA on 1-888-tech-180.

PROTECTION FROM ELECTRIC SHOCK

- Follow carefully the directions given in the user manuals of all the devices that you intend to connect to the VC-Feeder, particularly the instructions, warnings and limits that apply to:
  - system layout,
  - connections to other devices,
  - specified cables,
  - maximum cable lengths, and
  - maximum number of devices that can be connected.
- The VC-Feeder accepts input power at 48 VDC nominal via its combined power/data input connector marked IN. Do not supply it with power at any other voltage.
- The VC-Feeder can relay power at 48 VDC nominal via its throughput connector marked THRU. Connect only devices that accept 48 VDC to the THRU connector.
- The VC-Feeder can supply power at 15 VDC nominal via its combined power/data output connector marked OUT. Connect only devices that accept 15 VDC to the THRU connector.
- A linked chain that consists of one or more VC-Feeder devices plus display devices can draw a safe maximum total current of 7.5 A. Do not create an interconnected chain of devices with a total combined current draw that exceeds this 7.5 A limit. If the total current draw of a chain of devices has reached 7.5 A and you need to supply power to more devices, you must begin a new chain.
- If using a 48 VDC external PSU (power supply unit) in a DMX-controlled system, do not create an interconnected chain of devices with a total combined current draw that exceeds 7.5 A or the maximum current draw rating for the PSU output, whichever is lower. If the total current draw of a chain of devices has reached 7.5 A (or the maximum current rating for the PSU output, if this is lower than 7.5 A) and you need to supply power to more devices, you must begin a new chain that is connected to a new PSU output.
- Provide a means of locking out power that allows power to the installation to be shut down and made impossible to reapply, even accidentally, during work on the installation.
- Shut down power to the installation during service and when it is not in use.
- Use only the cables specified by Martin for the devices concerned to interconnect them. If the specified cables are not long enough for an intended cable run, consult Martin for assistance in finding or creating a safe alternative cable.
- Before applying power to the installation, check that all power distribution equipment and cables are in perfect condition, rated for the

current requirements of all connected devices and of suitable type for the location (including water, pollution, temperature and UV resistance).

- Isolate the installation from power immediately if any device, cable or power plug is in any way damaged or defective, or if there are any signs of overheating. Do not reapply power until the fault has been rectified.

- Do not operate the installation if any cover or component is missing, damaged or deformed.

- The VC-Feeder is IP65-rated and resists the ingress of water, but do not immerse it, install it in a location where flooding may occur or expose it to high-pressure water jets.

- Protect all unused BBD connectors from the entry of water by installing sealing caps on the connectors.

PROTECTION FROM BURNS AND FIRE

- Provide free airflow and a minimum clearance of 10 cm (4 in.) around the VC-Feeder.

- Do not operate the VC-Feeder if the ambient temperature (T_a) exceeds 55° C (131° F).

- Do not modify the VC-Feeder in any way not described in this manual or install other than genuine Martin parts. Use only accessories approved by Martin.

PROTECTION FROM INJURY

- When installing the VC-Feeder above ground level, ensure that the primary installation hardware and supporting structure can hold at least 10 times the weight of all the devices they support.

- When suspending the VC-Feeder from a rigging structure, use a rigging clamp that is approved by an official notified body for the weight it supports and installed as described in this manual.

- In an overhead installation or where the VC-Feeder may cause injury if it falls:
  - block access below the work area and work from a stable platform whenever installing, servicing or moving the VC-Feeder,
  - install as described in this manual a secondary attachment (such as a safety wire) that is approved in accordance with UL1573 Section 9.2 and EN 60598-2-17 Section 17.6.6 as a safety attachment for the weight it must secure if the primary attachment fails, and
  - as soon as work is completed, check that all hardware and components are securely in place and that all installation and rigging hardware used is securely fastened.

Introduction

Thank you for selecting the VC-Feeder from Martin Professional. The VC-Feeder is a multi-protocol IP65-rated driver box that accepts 48 VDC power and video/control data, and then supplies 15 VDC power and video/control data to Martin LED-based video display products.

For possible system layouts when using the VC-Feeder with Martin video display products, see the user documentation for those products. Martin user documentation is supplied with products and available for download from the Martin website at http://www.martin.com, where you can also find the latest specifications, firmware updates and support information for all Martin products.

Connector types

See Figure 1. The VC-Feeder is available in two models that have different connector types on their power & data IN and power & data THRU cable tails:

- VC-Feeder with M16 connectors, featuring the original M16 connectors for power & data IN and power & data THRU that have been fitted since the VC-Feeder was launched.
- VC-Feeder with BBD connectors, available from mid-2018, featuring the same BBD connectors as the Martin Exterior PixLine, Exterior Dot-HP, VDO Sceptron, VDO Dotron & VDO Fatron, for power & data IN and power & data THRU.

M16 connectors   **BBD connectors**

Figure 1:Power and data IN and THRU connector types

M16 and BBD connectors can be interconnected, if necessary, using adapter cables available from Martin.

Unused BBD connectors need to be closed with a cap to prevent the entry of water.

For easy compatibility with existing Martin VC family products, we recommend that you use the VC-Feeder with M16 connectors in existing installations. For easy compatibility with a wider range of Martin video and lighting products, we recommend that you use the VC-Feeder with BBD connectors in new installations.

The type of connectors used by Martin products are listed in their product specifications on the Martin website at www.martin.com.

The line drawings in this user manual show M16 connectors. BBD connectors have a slightly different appearance, but their use and function is identical with M16 connectors.

