

Valve and valve terminal series VG

FESTO



Multitalented.

Highlights

VUVG

- Compact and with high flow rates
- Can be expanded into a valve terminal with an individual connection
- 2x 3/2-way – one valve, two functions
- Simple installation
- Electrically and pneumatically actuated valves

VTUG with plug-in

- All standard fieldbuses
- IO-Link®
- Many multi-pin variants
- Up to 24 valve positions
- Available in 2 widths
- Flexible control cabinet installation

Quality

- Patented cartridge principle or sturdy sealing ring for maximum quality

All-round talents for universal application: the valve series VG

Small, compact and with high flow rates – available as individual valves or fieldbus-capable valve terminals with numerous pneumatic and electrical functions. Ideal for all price-sensitive applications. Now with the new VUVG-...-S with core features.

Individual valves VUVG and valve terminals VTUG with individual connections

Perfect for all applications requiring high flow rates, high speed and low volume, for example in small parts assembly, the electronics industry and the food and packaging industry. They have many electrical connection options and can be expanded quickly into a valve terminal with an individual connection.

Particularly cost-effective: the VUVG-...-S

Ready for dispatch worldwide in 24 hours, even in large quantities.

VTUG with plug-in: multi-pin or low-cost fieldbus

It offers excellent value for money. It has many multi-pin variants and a very simple connection for all standard fieldbuses and IO-Link®. It is also quick to install and configure, and is particularly suitable for control cabinet installation. For OEMs and all those who appreciate high pneumatic functionality and electric modularity.

Unrivalled: up to 24 valve positions on a single valve terminal.

Added bonus: parallel use of vacuum and pressure on one valve terminal.



reddot design award



product design award

More on this on pages 6 – 7.
→ www.festo.com/vuvg

More on this on pages 8 – 11.
→ www.festo.com/vtug

www.festo.com

Low-cost, high flow rates, compact and simple

Valve and valve terminal series VG – a product range with exceptional properties

A quick overview shows you the potential the VG series offers. Whether as a high-performance individual valve or a valve terminal VTUG with fieldbus plug-in for control cabinet installation, the VG series is well equipped for universal use at a very cost-effective price.

Individual valve VUVG

With its extremely high flow rate and small size, the VUVG is the best valve in its class. Many of the functions and variants it offers are unique, not least because of the proven, patented cartridge principle.

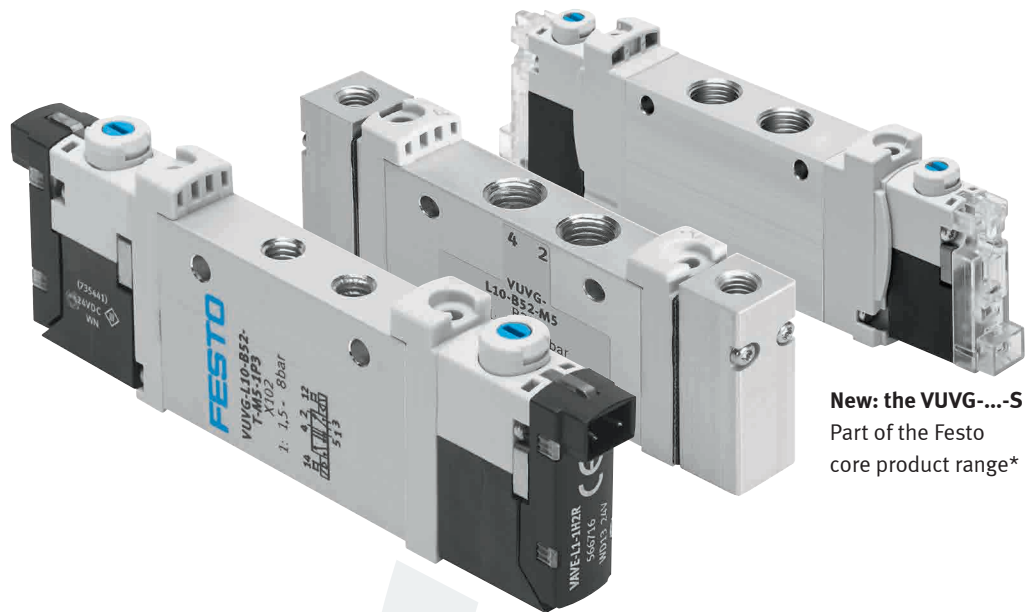
The new addition to the series, the VUVG-...-S, has core features with respect to pressure, flow rate, temperature and connections, in the proven Festo quality and at an attractive price.

The individual valves are also available as pneumatically actuated valves (VUWG).

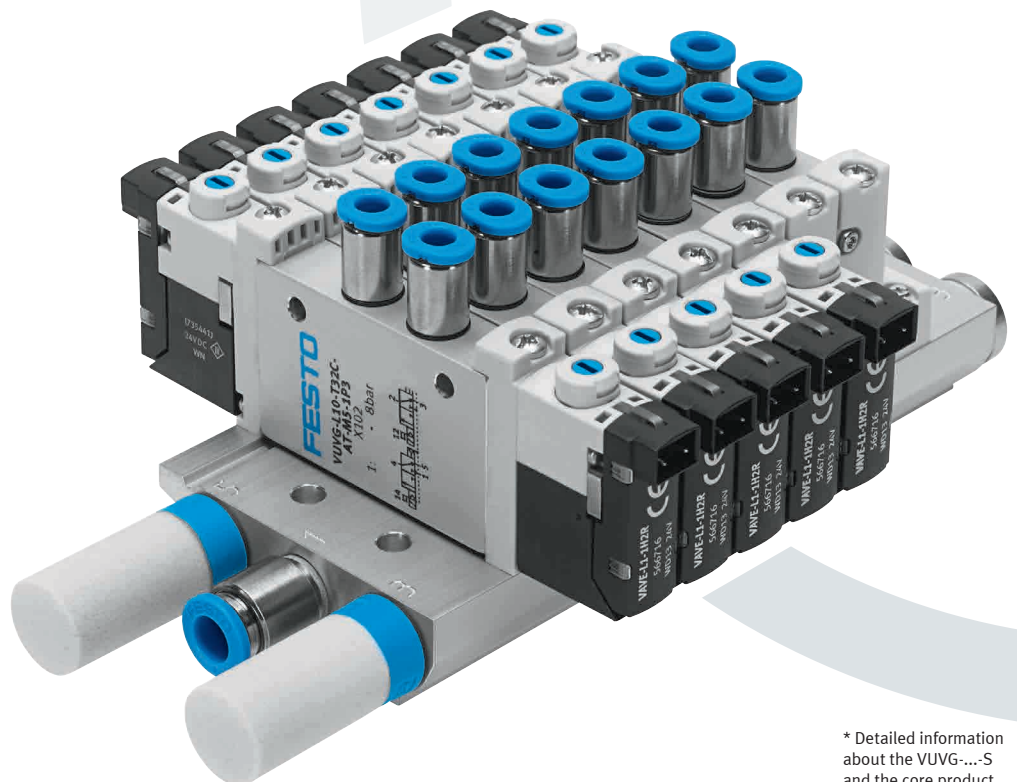
Valve terminal VTUG with individual connection

A good example of the easy-to-install philosophy from Festo. Just mount it on the manifold rail to turn an individual valve into a valve terminal with up to 16 valve positions. That is quick, simple and makes the VTUG compact.

