



Adhesive Application Solutions | ISO 9001 certified

VALVE DRIVER 8-CHANNEL

PN 27.01000.020

Technical Documentation



ITW Dynatec
An Illinois Tool Works Company
www.itwdynatec.com

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Chapter 1

Safety Instructions

General Considerations



- All operators and service personnel must read and understand this manual before operating or servicing equipment.
- All maintenance and service on this equipment must be performed by trained technicians.



Read and adhere to the manual!

1. Read and follow these instructions.
Failure to do this could result in severe personal injury or death.
2. Keep the binding rules for accident prevention valid for your country and the place of installation. Also keep the approved qualified technical rules for safety-conscious and professional work.
3. Additional safety instructions and/ or symbols are located throughout this manual. They serve to warn maintenance personnel and operators about potentially hazardous situations.
4. Inspect the machine for unsafe conditions daily and replace all worn or defective parts.
5. Keep work area uncluttered and well lit. Remove all material or things not needed for the production from the workspace of the equipment!
6. All covers and guards must be in place before operating this equipment.
7. Subject to technical modifications without notice!
8. To ensure proper operation of the equipment, use specified electrical and/ or air supply sources.
9. Do not attempt to alter the design of the equipment unless written approval is received from ITW Dynatec.
10. Keep all manuals readily accessible at all times and refer to it often for the best performance from your equipment.

Warning Labels

1. Read and obey all of the warning labels, signs and caution statements on the equipment.
2. Do not remove or deface any of the warning labels, signs and caution statements on the equipment.
3. Replace any warning labels, signs and caution statements which have been removed or defaced. Replacements are available from ITW Dynatec.

Safety Symbols in this Manual

1. WARNINGS and CAUTIONS are found throughout this manual. WARNINGS mean that failure to observe the specific instructions may cause injury to personnel.
2. CAUTIONS mean that failure to observe the specific instructions may damage the equipment.

Safe Installation and Operation



Read and adhere to the manual!

1. Read this manual before applying electrical power to the equipment. Equipment may be damaged by incorrect electrical connections.
2. Operate the unit only in a faultless and fully functional condition.

Explosion/ Fire Hazard

1. Never operate this unit in an explosive environment.

Electrical



DANGER HIGH VOLTAGE

1. Dangerous voltages exist at several points in this equipment. To avoid personal injury, do not touch exposed connections and components while input power is on.
2. Disconnect, lockout and tag external electrical power before removing protective panels.
3. A secure connection to a reliable earth ground is essential for safe operation.
4. An electrical disconnect switch with lockout capability must be provided in the line ahead of the unit. Wiring used to supply electrical power should be installed by a qualified electrician.
5. Notify the maintenance personnel immediately, if cables are damaged. Provide for exchanging the defective components immediately.

Lockout/ Tagout



Switch the unit voltage-free before working! Main switch OFF!

1. Follow OSHA 1910.147 (Lockout/ Tagout Regulation) for equipment's lockout procedures and other important lockout/tagout guidelines.
2. Be familiar with all lockout sources on the equipment.
3. Even after the equipment has been locked out, there may be stored energy in the application system, particularly in the capacitors within the panel box. To ensure that all stored energy is relieved, wait at least one minute after removing power before servicing electrical capacitors.

Protective Cover



WARNING
DO NOT OPERATE WITHOUT PROTECTIVE COVER IN PLACE

1. Keep all protective cover in place!

Servicing, maintenance

1. Only trained and qualified personnel are to operate and service this equipment.
2. Before any service work disconnect the external power supply and the pressure air supply!
3. Any defects in the equipment that impact safe operation have to be repaired immediately.
4. Check screws that have been loosened during the repair or maintenance, if they are tight again.
5. Never clean control cabinets or other houses of electrical equipment with a jet of water!

Measures in case of fire

Firefighting - burning electrical equipment:



EXTINGUISH FIRE

*Appropriate extinguishing agents:
Carbon dioxide (CO₂), Dry powder.*

Chapter 3

Description and Technical Specs

3.1 Applicable Safety Regulations

Intended Use

The 8-channel valve driver is microprocessor controlled and suitable for control of solenoid valves with a power supply of 24V DC.



If the valve driver is not used in accordance with this regulation, a safe operation cannot be guaranteed.

The operator - and not ITW Dynatec - is liable for all personal injury or property damages resulting from unintended use!



Intended use includes, that you

- read this documentation,
- heed all given warnings and safety instructions, and
- do all maintenance within the given maintenance rates.

Any other use is considered to be unintended.

Unintended Use

The valve driver may not be used under the following conditions:

- In defective condition.
- In a potentially explosive atmosphere.
- When the values stated under Specifications are not complied with.