Overview

Power (48 VDC) & data) THRU connector

M16 connector illustrated

Power (48 VDC) & data) IN connector

Surface mount attachment point

M16 connector illustrated

Rigging clamp attachment point

Surface mount attachment point

Hybrid (15 VDC & data) output OUT connector

Test/reset button   **Status LED**   **Safety wire attachment point**
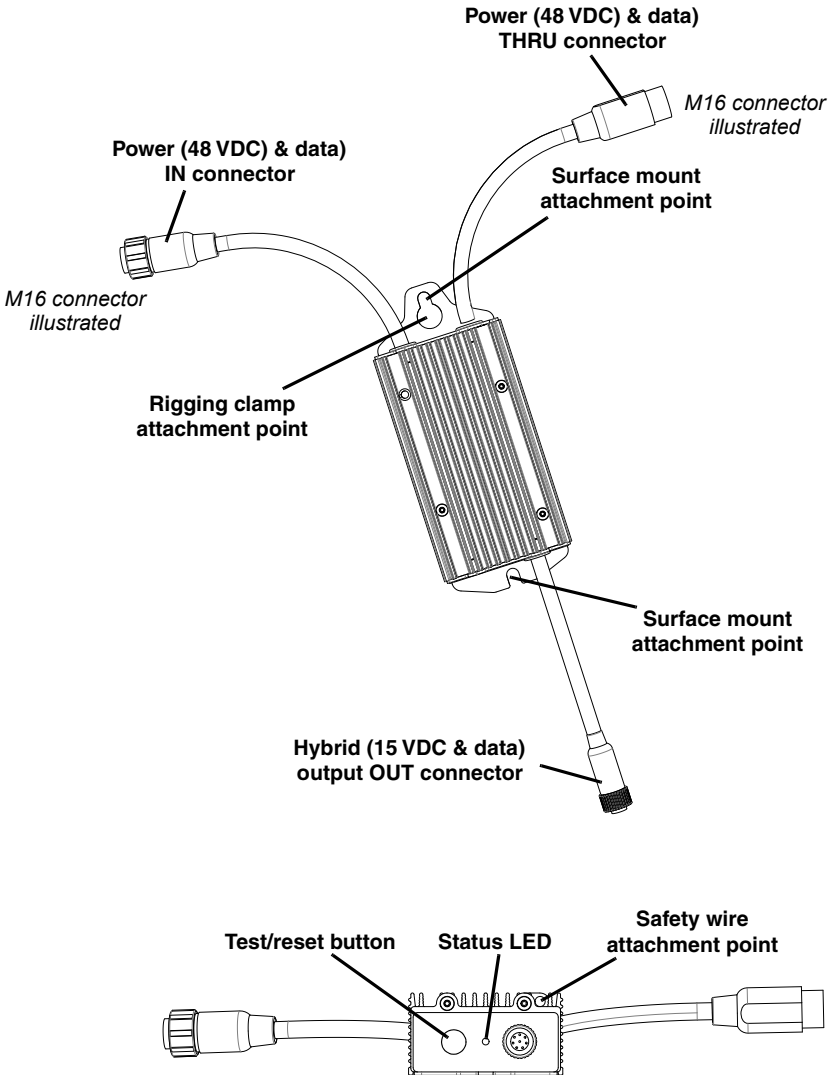
Figure 2: Product overview

Physical installation

⚠ _Warning! If suspending the VC-Feeder above ground level, secure it against failure of primary attachments with a safety wire that is approved as a safety attachment for the weight of the product._

The VC-Feeder can be installed on a flat surface or suspended from a rigging truss in any orientation. Allow free airflow and at least 10 cm (4 in.) of clearance around the device.

Supporting surfaces, fasteners and hardware must be capable of supporting ten times the load they will bear when devices are installed.

Fastening to a surface

The VC-Feeder can be mounted on a flat, stable surface in any orientation using bolts or screws fastened through the surface mount attachment points (see Figure 2 on page 9).

To fasten to a surface:

1. Check that the surface is flat and stable, and that the surface and all installation fasteners can support at least ten times the weight of all devices and hardware they will bear.

2. Fasten two grade 8.8 minimum steel 6 mm fasteners that are suitable for the mounting surface and environment through the two slotted holes that provide the surface mounting points for the VC-Feeder, ensuring that the fastener heads are wider than the slotted holes.

3. Check that the VC-Feeder is held securely and cannot fall.

4. If the product can cause injury or damage if the fasteners fail, install a safety wire that is approved as a safety attachment for the weight of the product by attaching it to the safety wire attachment point (see Figure 2 on page 9) and a secure anchoring point so that the safety attachment will catch the product if the primary attachment fails.

5. Check that the product is securely and safely installed.

Clamping to a truss

1. Obtain a rigging clamp and check that it is undamaged and approved for the weight it will support. Check that the structure that will be used for suspension can bear at least 10 times the weight of all installed products, clamps, cables, auxiliary equipment, etc.

2. Bolt the clamp securely through the rigging clamp attachment point see Figure 2 on page 9) with a minimum grade 8.8 steel M12 bolt and lock nut.

Figure 3: Martin half-coupler rigging clamp

3. Block access under the work area. Working from a stable platform, fasten the product to the truss with the rigging clamp.

4. Install a safety wire that is approved as a safety attachment for the weight of the product by attaching it to the safety wire attachment point (see Figure 2 on page 9) and a secure anchoring point so that the safety attachment will catch the product if the primary attachment fails.