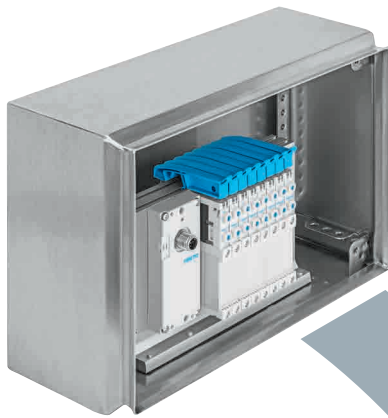
Save time, money and installation effort by letting us deliver the pre-assembled valve terminals directly to the shop floor.



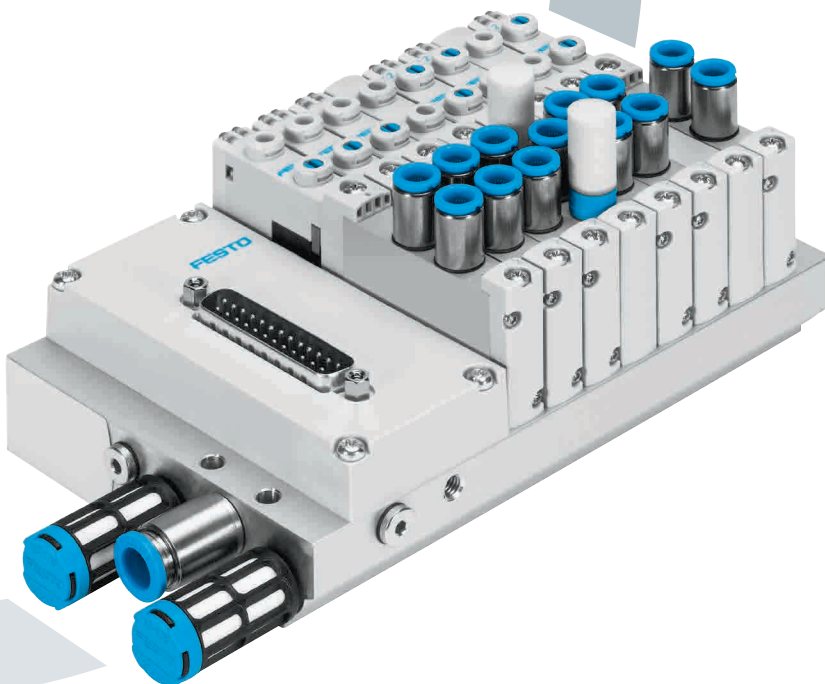
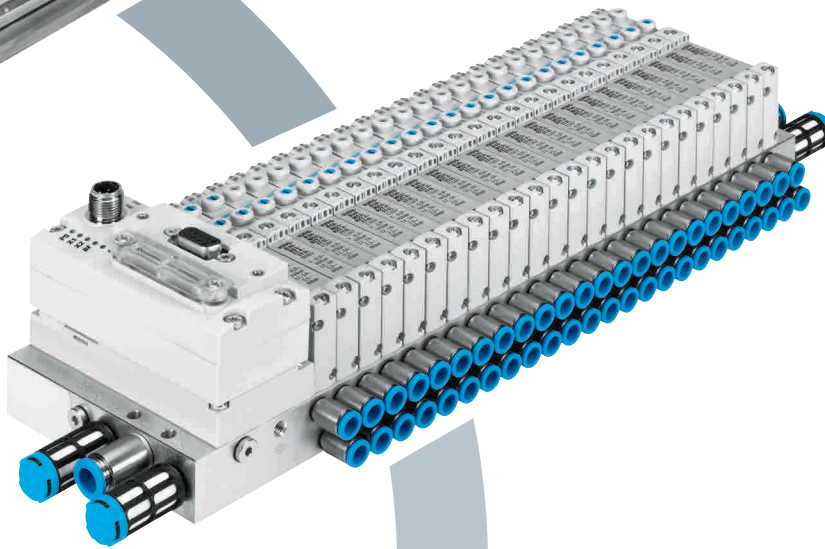
New: the VUVG-...-S
Part of the Festo core product range*



* Detailed information about the VUVG-...-S and the core product range on pages 12–13



New: the VTUG
in a control cabinet



VTUG with plug-in in control cabinets

A wide range of functions and details, such as pneumatic connections underneath, make the VTUG with plug-in particularly suitable as a low-cost valve terminal for installation in control cabinets. Control cabinet seals are also suitable for IP67 applications.

We also deliver ready-to-install control cabinets directly to the shop floor to save you time, money and installation effort.

VTUG with plug-in and fieldbus connection

Amazingly simple, incredibly low-cost, highly modular and flexible with fieldbus connection CTEU. It has never been easier to connect fieldbuses to valve terminals like the VTUG, and never easier to change the fieldbus type: attach the fieldbus node and you're done! It can also be easily expanded into a small installation system.

The VTUG with plug-in is also available with an IO-Link® interface.

VTUG with plug-in and multi-pin plug

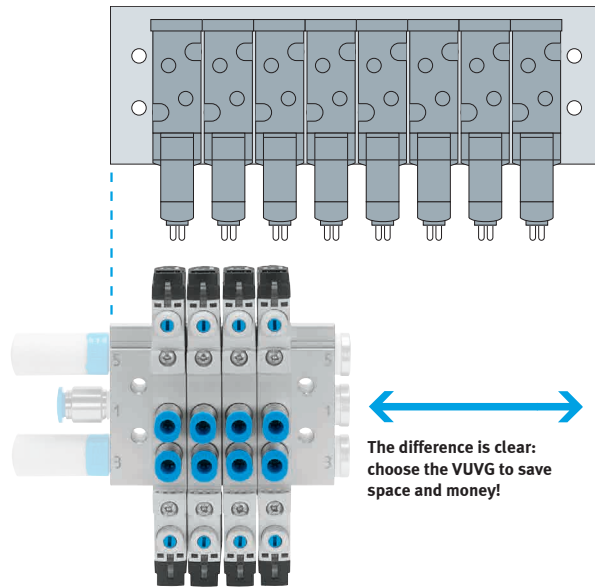
Simpler and easier to install with flat cable or Sub-D plug connector. Added bonus: various electric voltage and pressure zones can be set up for safety functions.

Exceptional technology with significant added value

The VUVG helps to save costs: one valve instead of two!

Save money, space and improve your cycle times:

- Two 3/2-way valves on one valve position. Without the VUVG, you would have to order two 3/2-way valves!
- Suitable for pressures up to 10 bar for compact assembly and a smaller footprint

