Open-loop Velocity Control Module

(Catalog Number 1746-QV)

Use this abbreviated procedure for getting the 1746-QV module into operation. If you need more information, refer to the user manual, publication 1746-6.18.

1.	Obtain Manual & Logic Files from Internet or Rockwell Software Bulletin Board (BBS)	Chapter 3

Obtain user manual and ladder program from Rockwell Software Bulletin Board (BBS) or the Internet.

From BBS: (216) 646-ROCK (-7625). If a new user, follow prompts to register. Log in. Look for 1746QV in the Allen-Bradley Products Library. The manual is in Word format. Download to a hard drive sub-directory and decompress it with PKUNZIP available on BBS. The ladder program, VELMOD, is SLC500 code (65 Kbyte). Download to a hard drive subdirectory where your programming software looks for files.

From Internet: webpage http://www.ab.com If a new user, click *Join Now* and follow prompts to register. Log in. Search for QV: on homepage, click *Search Our Site*, insert QV in window, and click *search* button. The manual is PDF format and requires Adobe Acrobat viewer. The ladder program is PDF format and must be entered manually.

2.	Set Up Your Software	Chapter 3

Configure the SLC Processor and I/O with your programming software. Enter the following:
a) processor type, b) module I/O-chassis slot, c) module ID (13115), d) G-file size (7 words), and e) G-file configuration values from ladder logic example (or publication 1746-6.18 appendix B).
Modify N files for profiles found in the ladder program (appendix B) to suite your application.

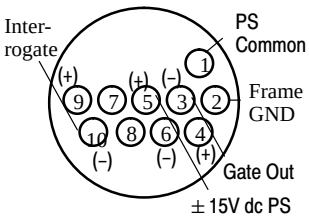
3.	Connect the LDT to the Module's Input Terminal Block	Chapter 4

We give you module input connections for Temposonics, Balluff, Santest, and Gemco LDTs.

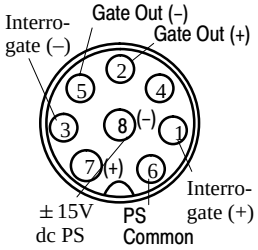
1746-QV Module Input Terminal Block

8	(+) Gate Out
7	(–) Gate Out
6	(–) Interrogate
5	(+) Interrogate
4	Shield/Frame
3	–15V dc PS
2	PS Common
1	+15v dc PS

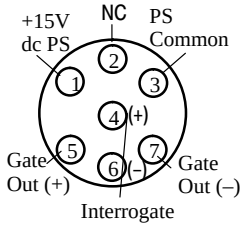
Temposonics II, RPM or DPM



Balluff BTL-2-L2 & -2-M2



Santest GYRP & GYRG



Gemco Quick-Stick II 951VP w/PWM Output

B–BLK PS Common
C–RED +15V dc PS
K–GRY + Interrogate
E–BRN –Sq Wave Out*
F–BLU +Sq Wave Out*
A–WHT –Interrogate
G, D, H RS232RXD
J–PUR 2nd PS COM

*951RS has pulse trigger

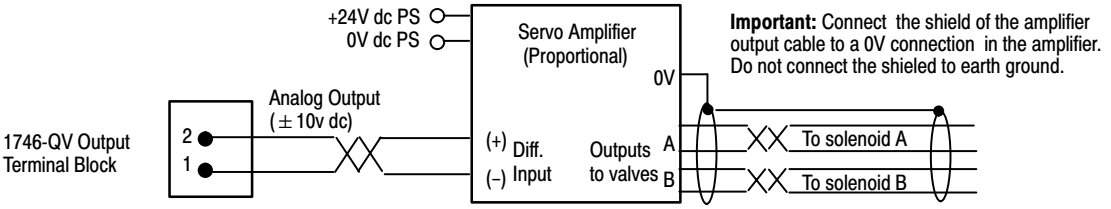
The views are looking at the connector on the LDT head.

1746-QV Input Pin #	Function	Temposonics II RPM or DPM	Balluff BTL-2-L2 & -M2	Santest GYRP/GYRG	Gemco Quick-Stick 951VP/RS
8	(+) Gate Out	4 – Pink	2 – Gray (note 1)	pin 5	F – Blue (note 1)
7	(–) Gate Out	3 – Gray	5 – Green (note 1)	pin 7	E – Brown (note 1)
6	(–) Interrogate	10 – Green	3 – Pink	pin 6	A – White
5	(+) Interrogate	9 – Yellow	1 – Yellow	pin 4	K – Gray
4	Shield/Frame	n/a	n/a	n/a	n/a
3	–15V dc PS	6 – Blue	8 – White	n/a	n/a
2	PS Common	1 – White	6 – Blue	pin 3	B – Black
1	+15V dc PS	5 – Red	7 – Brown	pin 1	C – Red

(+) and (–) wires of same function should be a twisted pair within the cable.
Note 1: We use the term "gate out" for pulse triggered or square wave (Gemco) and stop/start (Balluff -M2) LDT signals.