5. Check that the product is securely and safely installed.
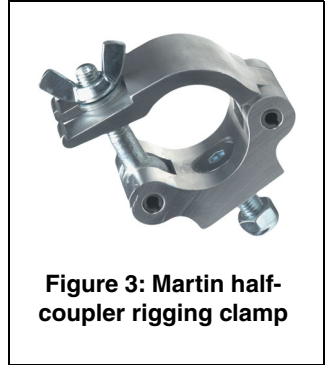
Connections

Warning! Check that the installation is isolated from AC mains power and that power cannot be reapplied during work on cables and connections.

Warning! Before connecting devices to the output (OUT) or throughput (THRU) connectors of a VC-Feeder, check carefully the information about system layouts and maximum safe limits:

- *in "Safety information" on page 4 of this manual, and*
- *in the user manuals of the devices in the system.*

Warning! When linking a VC-Feeder to other devices using its throughput connector, respect the maximum limits given in display device user manuals for the number of devices that can be linked in a chain and maximum permitted cable lengths.

Important! Do not connect more than twenty (20) VC-Feeder devices in one linked chain, even if you have not reached the maximum permitted current draw for the chain.

Figure 4 gives an example of how the VC-Feeder is connected:

48 VDC power + data input (IN) from power and data source

48 VDC power + data throughput (THRU) to other VC-Feeders

Maximum total current 7.5 A or maximum PSU output current, whichever is lower

15 VDC power + data output (OUT) to display devices
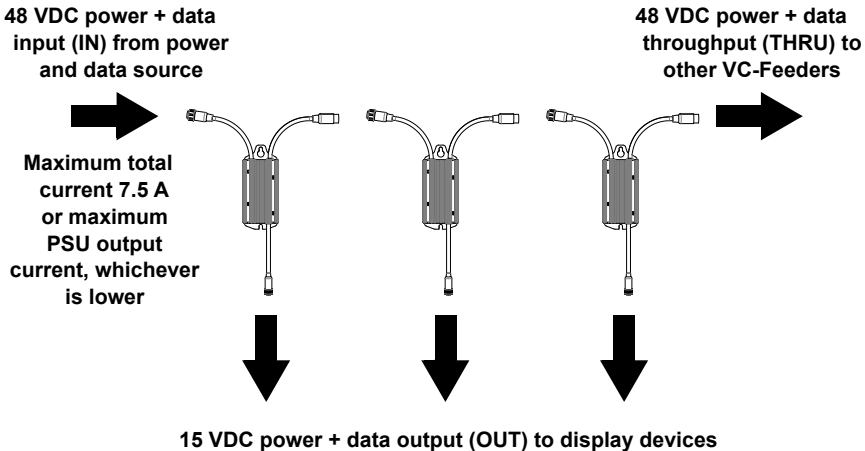
M16 connectors illustrated

Figure 4: VC-Feeder™ connections overview

Input connections: general

The VC-Feeder accepts 48 VDC power and data from a Martin P3™ video or DMX/RDM lighting data source via a 180 mm (7 in.) data IN cable tail. The cable tail has either an M16 or BBD type 6-pin male connector depending on VC-Feeder model.

The cables required for VC-Feeder connections depend on whether the installation is intended to display a P3 video signal or DMX-controlled lighting effects. These two different setups are covered in separate sections in this chapter.

Connectors

The VC-Feeder uses custom IP65-rated connectors. Depending on VC-Feeder model, either M16 or BBD connectors are fitted to power & data IN and power & data THRU cable tails (see "Connector types" on page 7).

To ensure that connectors are correctly sealed and avoid damage, connect them as follows:

1. Line up the raised lug and corresponding groove on the connectors. The connector pins and holes should now also be lined up.

2. Push the connectors together firmly but without excessive force. If force seems necessary, separate the connectors and check that they are correctly lined up, then try again.

3. When the connectors are correctly pushed together:
   • on M16 connectors, screw the locking ring on the male connector onto the thread on the female connector until fully tight
   • on BBD connectors, screw the locking ring on the male connector a quarter turn onto the female connector to lock it.

Seal all unused BBD THRU connectors with blanking caps (available in sets of ten by ordering P/N 91616052) to prevent the entry of water.

Extension cables

If the VC-Feeder is not close to the power and data source, you will need to extend the input cable. To do this, insert a Martin hybrid extension cable with either M16 or BBD connectors (depending on VC-Feeder model) between the input cable shown in Figure 5 and the VC-Feeder's IN connector. Suitable extension cables for M16 and BBD connectors are listed under "Accessories" on page 27.

Do not exceed the maximum lengths for cable runs specified in display device user manuals.

P3 video installations

In a Martin P3 video display system, you supply a chain of VC-Feeders with video data from a P3 video processor via a combined P3 video and 48 VDC power supply device such as a Martin P3 PowerPort.

Input cable

To connect a chain of VC-Feeders to a DC power and P3 video data source, you must use a Martin P3 Hybrid Input Cable shown in Figure 5. Hybrid P3 Input Cables have:

• a 4-pin male XLR connector that accepts DC power and P3 video data, and

• a 6-pin female M16 or BBD connector that connects to the VC-Feeder's IN connector.