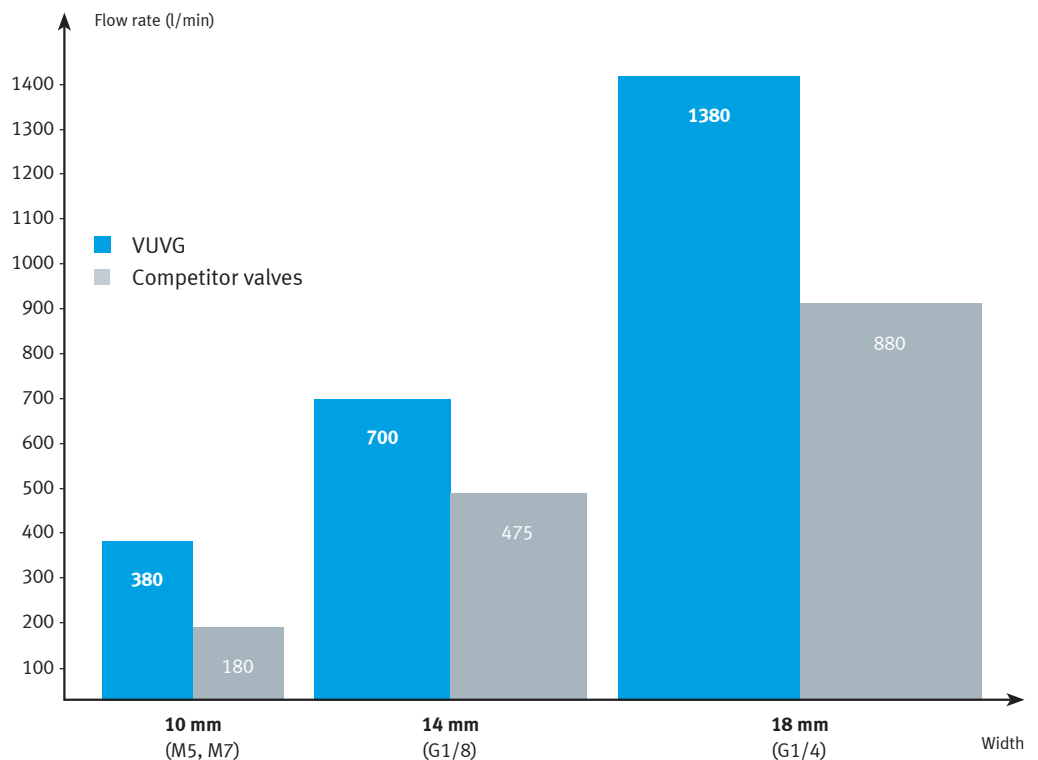


Competition:
1 valve position = 1 function

Festo:
1 valve position = 2 functions

Choose the VUVG to boost your productivity by up to 100%!

Identical size but up to 100% more flow than its competitors: speed up your production without increasing costs!



Example: 5/2-way single solenoid valve

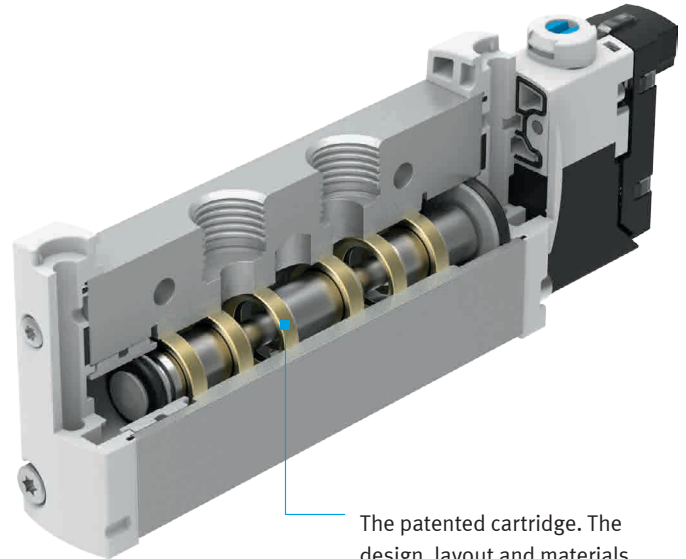
Patented sealing technology: the cartridge concept in the VUVG for greater performance and more functions.

The secret of the success of the VG series is on the inside thanks to excellent engineering. The patented cartridge principle makes the VUVG the most powerful valve in its class.

Internal, positive-locking and made of particularly stable materials: three reasons for the superb sealing characteristics of the VUVG. And a major reason for extremely high flow rates.

Further advantages:

- Neatly separated pressures mean that overlapping between the air ducts during dual pressure operation, common in other valves, doesn't happen with the VUVG.
- Reversible: two pressures in one valve (compressed air at ports 3 and 5) – the exhaust air flows through port 1.

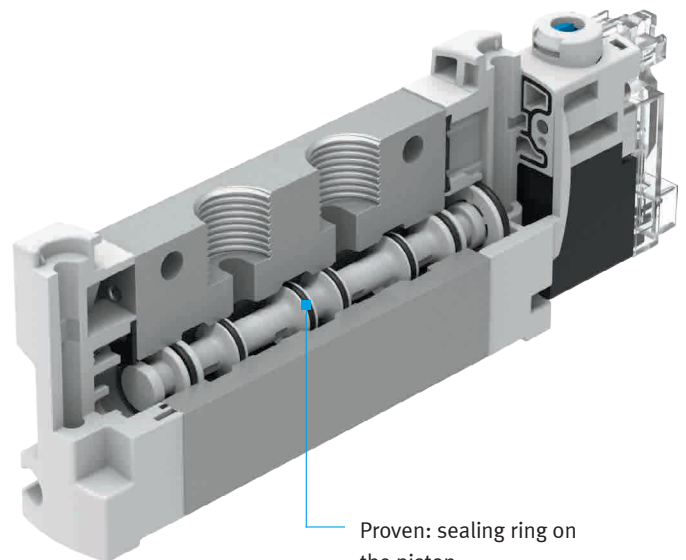


The patented cartridge. The design, layout and materials ensure exceptionally high performance.

The proven standard: the sealing ring on the piston in the VUVG-...-S.

As the new addition to the series, the VUVG-...-S with its core features is part of the Festo core product range. Attractively priced, available worldwide and ready for quick delivery even in large quantities.

The core features with respect to pressure, flow rate, temperature and connections are designed for a narrowly defined range.



Proven: sealing ring on the piston.

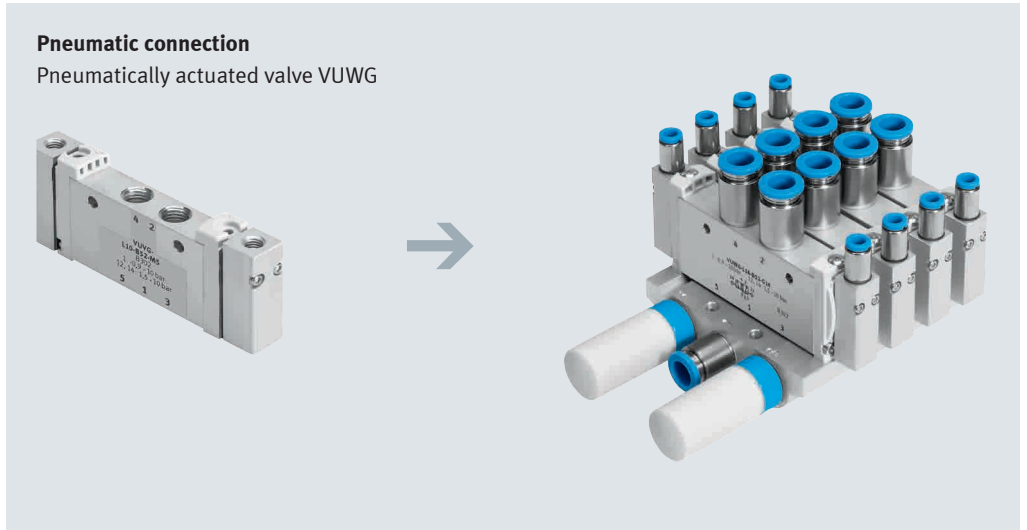
Discover the best valve in its class – the VUVG!

Wide range of options for pneumatics and electrics!

Whether used as a pneumatically or solenoid actuated individual valve or as a valve terminal with individual connections, every variant in the VG series offers many advantages for pneumatics and electrics and provides a multitude of options for greater functionality and low-cost solutions. See for yourself!