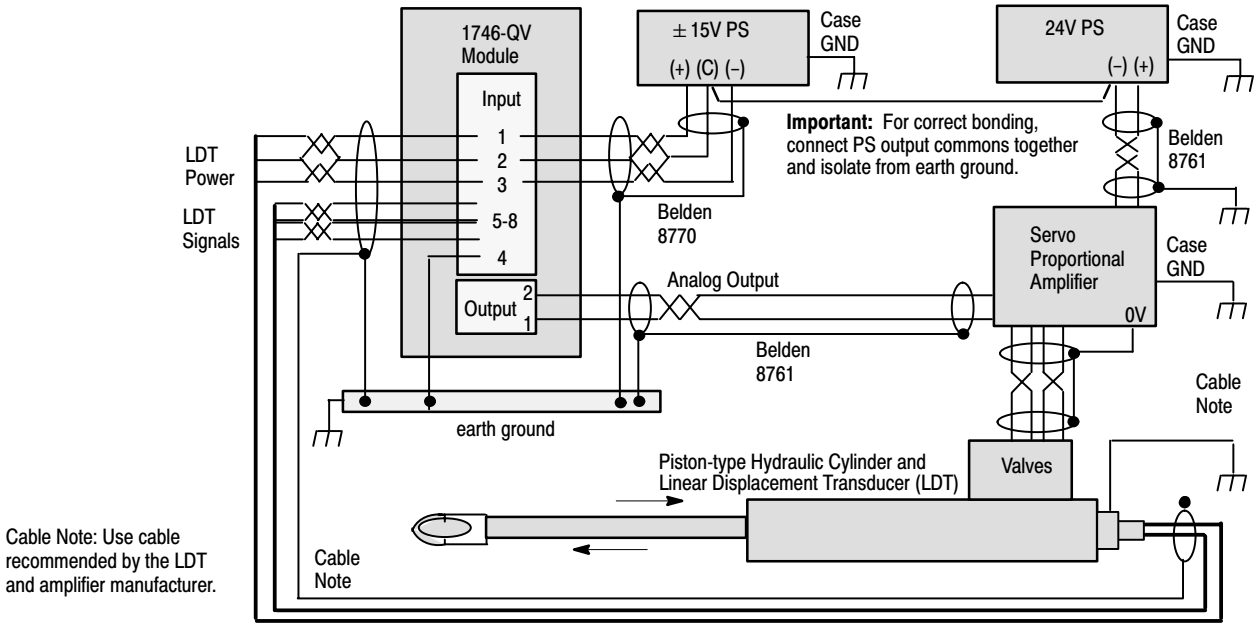
AB PLCs

4. Connect Module Output Terminals to Output Devices — Chapter 4



5. Minimize Interference from Electrical Noise with Correct Shielding and Grounding — Chapter 4

Important: Connect the following to earth ground: a) cable shields (except for amplifier output cable) at one end only, b) input terminal 4, c) case grounds of PS and amplifier, e) LDT flange.



Cable Note: Use cable recommended by the LDT and amplifier manufacturer.

6. Operate the Module for the First time — Chapter 5

After loading extend and retract profiles (step 1), alternately run the extend profile (O:e.0/0 = 0-to-1), then the retract profile (O:e.0/1 = 0-to-1). Modify a profile to reach the preset reference, and set it.
Important: If motion is reversed: for a ± 10V dc output, change the sign (±) of all extend/retract voltage values; or for a +10V output, energize the other solenoid on the directional valve (with ladder logic).

To do this:	Enter decimal:	at address:
load all profiles	1	N7:40
set preset reference to zero	8	N7:50
clear errors	16	N7:50
read current position	read, only	N7:61

Rockwell Automation
Allen-Bradley

Allen-Bradley, a Rockwell Automation Business, has been helping its customers improve productivity and quality for more than 90 years. We design, manufacture and support a broad range of automation products worldwide. They include logic processors, power and motion control devices, operator interfaces, sensors and a variety of software. Rockwell is one of the world's leading technology companies.

Worldwide representation

Allen-Bradley Headquarters, 1201 South Second Street, Milwaukee, WI 53204 USA, Tel: (1) 414 382-2000 Fax: (1) 414 382-4444

Publication 1746-10.1 – may 1997
Supercedes 1746-10.1 – August 1996
PN955129-42
Copyright 1997 Allen-Bradley Company, Inc. Printed in USA