From DC power and video data source

DC power and video data to VC-Feeder IN

4-pin male XLR

VC-Feeder connector (M16 connector illustrated)
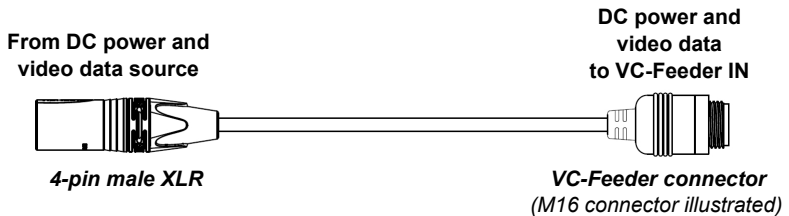
*Cable with 4-pin male XLR to female M16: P/N 11840165
Cable with 4-pin male XLR to female BBD: P/N 91616046*

Figure 5: Hybrid P3 Input Cable

To connect the VC-Feeder to P3 data and DC power:

1. Check that the system is isolated from AC mains power.

2. See Figure 5. Obtain a Martin Hybrid P3 Input Cable with either an M16 or a BBD connector, depending on whether the VC-Feeder's IN connector is M16 or BBD type. Figure 5 gives the part numbers for the two different cables.

3. Connect the cable's 4-pin male XLR connector to the 4-pin female XLR output of the Martin P3 PowerPort device that will supply 48 VDC power and a relayed P3 video signal.

4. Connect the cable's M16 or BBD connector to the first VC-Feeder's IN connector. If the cable is not long enough, add a hybrid extension cable. The extension cable connectors must also be of the correct type: M16 or BBD (see "Accessories" on page 27).

5. Add VC-Feeders to the chain as described in "Throughput connections" on page 17.

DMX-controlled installations

In a DMX-controlled system, the VC-Feeder accepts DMX/RDM data from a DMX/RDM controller and 48 VDC power from an external PSU. The external PSU can be either:

- a Martin IP66 PSU 240W (identical with the discontinued Martin Tripix Power IP66), or
- a generic external PSU that can supply DC power at 48 V (the Mean Well SP-480 48, for example).

The power and data input cables required depend on choice of PSU:

DMX system using a Martin IP66 PSU 240W

To connect the VC-Feeder to DMX data and DC power from a Martin IP66 PSU 240W or Martin Tripix Power IP66:

1. Check that the system is isolated from AC mains power.

2. See Figure 6. Obtain a Martin Hybrid DMX Input Cable for Martin PSUs with either an M16 or a BBD connector, depending on whether the VC-Feeder's IN connector is M16 or BBD type. Figure 6 gives the part numbers for the two different cables.

DMX from DMX/RDM controller

DC power and DMX data to VC-Feeder IN

5-pin male XLR

VC-Feeder connector
(M16 connector illustrated)

DC connector

48 VDC power from Martin IP66 PSU 240W or Martin Tripix Power IP66
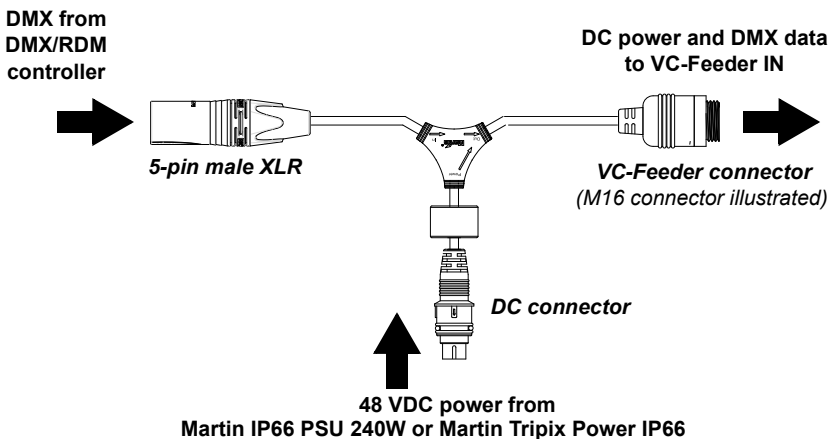
Cable with 5-pin male XLR + Martin DC to female M16: P/N 11840195
Cable with 5-pin male XLR + Martin DC to female BBD: P/N 91616050

Figure 6: Hybrid DMX Input Cable for Martin IP66 PSU 240W

3. Connect the cable's 5-pin male XLR connector to the DMX data output of a DMX controller.

4. Connect the cable's DC connector to the 48 VDC power output of a Martin IP66 PSU 240W.

5. Connect the cable's M16 or BBD connector to the VC-Feeder's IN connector. If necessary, add an IP65 extension cable (see "Extension cables" on page 13) between the Hybrid Input Cable and the VC-Feeder IN connector. The extension cable connectors must also be of the correct type, M16 or BBD.

6. Add VC-Feeders to the chain as described in "Throughput connections" on page 17.

DMX system using a generic 48 V external PSU

Warning! Note the maximum current rating of the external PSU's output and make sure that the total current draw of all the devices connected to the output will not exceed the maximum current rating or 7.5 A, whichever is lower.

If the PSU does not have constant overcurrent protection that will limit current to 8 A on the DC output used, install an inline fuseholder with a 7.5 A or 8 A fuse on the Hybrid Input Cable's white (+ve) power lead-in wire. You can use a 30 amp automotive-type inline fuseholder with a 7.5 A blade fuse.

To connect the VC-Feeder to DMX data and DC power from a generic 48 V external PSU:

1. Check that the system is isolated from AC mains power.

2. See Figure 7. Obtain a Martin Hybrid DMX and DC Power Input Cable for Generic PSUs with either an M16 or a BBD connector, depending

on whether the VC-Feeder's IN connector is M16 or BBD type. Figure 7 gives the part numbers for the two different cables.