Pneumatic connection

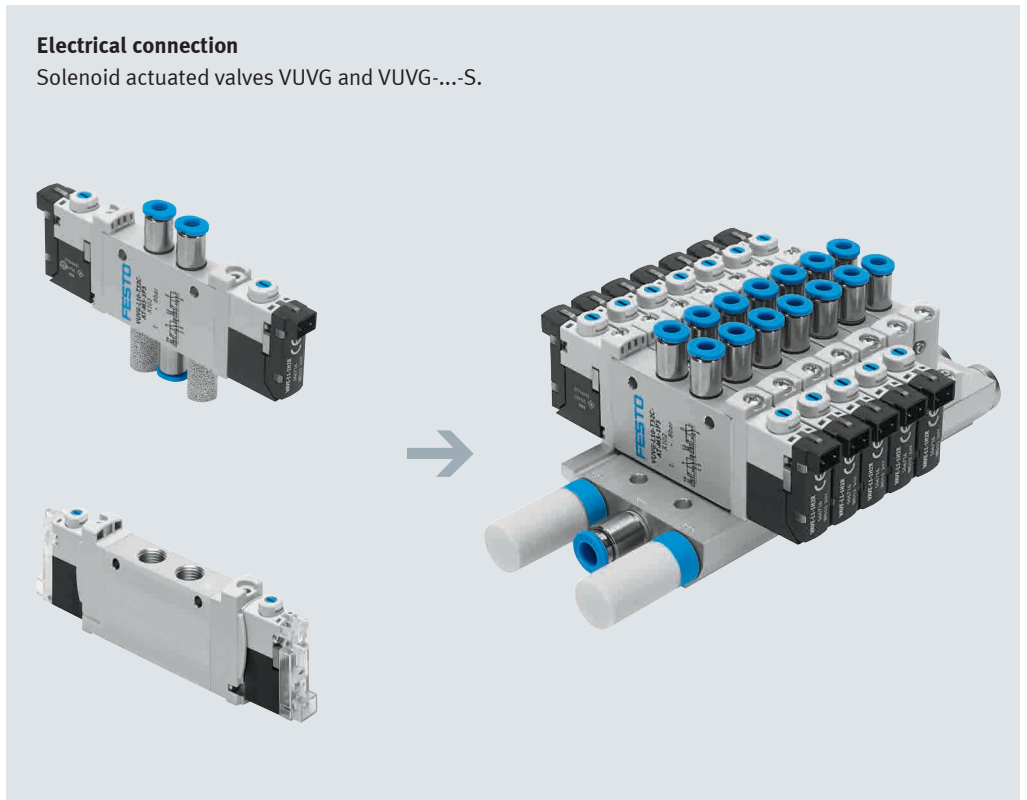
Pneumatically actuated valve VUVG



Available as a configurable individual valve or a pre-assembled valve terminal. This saves you time, money and installation effort.

Electrical connection

Solenoid actuated valves VUVG and VUVG-...-S.





Integrated LED for 360° view – convenient for a fast status overview as well as reduced downtimes.



Locating lug for correct mounting of the valve.



Fixed restrictors and check valves can be directly integrated.



Multiple pressure zones can be created quickly and easily with separators.



Captive screws. Strong and sturdy with high torque for secure mounting.



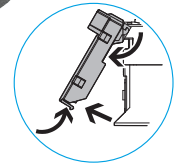
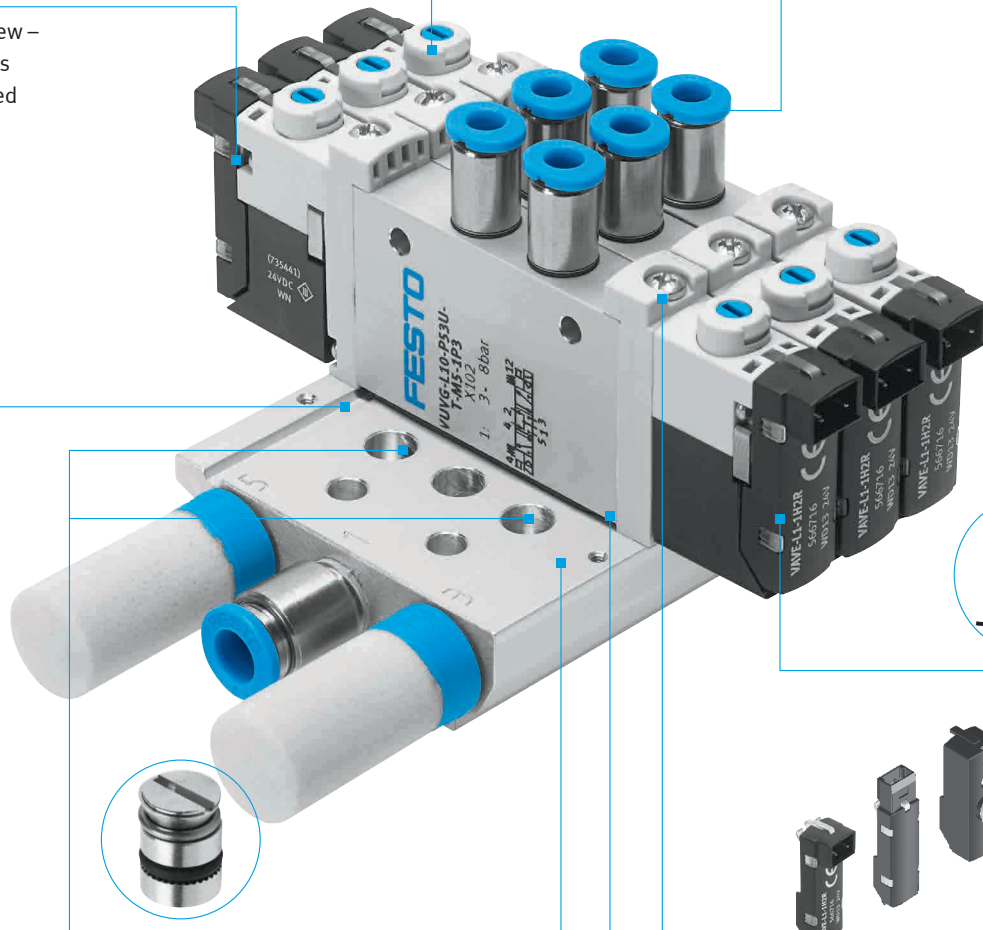
Captive seal integrated in the valve.

Weight-optimised design: ideal for applications which require rapid and dynamic movements.

Available in three sizes

Standard: the non-detenting/detenting manual override for easy commissioning with cover if required.

Imperial connections (inch sizes) can be easily implemented with hybrid fittings.



Click! Just snap it into place.

E-box with numerous connections for optimal integration in your system concept. Whether M8, flying leads, grommet or horizontal and vertical cable outlets, everything fits and can be easily changed at any time! IP40 and IP65.

→ www.festo.com/vuvg
→ www.festo.com/vuwg

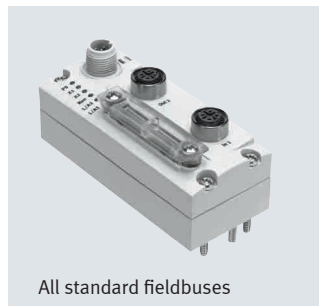
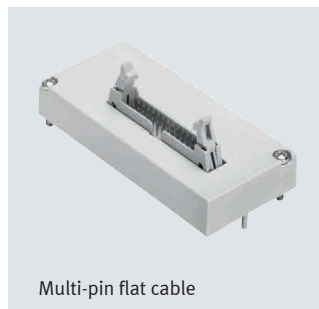
VTUG with plug-in: the ideal valve terminal for universal use!