Residual Risks

In the design of the Vector Slot Applicator, every measure was taken to protect personnel from potential danger. However, some residual risks cannot be avoided.

Personnel should be aware of the following:

- Risk of death by electric shocks.



Technical changes

Any kind of technical changes having impact to the security or the operational liability of the system should only be done by written agreement of ITW Dynatec. Suchlike changes made without given a corresponding written agreement will lead to immediate exclusion of liability granted by ITW Dynatec for all direct and indirect subsequent damages.

Using foreign components

ITW Dynatec takes no responsibility for consequential damages caused by using foreign components or controllers that have not been provided or installed by ITW Dynatec.

ITW Dynatec does not guarantee that foreign components or controllers used by the operating company are compatible to the ITW Dynatec-system.

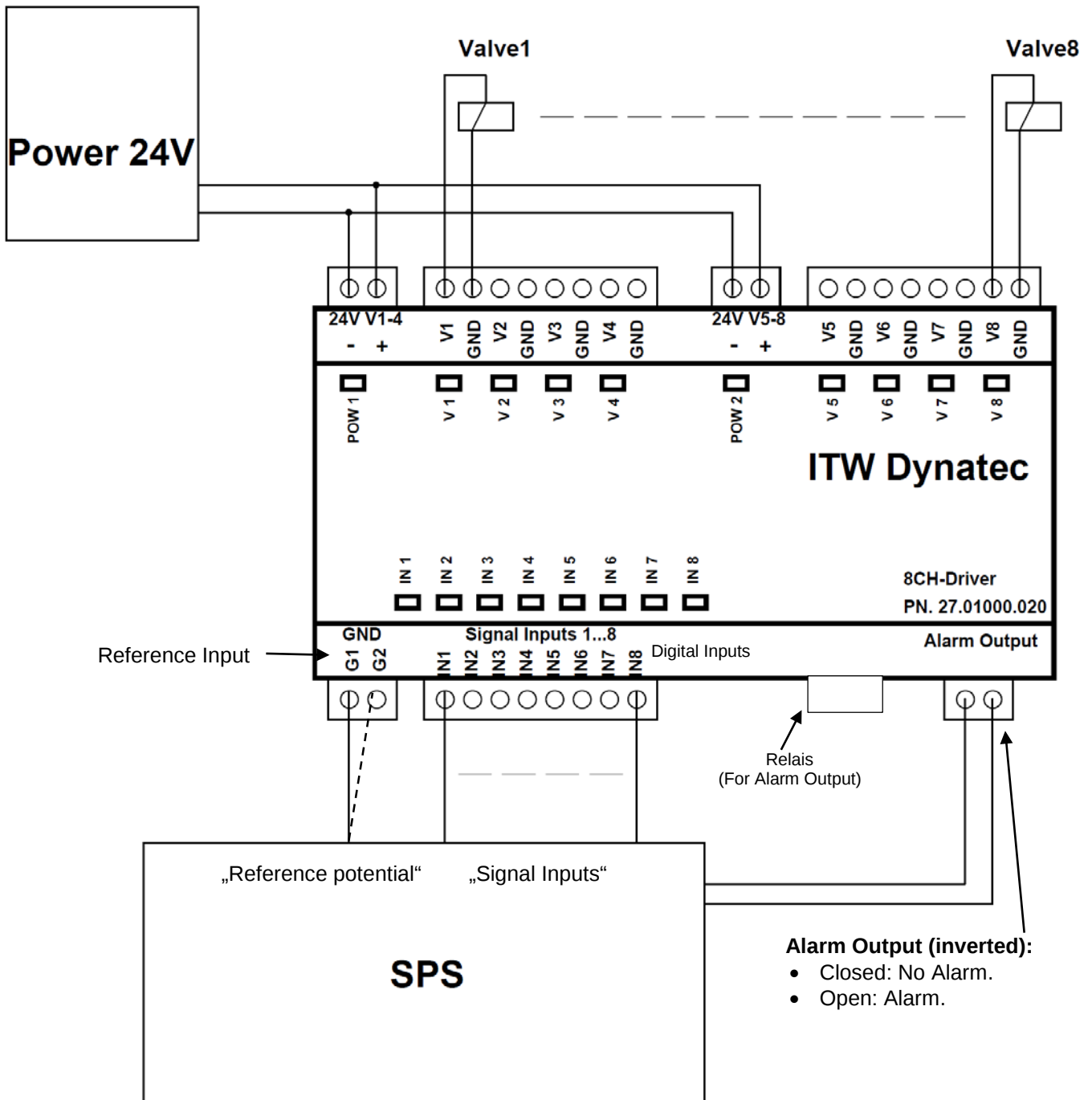
Setting-up operation

We recommend asking for an ITW Dynatec-service technician for the setting-up operation, to ensure a functioning system. Let yourself and the people working with or working on the system be introduced to the system on this occasion.