DMX from DMX/RDM controller

DC power and DMX data to VC-Feeder IN

5-pin male XLR

VC-Feeder connector
(M16 connector illustrated)

48 VDC power from PSU
white to +ve, black to -ve

Insert 7.5 A or 8 A inline fuse here if PSU does not have 8 A overcurrent protection
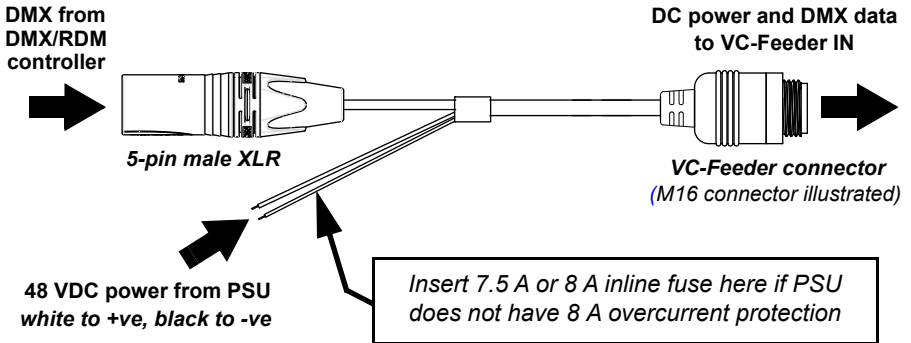
Cable with 5-pin male XLR + power wires to female M16: P/N 11840174
Cable with 5-pin male XLR + power wires to female BBD: P/N 91616048

Figure 7: Hybrid DMX and Power Input Cable for Generic PSUs

3. Connect the cable's 5-pin male XLR connector to the DMX data output of a DMX controller.

4. Connect the cable's power lead-in wires to a 48 VDC output on the external PSU. Connect the white wire to positive (+ve) and the black wire to negative (-ve).

5. Connect the cable's M16 or BBD connector to the VC-Feeder's IN connector. If necessary, add an IP65 extension cable (see "Extension cables" on page 13) between the Hybrid Input Cable and the VC-Feeder IN connector. The extension cable connectors must also be of the correct type, M16 or BBD.

6. Add VC-Feeders to the chain as described in "Throughput connections" below.

DMX termination

DMX termination is integrated in the VC-Feeder. No external DMX termination is required.

Throughput connections

You can connect up to twenty (20) VC-Feeders in one linked chain, but as soon as you reach the maximum permitted current draw for a chain (7.5 A or the PSU output's maximum current rating if you are using an external PSU) you must create a new chain.

Do not exceed the maximum cable lengths specified in display device user manuals.

The VC-Feeder throughput (THRU) is an integral 180 mm (7 in.) cable tail with a 6-pin female M16 or BBD connector (depending on VC-Feeder model) that can relay power and data to other VC-Feeder devices in a chain.

To create a chain of VC-Feeder devices, see the example in Figure 4 on page 12, Connect one VC-Feeder's THRU connector to the next VC-Feeder's IN connector. Connector types must match: M16 to M16 or BBD to BBD, but you can use adapter cables (see below) to interconnect the two different types.

Seal all unused BBD connectors against the entry of water with blanking caps.

M16 - BBD adapter cables

It is possible to mix VC-Feeder models with M16 and BBD connectors on one chain if you use one of the M16 / BBD adapter cables available from Martin (see "Accessories" on page 27).

M16 - BBD extension cables

If you want to install VC-Feeders further apart than their THRU and IN connector cable tails allow, insert an extension cable with M16 or BBD connectors to extend the link between VC-Feeders. You can also obtain bulk cable in 100 m reels and loose connectors from Martin (see "Accessories" on page 27).

Throughput to other device types

It is possible to draw off 48 VDC power and data at the end of a VC-Feeder chain for connection to other types of Martin device by connecting a Martin Hybrid Output Cable (see "Accessories" on page 27) to the VC-Feeder THRU connector. The 0.25 m (0.8 ft.) hybrid output cables are available in four types:

- Cable with 6-pin male M16 connector to 4-pin female XLR connector to supply 48 VDC power and data to P3 video display devices, P/N 11840166

- Cable with 6-pin male BBD connector to 4-pin female XLR connector to supply 48 VDC power and data to P3 video display devices, P/N 91616047

- Cable with 6-pin male M16 connector to 5-pin female XLR connector to supply data to DMX-controlled devices, P/N 11840202

- Cable with 6-pin male BBD connector to 5-pin female XLR connector to supply data to DMX-controlled devices, P/N 91616051

Warning! If you draw off power and data at the end of a chain, do not exceed the maximum permitted current for a chain as described in "Protection from electric shock" on page 5.

Output connections

The VC-Feeder output (OUT) is a 180 mm (7 in.) cable tail with an 8-pin female IP65 connector that supplies 15 VDC power and data to Martin LED-based display devices.

The method for connecting the power + data output from the VC-Feeder is the same for P3 video and DMX/RDM-controlled systems:

1. Check that the installation is isolated from power.

2. Connect the display device or chain of display devices to the VC-Feeder OUT connector:
   - Follow the instructions under "Input connections: general" on page 13.
   - If you are connecting devices to a VC-Feeder that is part of a chain (i.e. two or more VC-Feeders are linked using the THRU connector), do not connect devices that will draw more than a combined total of 7.5 A to the OUT connectors in the chain.
   - If you are connecting devices to one single VC-Feeder that is not connected to any other VC-Feeders, you can connect devices that will draw up to the maximum limit of 7.5 A to that VC-Feeder's OUT connector.