Highly variable: the electrical connections for multi-pin or fieldbus systems

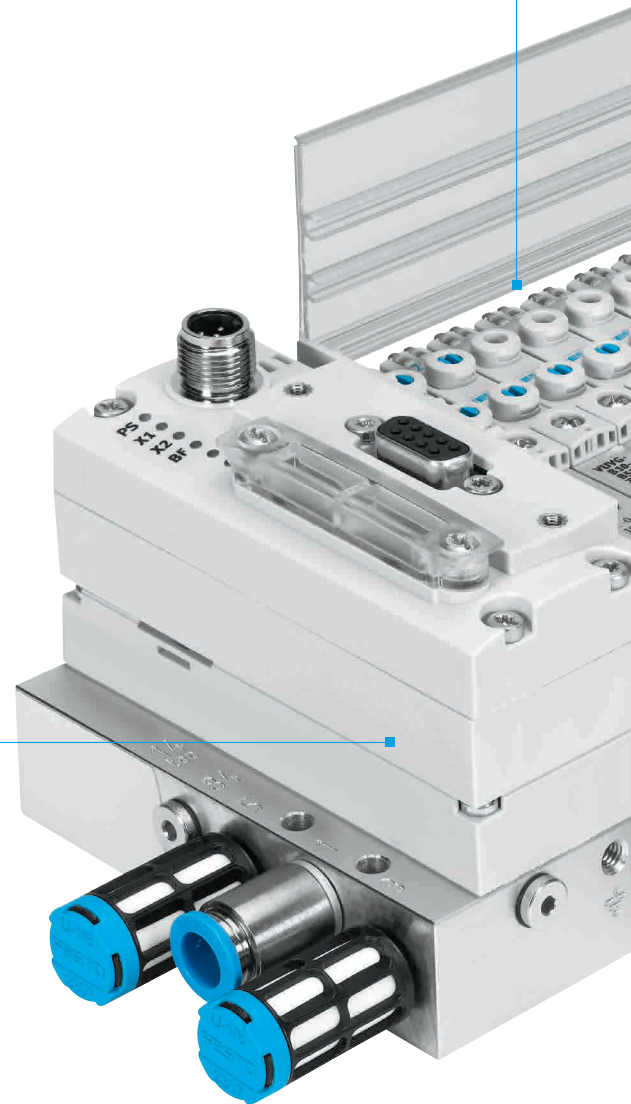
Modular: the terminal strip

Converting from multi-pin to all standard fieldbuses and IO-Link® takes just seconds.

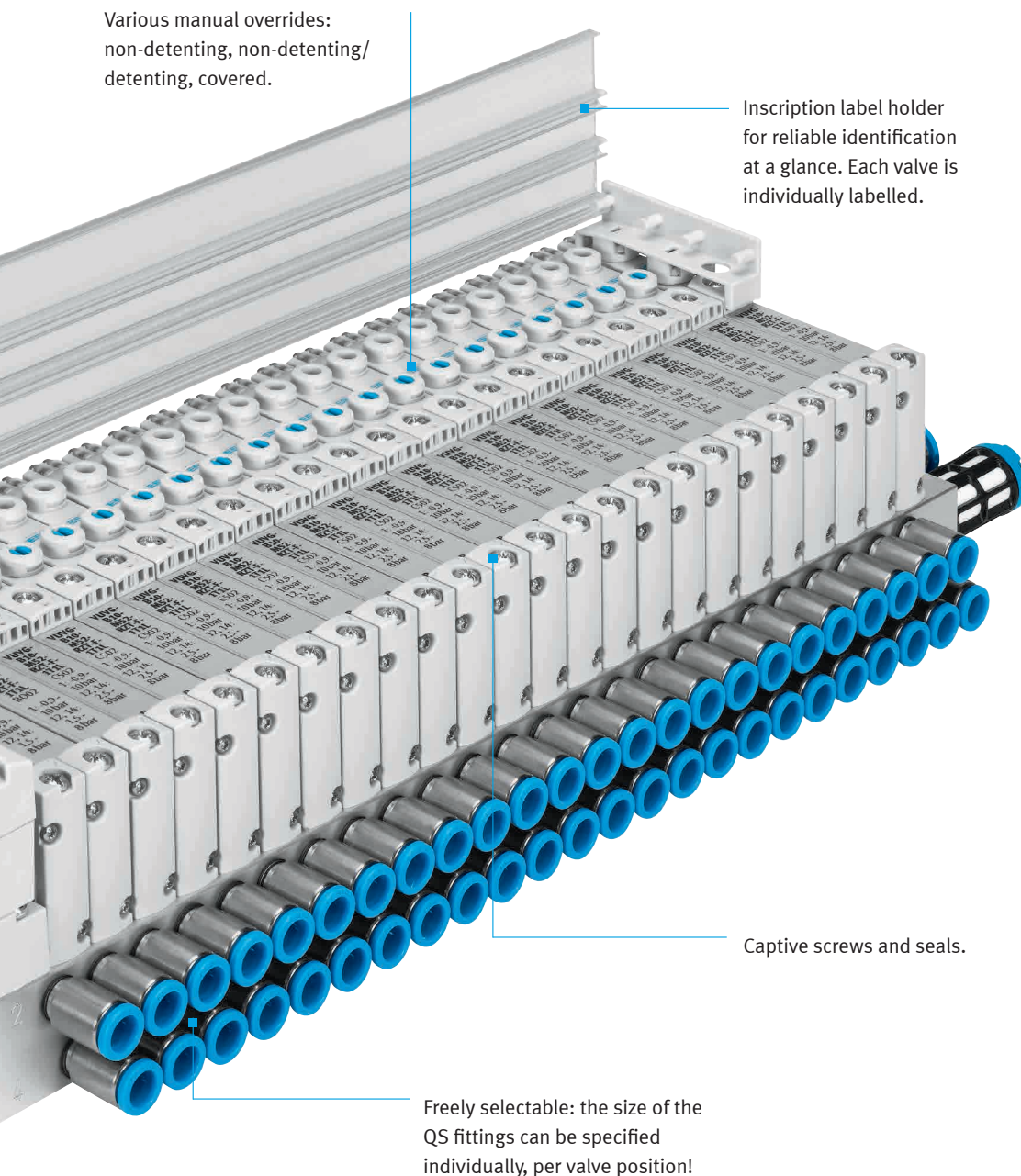
Even at a later date!



Integrated LED: 360° view for quick, reliable diagnostics.



Product	Valve function	Design	Width [mm]	Flow rate [l/min]	Pneumatic connection	Max. valve positions/max. solenoid coils	Function integration	Degree of protection
VTUG plug-in	5/2-way	Semi in-line valve	10	220	M5 (QS 3/4/6)	24/48	Interlock	IP40 IP65/IP67
	5/3-way	Sub-base valve	14	330	M7 (QS 4/6)			
	2x 3/2-way		14	630	G1/8 (QS 4/6/8)			
			18	1200	G1/4 (QS 6/8/10)			



Various manual overrides:
non-detenting, non-detenting/
detenting, covered.

Inscription label holder
for reliable identification
at a glance. Each valve is
individually labelled.

Captive screws and seals.

Freely selectable: the size of the
QS fittings can be specified
individually, per valve position!

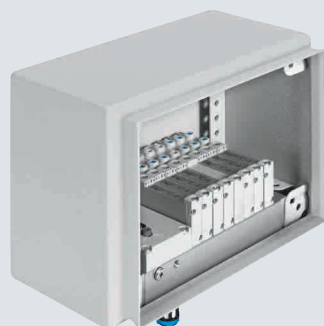
Other highlights

- Up to 24 valve positions in a fixed grid
- Available in 3 sizes
- Vacuum and pressure on one valve terminal
- Several different pressure zones on one valve terminal
- The two 3/2-way valves permit two functions on one valve position – at the same time!
- Ideal for low pressure applications: external pilot air for vacuum operation and common pilot air supply for all valves
- Suitable for pressures up to 10 bar for more power
- Energy-efficient: reduction of holding current decreases power consumption to 0.35 W
- Up to 60°C

→ www.festo.com/vtug

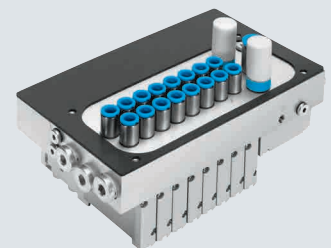
Particularly suitable for control cabinet use:

A wide range of functions and details, such as pneumatic connections underneath, make the VTUG with plug-in particularly suitable as a low-cost valve terminal for installation in control cabinets.