ITW Dynatec takes no responsibility for damages or faults caused by any untrained personal.

3.2 Description

The 8-channel valve driver is microprocessor controlled and suitable for control of solenoid valves with a power supply of 24V DC.

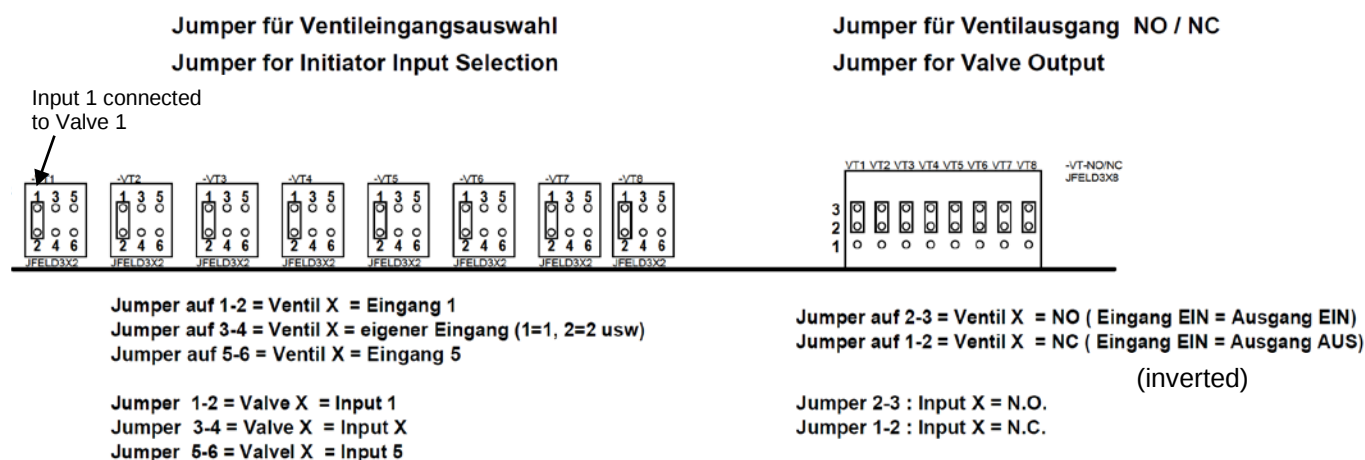


Connections:

- Standard SPS: PNP**
G1 or G2 at „Reference potential“ from PLC.
- Option: NPN**
G1 or G2 at 24V DC from PLC (with negative switching PLC outputs)

Depending on the jumper setting (see below) each valve can be attracted by its own signal input, the master input 1 (In1) or the master input 2 (In5).

These configuration settings allow easy combination of valve groups.



The valve outputs are short-circuit proof. In case of failure the respective valve will be deactivated for 2 seconds and a cyclical attempt to release the power again is made. Simultaneously, the respective control-LED remains in "RED" condition and the external alarm output will open up to signal the failure event to the master control (if existing).

3.3 Technical Specs

Environmental:

Storage/ shipping temperature	-40°C to 70°C (-40°F to 158°F)
Ambient service temperature	0°C to 50°C (32°F to 122°F)

Electrical:

Supply voltage	Terminal 24V V1-4 : 24V DC *
	Terminal 24V V5-8 : 24V DC *
Total output power	192W
Maximum output power	each channel 24W
Short-circuit proof outputs	Yes
Input signals 1-8	PNP/NPN 24VDC 5mA / min **
Alarm Output	Relais contact NC max. 230V AC 1A ***

* The terminals 24V V1-4 and 24V V5-8 both must always be wired.

** Reference for the input signals is the terminal G1/G2, only one of the terminals needs to be assigned.

*** Alarm Output: in case of alarm opened.

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Contact us:

AMERICAS

ITW Dynatec
31 Volunteer Drive
Hendersonville, TN 37075
USA
Tel. +1.615.824.3634
Toll Free +1.800.966.6358
dynatec@itwdynatec.com

EUROPE, MIDDLE EAST & AFRICA

ITW Dynatec Industriestrasse 28 40822 Mettmann Germany Tel. +49.2104.915.0	ITW Dynatec Z.I. Croix de Raville 28500 Chérisy France Tel.: +33.237.62.56.47
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ASIA PACIFIC

ITW Dynatec Unit2, B1 Building No.9 Weixin Road SIP, Suzhou, 215122 China Tel. +86.512.6289.0620	ITW Dynatec Tsukimura Building 5th Floor 26-11, Nishikamata 7-chome Ota-ku, Tokyo 144-0051, Japan Tel. +81.3.5703.5501
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