Setup

The VC-Feeder automatically detects the LED display devices that are connected to it and the type of data signal (P3 or DMX/RDM) that is sent to it.

Setting up for P3 video display

When a Martin P3™ controller is connected to the data link and the installation is powered on, you can set up all the devices on the link for data display using the P3 controller. See the P3 controller user manual for details.

Setting up for DMX control

You can set up and control a VC-Feeder installation over the data link using an RDM-compatible DMX controller.

If individual DMX control of strings or groups of devices in the VC system is required, each VC-Feeder must be set up to receive instructions from the DMX controller on a DMX channel or group of DMX channels in the 512 channels available in a DMX universe.

The DMX address, also known as the control address or start channel, is the first of these channels. Each group of devices uses this channel and the channels immediately above it to receive instructions.

The VC-Feeder uses the number of DMX channels required by the devices connected to it. For example, if a VC-Feeder has its DMX address set to 1 and you connect a string of 100 VC-Dots display devices (each using three DMX channels for RGB control) to the VC-Feeder, it will use channels 1 - 300. Channel 301 will be available for use as the DMX address for the next VC-Feeder.

If two or more VC-Feeder devices are set up with the same DMX address, they will receive the same instructions and behave identically.

Setting up via RDM

Using an RDM-compliant DMX controller, you can communicate with the VC-Feeder devices on the data link via RDM. You can:

• Retrieve data

• Set the DMX addresses and DMX modes of the VC-Feeder devices on the link.

• Apply various setup options to the display products connected to the VC-Feeder (see the display products' user manuals).

Operation

The VC-Feeder automatically detects whether it is receiving P3 or DMX/RDM data and uses the commands it receives to drive the LED display devices that are connected to it.

Ambient temperatures

The VC-Feeder can be operated at ambient temperatures from -20° C (-4° F) to 55° C (131° F). Do not operate it outside this temperature range.

P3 video display

You can display video on the LED-based devices connected to each VC-Feeder by sending a video data signal from a Martin P3™ system controller over the data link.

Displaying video on a VC installation is managed from the P3 system controller. See the P3 controller manual for details.

DMX control

If the display devices connected to the VC-Feeder have been set up with individual DMX addresses, each device can be controlled as an individual pixel using DMX.

If a string of display devices connected to the VC-Feeder has been set up so that the devices share the same DMX address, the devices will behave identically and the string can be controlled as one unit (one long pixel) using DMX.

Monitoring, testing and resetting the installation

Status indicator

A status LED on the VC-Feeder (shown in Figure 2 on page 9) monitors system status and gives the information shown in Table 1:

Color	Output	Indication	Action required
Blue	Constant	Busy (e.g. booting up or writing to flash memory).	Wait a moment for normal operation to be resumed.
Red	Constant	Error. The VC-Feeder has encountered a fatal error and can not run.	Perform a factory reboot, followed by a firmware upload.
Red	Flashing	No control source detected.	Connect a P3 system controller or DMX source to the network.
Green	Flashing	Ready. VC-Feeder connected to P3 controller but not receiving valid P3 data stream.	Set up the P3 controller to use the products connected to the VC-Feeder.
Green	Constant	Running normally in P3 mode.	None.
Cyan	Flashing	Ready. VC-Feeder connected to DMX controller but not receiving valid DMX data stream.	Set up the DMX controller to use the products connected to the VC-Feeder.
Cyan	Constant	Running normally in DMX mode.	None.

Table 1: Status LED information

Control button

See Figure 2 on page 9. A control button on the VC-Feeder allows you to send test patterns to all connected devices and reset the device together with the display devices connected to it.

The test patterns that are stored in internal memory let you check that the video display products in an installation are correctly connected without the need for a P3 system controller.

Note that test patterns can also be called up on P3 system controllers and the P3 PowerPort 1500™.

The control button has the following functions:

Button action	Function

Repeated short press	Display the following test patterns on all the video display products that are correctly connected (one short press scrolls to next pattern):
	  - Calibrated white
	  - Full red
	  - Full green
	  - Full blue
	  - Vertical scrolling gradient
	  - Dimmed (20% uncalibrated white)

Press and hold until status LED lights blue	Reboot the VC-Feeder.
Press and hold until status LED lights white	Return the VC-Feeder to its default factory firmware.

Service

Warning! There are no user-serviceable parts inside the VC-Feeder. Refer any service operation not described in this guide to Martin Professional or its authorized service agents.

Installation, on-site service and maintenance can be provided worldwide by the Martin Professional Global Service organization and its approved agents, giving owners access to Martin's expertise and product knowledge in a partnership that will ensure the highest level of performance throughout the product's lifetime. Please contact your Martin supplier for details.

The only service operation the user can carry out on the VC-Feeder is occasional cleaning and uploading software, if this should ever be necessary.

Cleaning

Warning! Do not immerse the VC-Feeder or expose it to high-pressure water jets.

Do not use abrasive, caustic or solvent-based products for cleaning, as they can encourage corrosion and cause surface damage.

To clean a VC-Feeder:

1. Disconnect the installation from power.
2. Clean the outside of the device with a soft cloth dampened in a warm water/detergent solution.

Software installation

It may be necessary to upload new software (i.e. firmware) to a VC-Feeder if you believe that the product has a software-related fault or if you want to update to a newer version. Software updates are available from the Martin website (http://www.martin.com) and can be installed from the P3 system controller.