Control cabinet seals with IP67

Save time, money and installation effort by letting us deliver the pre-assembled control cabinet directly to the shop floor.

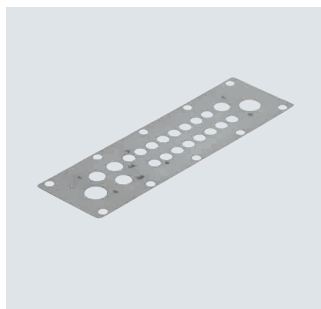


VTUG with plug-in: flexibility for the control cabinet

Optimised and space-saving variants for installation in control cabinets.

The universal valve terminal VTUG now comes in optimised and space-saving variants for installation in control cabinets.

With new manifold rails, check valves and fixed restrictors. Compact, with high flow rates and universal in use, the VTUG is also evolving into an all-rounder for the control cabinet.



High corrosion resistance: stainless steel coating for manifold rails

- For 4, 8, 12, 16 and 24 valve positions
- The valves are easily accessible
- Different compressed air supply options
- Even the standard variant of the new manifold rails offers degree of protection IP69k
- Optional: stainless steel coating for increased corrosion protection

Very reliable: the new check valves

- No more problems with back pressure
- Selected using the valve terminal configurator VTUG
- Valve terminal is supplied fully assembled and tested
- For in-house installation and retrofitting of existing valve terminals
- Installed directly in the ducts of the manifold rail

Fixed restrictors: for individual, low-cost and reliable speed control

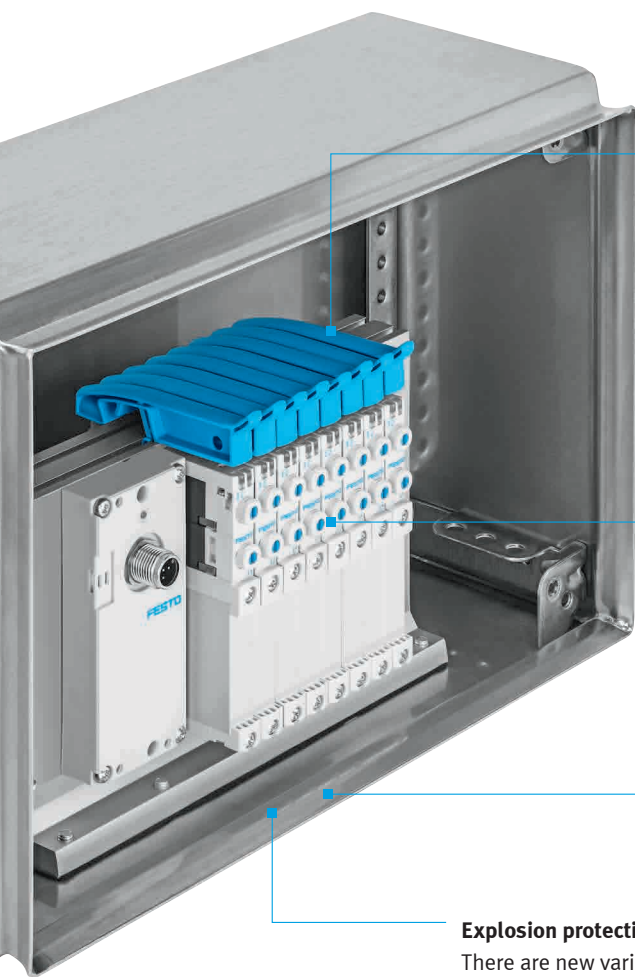
- Various nominal sizes
- Tamper-proof speed control
- Installed directly in the ducts of the manifold rail



Product	Valve function	Design	Width [mm]	Flow rate [l/min]	Pneumatic connection	Max. valve positions/ max. solenoid coils
VTUG plug-in	5/2-way	Sub-base valve	10	220	M5 (QS 3/4/6)	24/48
	5/3-way		14	330	M7 (QS 4/6)	
	2x 3/2-way			630	G1/8 (QS 4/6/8)	

VTUG with outlet direction to the front

- For compact control cabinets
- Optimum view of LED display and inscription label holder
- Convenient access to the manual overrides



Hot-swap function

The hot-swap function for the new VTUG control cabinet profile lets you replace valves during operation without having to depressurise the valve terminal.

Manual override

You have a choice of manual overrides: non-detenting, non-detenting/detenting, covered.

Different connection variants

Explosion protection

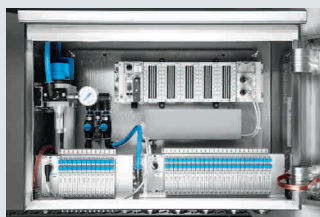
There are new variants for use in explosion protection areas.

Other highlights

- Up to 24 valve positions on a single valve terminal
- Suitable for a control cabinet and environment up to IP69K
- For multi-pin, IO-Link® and all common fieldbuses thanks to CTEU
- Two sizes for optimum performance with respect to energy costs
- Increased corrosion protection
- Compressed air supply from one or both ends

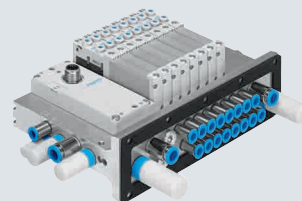
Ready-to-install system solutions for the control cabinet

With compressed air preparation, control technology and valve terminals. Cost-effective: two valve terminals can be controlled using one fieldbus module.



Compressed air supply and exhaust

At one end, at both ends from the outside or within the control cabinet, you decide which compressed air supply and exhaust variant is best for you.



The VUVG-...-S is an important part of our core product range

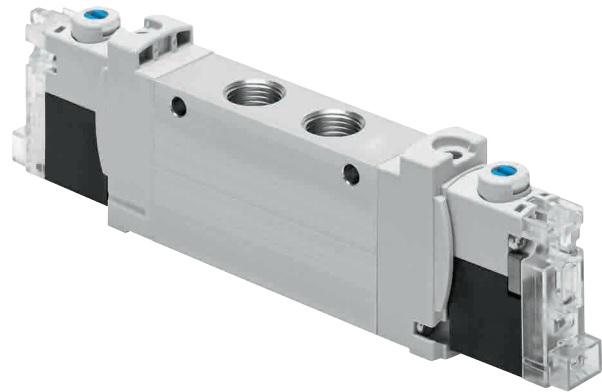
Designed for maximum productivity.

The new addition to the series VUVG-...-S with core features with respect to flow rate, temperature and connections is part of the Festo core product range.

Attractively priced, available worldwide and ready for quick delivery even in large quantities.

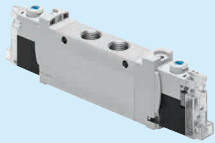

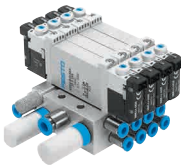



- Festo quality
- High flow rate
- Versatile in use
- Short delivery times

This is Festo quality at an attractive price and available worldwide. Just look for the star ★



Valve series in detail

The product series VUVG: chose and combine

Solenoid valve		VUVG-...-S		VUVG	Valve manifold VTUG			Pneumatic valve VUWG				
		 <p>Core features – Festo quality – attractively priced</p>										
Part of the core product range Our recommendation: look for the star		★										
Valve width [mm]		10	14	10	14	18	10	14	18			
Valve function		2x 3/2-way, 5/2-way		5/2-way, 5/3-way, 2x 3/2-way								
Flow rate [l/min]		150, 360	660	100, 220, 380	780	1300	100, 220, 380	780	1300			
Connections	Pneumatic	M5, M7	G1/8	M3 (QS 3/4) M5 (QS 3/4/6), M7 (QS 4/6)	G1/8 (QS 4/6/8)	G1/4 (QS 6/8/10)	M3 (QS 3/4) M5 (QS 3/4/6), M7 (QS 4/6)	G1/8 (QS 4/6/8)	G1/4 (QS 6/8/10)			
	Electric	Non-modular		Modular variant Plug connector, flying leads, cable, plug connector M8 (Cnomo: M12, type C)				–				
Pressure range [bar]		1.5 ... 7		–0.9 ... 10								
Temperature range [°C]		–5 ... +50		–5 ... +60								
Voltage [V DC]		24		5, 12, 24			–					
Voltage [V AC]		–		–	Cnomo: 110, 230			–				
Degree of protection		IP40, IP65		IP40, IP65								

★ **Festo core product range**
Covers 80% of your automation tasks

Worldwide: always in stock
Excellence: Festo quality at an attractive price
Easy: just a few clicks to place an order online
Fast: generally ready for dispatch from the Festo factory in 24 hours

The core product range: the stars in automation

Fast, reliable and available worldwide for easier automation.

Our core product range has been selected by our experts based on customer requirements in order to simplify your work and to make you even more productive. More than 2200 components from every phase of the pneumatic and electrical control chain make your life easier.

Easy selection, attractive price

From air preparation, valves and cylinders to grippers – with the core product range, 80% of all applications can be accomplished effortlessly and quickly, even

when large quantities are needed. And at a low price.

Fast delivery, available worldwide

Products marked with a full star are held in stock and are available for dispatch just 24 hours after the order is received. Configurable products with the outline star are ready for delivery within five days. All these components are available worldwide. Quality remains at a consistently high level thanks to automated production in state-of-the-art plants such as

Scharnhausen in Germany, Mason Ohio in the USA and Jinan in China. What's more, our logistics chain is designed to ensure you receive your deliveries quickly.

Safety built-in

Fast ordering, fast delivery, fast installation and fast replacement: the proven technology in every product makes assembly, commissioning and operation simpler and safer for OEMs and end users. See for yourself how the core product range is an investment that always pays off.

Find out more about our core product range:

→ www.festo.com/corerange



You will be amazed how simple and cost-effective fieldbus technology can be with the installation system CTEL.

Amazingly simple and inexpensive fieldbus technology.

The new decentralised installation system CTEL makes valve terminals fieldbus compatible – at the price of a multi-pin solution. CTEL is the new standard communication platform for all price-sensitive applications. It is smart and intuitive, easy to configure and install, and extremely flexible thanks to easy module replacement, making it ideal for OEMs.

Plug and work: easy to change, easy to upgrade – without reconfiguring the interface



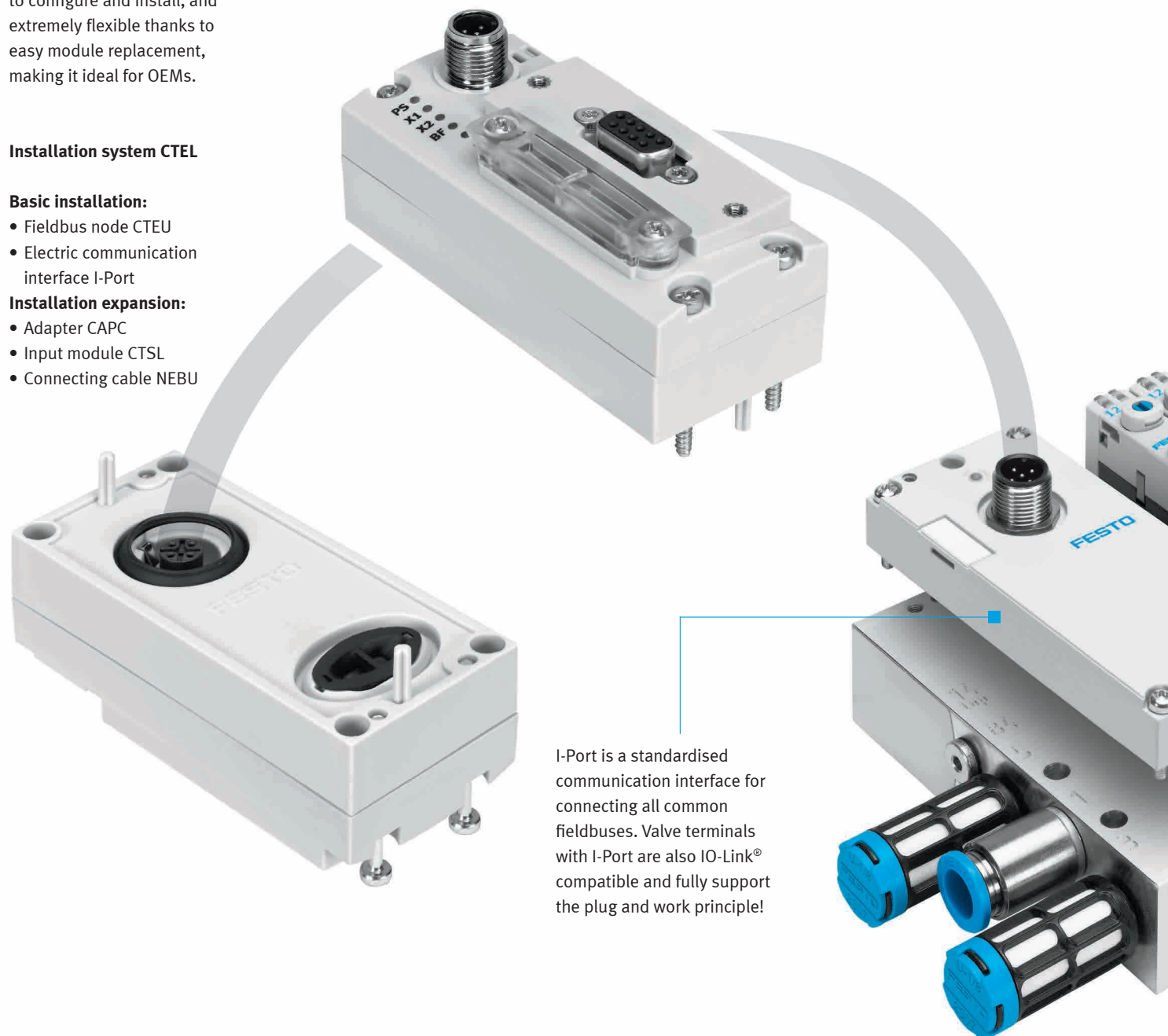
Installation system CTEL

Basic installation:

- Fieldbus node CTEU
- Electric communication interface I-Port

Installation expansion:

- Adapter CAPC
- Input module CTSL
- Connecting cable NEBU

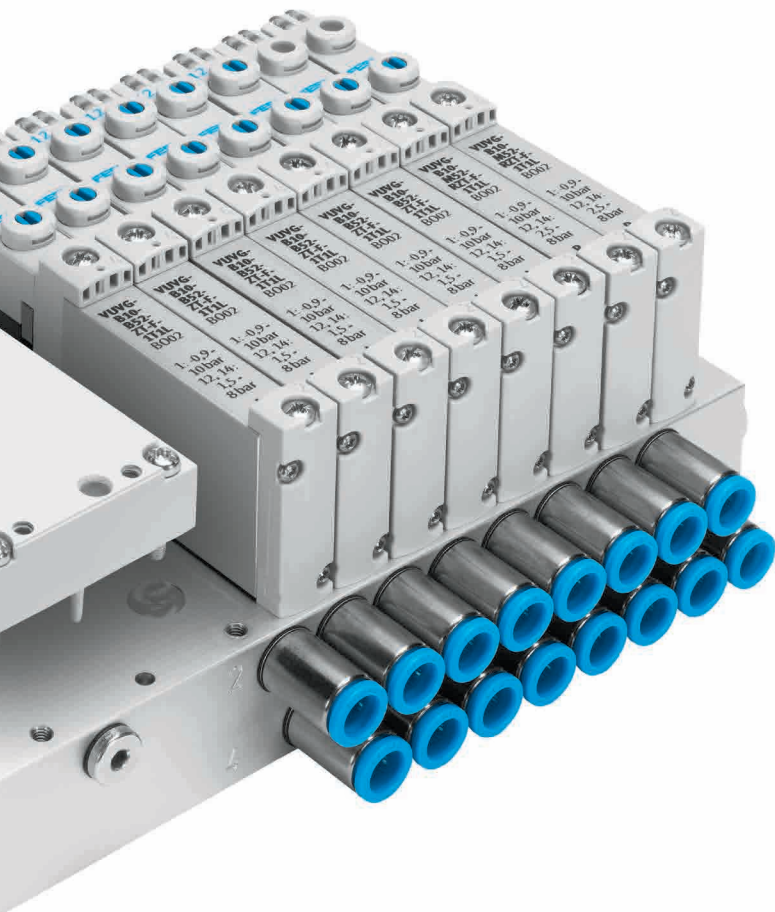


I-Port is a standardised communication interface for connecting all common fieldbuses. Valve terminals with I-Port are also IO-Link® compatible and fully support the plug and work principle!

Highlights

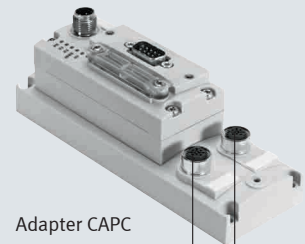
- Save storage, ordering and hardware costs: simply swap the fieldbus on the same valve terminal combination.
- Fieldbus-specific basic diagnostics, e.g. undervoltage, short circuit, etc.
- Bus node CTEU is independent of the valve size.
- Protection classes: IP65, IP67.
- Inexpensive standard cable (NEBU).
- Load voltage of the valve terminal can be disconnected separately for safety applications.
- Hold last state: if the fieldbus connection is interrupted, the valve terminal can either be returned to zero or maintain the last valid status – ideal for gripping tasks, for example.
- Tool change mode: the entire valve terminal can be changed without shutting down. The new valve terminal is automatically identified and starts up immediately.

→ www.festo.com/cteu

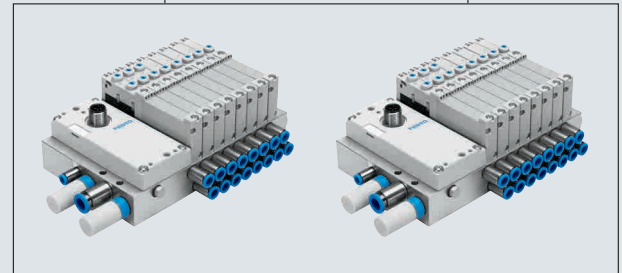


Halve your costs!

The adapter CAPC doubles the communication output: connect up to 2 I-Port devices with bus nodes using the adapter CAPC. Valves and inputs are supported by CTEU.



Adapter CAPC

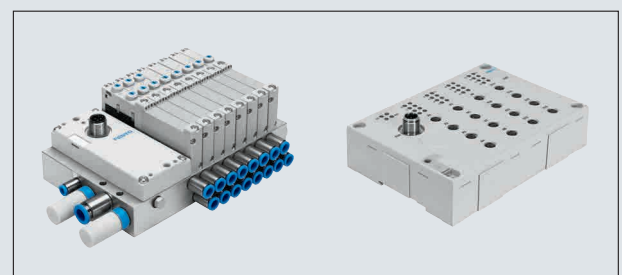


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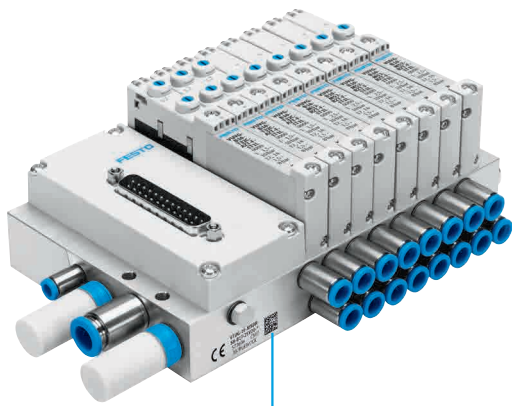



Input module CTSL

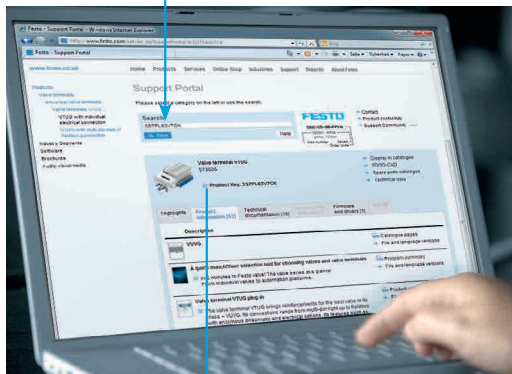
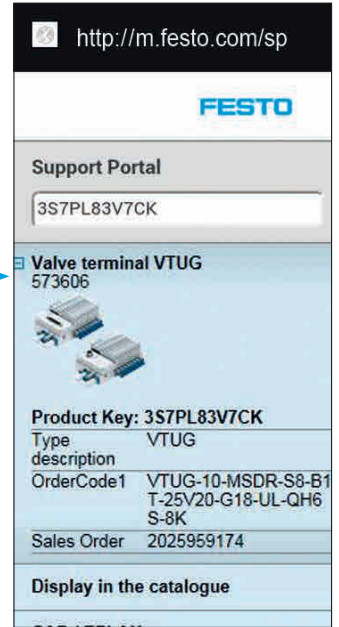
or



Easy to configure, easy to order, easy to use!




VTUG-10-MSDR-S8-B1T-25V20-*
 573606 C502
 3S7PL83V7CK

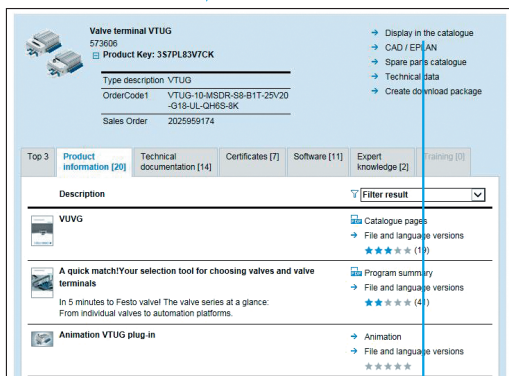


Your VTUG's DNA

Just scan the data matrix code on the rating plate with your smartphone using an app like "i-nigma". Or enter the product key directly into the Support Portal. You can then access information such as the manufacturing date, ident code, hardware/software version or order data.

Reordering made easy

- Step 1: Enter the product key in the Support Portal.
- Step 2: Click the button "Display in catalogue". The configured valve terminal comes up. Check whether the configuration is still OK, change if necessary.
- Step 3: Add to the shopping basket and order. Ready to go!



Support Portal:
 → www.festo.com/net/supportportal
 Support Portal for mobile devices:
 → <http://m.festo.com/sp>