Troubleshooting

Problem	Probable cause(s)	Remedy
VC-Feeder is completely dead.	No power to VC-Feeder.	Check power and connections.
	Electronic overload protection in VC-Feeder tripped.	Isolate system from power. Check all connections and check that the VC-Feeder is not overloaded. Reapply power. If problem persists, isolate system from power, bypass the VC-Feeder and contact Martin for service. Do not attempt to open the VC-Feeder or rectify faults yourself.
Display devices respond incorrectly to video/control data or do not respond at all.	Fault on data link.	Inspect connections and cables. Correct wrong or poor connections. Repair or replace damaged cables.
	Incorrect VC-Feeder setup.	Check that VC-Feeder is correctly addressed and set up using the P3 controller or via RDM. Check number of control channels required by display devices (three channels for RGB, four channels for RGBW, etc.) and check that system is set up accordingly.
	VC-Feeder defective.	Isolate system from power, bypass the VC-Feeder and contact Martin for service. Do not attempt to open the VC-Feeder or rectify faults yourself.
	Other device on data link defective.	Bypass devices on data link until faulty device has been identified. Have faulty device tested and serviced by Martin service technician or device supplier.
Luminaires cut out intermittently.	VC-Feeder is too hot.	Ensure free airflow around VC-Feeder. Clean VC-Feeder. Check that ambient temperature does not exceed maximum permitted level. If problem persists, contact Martin for service.

Table 2: Troubleshooting

Specifications

Physical

Length . . . . .164 mm (6.5 in.) including mounting ears
Width . . . . 68 mm (2.7 in.)
Height . . . . 36 mm (1.4 in.)

Control and Programming

Control options . . . . Martin P3™ System Controller via Martin
P3 PowerPort 1500™ and/or DMX
Protocol detection . . . . Automatic
Product detection . . . . Automatic
Control modes . . . . .Adapts to detected product
DMX channels . . . . .Adapts to detected product
Setting and addressing . . . . . . .P3 System controller or RDM-compliant controller
DMX compliance . . . . .USITT DMX512-A
RDM compliance . . . . .ANSI/ESTA E1.20
P3 compliance . . . . .Martin proprietary P3 video data protocol
Firmware update . . . . Via P3 System Controller

Control/User Interface

Device status . . . . Multicolor status LED
Device test and reset . Pushbutton to call up local test patterns and reset device

Video Processing

Brightness control
Gamma correction and control
Color temperature control
Calibration processing
Synchronization

Construction

Housing . . . . .Extruded aluminum
Ingress protection, VC-Feeder IP65
Ingress protection, M16 and BBD connectors IP65

Installation

Orientation . . . . Any
Surface mounting . . . . Two M6 mounting slots
Truss mounting . . . . .M12 mounting hole for standard rigging clamp

Connections

48 VDC power and data input* . . . . 6-pin male connector, IP65-rated
48 VDC power and data throughput* . . . . . . .6-pin female connector, IP65-rated
15 VDC power and data output . . . . .8-pin female connector, IP65-rated

IN and THRU connectors are M16 or BBD type depending on model

Electrical

Nominal input voltage. . . . . 48 VDC
DC power input options . . . . Martin P3 PowerPort 1500, Martin
IP66 PSU 240W or other external PSU
Nominal output voltage. . . . . 15 VDC
Maximum current per VC-Feeder chain with P3 PowerPort 1500™ . . . . . . 7.5 A
Maximum current per VC-Feeder chain with
external PSU . . . . . . max. PSU rating or 7.5 A, whichever is lower
Maximum total power consumption . . . . 135 W

Thermal

Cooling . . . . Convection
Maximum ambient temperature (*Ta max.*) . . . . 55° C (131° F)
Minimum ambient temperature (*Ta min.*) . . . . -20° C (-4° F)

Approvals

EU safety . . . . EN 60950-22
EU EMC . . . . EN 55022, EN 55024
US safety . . . . UL 62368-1
US EMC . . . . .FCC Part 15 Class A
Canadian safety . . . . CSA C22.2 No. 62368-1
Canadian EMC. . . . . ICES-003 Class A
United Kingdom . . . . UKCA
Australia/NZ . . . . RCM

Accessories

M16 connector models

Input cables, M16 connectors

Hybrid P3 input cable,
4-pin male XLR to female M16, 0.25 m (0.8 ft.) . . . . P/N 11840165
DMX and Martin IP66 PSU 240W / Tripix Power IP66
input cable, 5-pin male XLR plus Martin
IP66 240W PSU connector to female M16 . . . . P/N 11840195
DMX and generic 48 VDC PSU input cable,
5-pin male XLR plus two wire tails to female M16 . . . . P/N 11840174

Output cables, M16 connectors

Hybrid output cable for P3 systems, male M16 to
4-pin female XLR, 0.25 m (0.8 ft.) . . . . P/N 11840166
Hybrid output cable for DMX systems, male M16 to
5-pin female XLR, 0.25 m (0.8 ft.) . . . . P/N 11840202

Extension cables, M16 connectors

Hybrid extension cable, M16 to M16, 1 m (3.2) ft.) . . . . .P/N 11840167
Hybrid extension cable M16 to M16, 2.5 m (8.2 ft.) . . . . .P/N 11840168
Hybrid extension cable, M16 to M16, 5 m (16.4 ft.) . . . . .P/N 11840169
Hybrid extension cable, M16 to M16, 10 m (32.8 ft.) . . . . .P/N 11840170
Hybrid extension cable, M16 to M16, 25 m (82 ft.) . . . . .P/N 11840164

Loose M16 connectors

M16 connector, male . . . . .P/N 05343522
M16 Connector female . . . . .P/N 05323538

BBD connector models

Input cables, BBD connectors

Hybrid P3 input cable,
   4-pin male XLR to female BBD, 0.25 m (0.8 ft.) . . . . .P/N 91616046
DMX and Martin IP66 PSU 240W / Tripix Power IP66 input
   cable, 5-pin male XLR plus Martin IP66
   240W PSU connector to female BBD, 0.25 m (0.8 ft.) . . . . .P/N 91616050
DMX and generic 48 VDC PSU input cable,
   5-pin male XLR plus two wire tails
   to female BBD, 0.25 m (0.8 ft.) . . . . .P/N 91616048
DMX and hybrid P3 input cable,
   5-pin male XLR + 4-pin male XLR
   to female BBD, 0.25 m (0.8 ft.) . . . . .P/N 91616049

Output cables, BBD connectors

Hybrid output cable for P3 systems, male BBD to
   4-pin female XLR, 0.25 m (0.8 ft.) .P/N 91616047
Hybrid output cable for DMX systems, male BBD to
   5-pin female XLR, 0.25 m (0.8 ft.) .P/N 91616051

Extension cables, BBD connectors, rental type

Hybrid extension cable, rental type, BBD to BBD, 1 m (3.2 ft.). . . .P/N 91616041
Hybrid extension cable, rental type, BBD to BBD, 2.5 m (8.2 ft.) . .P/N 91616024
Hybrid extension cable, rental type, BBD to BBD, 5 m (16.4 ft.). . .P/N 91616042
Hybrid extension cable, rental type, BBD to BBD, 10 m (32.8 ft.). .P/N 91616043
Hybrid extension cable, rental type, BBD to BBD, 25 m (82 ft.) . . .P/N 91616044

Extension cables, BBD connectors, install type

Hybrid extension cable, install type, BBD to BBD, 1 m (3.2 ft.). . . .P/N 91616055
Hybrid extension cable, install type, BBD to BBD, 2.5 m (8.2 ft.) . .P/N 91616056
Hybrid extension cable, install type, BBD to BBD, 5 m (16.4 ft.). . .P/N 91616057
Hybrid extension cable, install type, BBD to BBD, 10 m (32.8 ft.). .P/N 91616058
Hybrid extension cable, install type, BBD to BBD, 25 m (82 ft.) . . .P/N 91616059

Extension Cables, BBD Connectors, Low Smoke Zero Halogen type

Hybrid extension cable, LSZH type, BBD to BBD, 1 m (3.2 ft.). . . .P/N 91616012
Hybrid extension cable, LSZH type, BBD to BBD, 2.5 m (8.2 ft.) . .P/N 91616013
Hybrid extension cable, LSZH type, BBD to BBD, 5 m (16.4 ft.). . .P/N 91616014
Hybrid extension cable, LSZH type, BBD to BBD, 10 m (32.8 ft.). .P/N 91616015
Hybrid extension cable, LSZH type, BBD to BBD, 25 m (82 ft.) . . .P/N 91616016

Loose BBD connectors

BBD connector, male . . . . P/N 91611750
BBD connector, female . . . . P/N 91611751
Set of 10 caps for sealing unused female BBD connectors . . . . . P/N 91616052

All models

M16 to BBD adapter cables

Male M16 to female BBD, 0.25 m (0.8 ft.) . . . . P/N 91616053
Male BBD to female M16, 0.25 m (0.8 ft.) . . . . P/N 91616054

Bulk hybrid cable

Hybrid cable, rental type, 100 m (328 ft.) . . . . P/N 91616045
Hybrid cable, install CMX type, 100m (328 ft.) . . . . P/N 91616060
Hybrid cable, install LSZH type, 100 m (328 ft.) . . . . P/N 91616017

Hybrid cables carry both DC power and data over separate conductors.

Rental type cables are suitable for temporary installations, install type cables are suitable for permanent installations.

Installation hardware

G-clamp for rigging truss attachment . . . . P/N 91602003
Half-coupler clamp for rigging truss attachment. . . . . P/N 91602005
Quick trigger clamp for rigging truss attachment . . . . P/N 91602007
Safety wire, SWL 50 kg (110.2 lbs.), EN and UL approved . . . . . . P/N 91604003

Related Items

VC-Dot 1 RGB 100 mm pitch, 100 pcs., 2 m lead-in . . . . P/N 90357060
VC-Dot 4 RGB 200 mm pitch, 64 pcs., 2 m lead-in . . . . P/N 90357100
VC-Dot 9 RGB 400 mm pitch, 36 pcs., 2 m lead-in . . . . P/N 90357140
P3-PC System Controller . . . . P/N 90721030
P3-050 System Controller . . . . P/N 90721090
P3-150 System Controller . . . . P/N 90721015
P3-300 System Controller . . . . P/N 90721060
P3 PowerPort 1500 . . . . P/N 90721040
P3 PowerPort 1000 IP Rental. . . . . P/N 90721070
P3 PowerPort 1000 IP Installation . . . . P/N 90721080
Martin IP66 PSU 240W external power supply unit
        (identical to Martin Tripix Power IP66) . . . . P/N 90760330

See www.martin.com for latest information on related products and system integration. Custom VC-Dot strings are available from Martin.

Ordering Information

VC-Feeder with M16 connectors . . . . P/N 90357040
VC-Feeder with BBD connectors . . . . P/N 90357041

Specifications subject to change without notice. See www.martin.com for latest specifications and product information.