



DESCRIPTION

Compact **filter valve control unit** for 110/230 VAC and 24 VAC alternating current valves, adjustable impulse and interval times and control input for our differential pressure controller types: DDD*, DDU*, DDP*, DFC* and DPQ*. Up to 25 valves in one device, expandable.

Examples: JET filter plants where the filters are cleaned via air valves with pressure air impulses.

With low filter contamination – filter clean – the TFS-12 works with the long **INTERVAL 2** – can also be switched off -, which can be set between 5 s - 60 min and caters for occasional cleaning **IMPULSES**, which can be programmed separately for **INTERVAL 1 and 2** from 20 ms - 5 s. The **IMPULSES** are shown by LEDs. The impulse and interval times can be accurately programmed digitally via the PAR, ENT, ↓ and ↑ keys.

If the filter contamination increases, the shorter **INTERVAL 1** can be switched over to via an external contact (bridge terminal 11 and 15) and the filter can be cleaned at shorter intervals. Alternatively, Interval 1 can be switched over to by a 24 VDC signal at terminal 11 and 14, e.g. by an SPS.

There is a potential-free relay contact **ALARM** for aggregated error messages. The **ALARM** LED signalises the **ALARM** visibly in addition.

The filter valve control unit TFS-12 is available as one device with up to 25 valve outlets. If more valve outlets are required, several TFS-12 can be connected to each other (expander mode).

The robust relay outlets for the valves are protected against overload, e.g. valve short circuit, by fuses.

The cleaning process controlled by the **TRANS-FILTER-SCANNER TFS-12** means a longer service life for the filters and economic handling of energy. Compressed air for cleaning is saved, economic operations of the filter plant and the plant aggregates becomes possible.

FEATURES

- Up to 25 valve outlets in one device, for valves with 24V / 110V / 230V, 50-60 Hz voltage. The number of outlets can be programmed.
- Expander mode with further TFS-12 devices for more than 25 valves
- **IMPULSE 1 and 2** : 20 ms - 5 s, separately programmable for each **INTERVAL**
- **INTERVAL 1** : 5 s - 999 s
- **INTERVAL 2** : 5 s - 60 min (can be switched off)
- Signal inlets for remote control: **HAND, STOP, EXP** (for expander mode)
- Signal outlet: **OUT** (for expander mode), **ALARM** relay
- Casing protection type IP 65
- Machinery Directive 2006/42/EC, Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC fulfilled
- High reliability due to "burn in"

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TECHNISCHE DATEN / TECHNICAL DATA

Anzeige, Display	:	Digital 3-stellig, 7-Segment-LED rot, 14 mm hoch. Digital, 3-digit, 7-segment - LED, red, 14 mm high
Zeitbereiche Time ranges	:	IMPULS 1-2 / PULSE 1-2: 20 ms - 5 s INTERVALL 1 : 5 s - 999 s INTERVALL 2 : 5 s - 60 min
Signaleingänge	:	Digital : - HAND = Dauerabreinigung mit IMPULS 1 und INTERVALL 1 - STOP Ventilansteuerung verriegelt - EXP für Expanderbetrieb mit weiteren TFS-12 Aktivierung durch externen Kontakt, der 5 mA bei 5 VDC schalten kann oder durch eine externe Spannung 24 VDC, 10 mA.
Signal inputs	:	Digital : - HAND, continues cleaning with PULSE and INTERVAL 1 - STOP = valve activity is blocked - EXP for expander operation with additional TFS-12 Activation with external switches which can switch 5 mA, 5 VDC, reliable or with external voltage 24 VDC, 10 mA.
Signalausgänge Signal output	:	Digital: Relais ALARM, 1x Schließerkontakt, potentialfrei. Relay ALARM, 1x NO contact potential-free OUT für Expanderbetrieb mit weiteren TFS-12. OUT for expander operation with additional TFS-12 Belastung für Relais-Kontakt ALARM / load for relay-switch ALARM: min 10 mA, max. 2 A cos phi = 1, 24 - 255 V, 50 - 60 Hz, ≥24 VDC. LED: ALARM, INTERVALL 1, INTERVALL 2, EXP.
Signalausgänge Signal output	:	Digital: 12, 18 oder 25 Hochstrom-Relaiskontakte, potentialfreie Schließer / 12, 18 or 25 high current relay contacts, NO, potential-free. Zahl der Ventilausgänge angeben / Indicate number of valve outputs..... ORDER-INDEX:-VENT-
Stromversorgung Gerät Power supply appliance	:	24 VDC, 3.3W und 110-120 / 230-240 V _≈ , 50 - 60 Hz, 5 VA..... ORDER-INDEX:-240AC-
Stromversorgung Ventile Power supply valves	:	230-240 V _≈ , 50 - 60 Hz, max. 100 VA
Stromversorgung Gerät Power supply appliance	:	24 VDC, 3.3W und 110-120 / 230-240 V _≈ , 50 - 60 Hz, 5 VA..... ORDER-INDEX:-110AC-
Stromversorgung Ventile Power supply valves	:	110-120 V _≈ , 50 - 60 Hz, max. 100 VA
Stromversorgung Gerät Power supply appliance	:	24 VDC, 3.3W und 12 / 24 V _≈ , 50 - 60 Hz, 5 VA..... ORDER-INDEX:-24AC-
Stromversorgung Ventile Power supply valves	:	24 V _≈ , 50 - 60 Hz, max. 48 VA
Elektr. Anschluss Electric connection	:	Schraubklemmen, max. Drahtquerschnitt 2,5 mm ² Screw terminal, max. cross section of wire AWG 14
Gehäuse Housing	:	Abmessungen / dimensions: 287 x 188 x 130 mm, B x H x T (Width x Height x Depth). Schutzart / protection class : IP 65. Material / material : Polycarbonat(e) . Farbe / colour: grau / grey.
Kabelverschraubungen Cable glands	:	1.1. Kabelverschraubungen zur Sammelverdrahtung der Ventilleitungen: 2x M20, 1x M20 blind und 2x M32 für Ventile..... ORDER-INDEX: -PG- Cable glands for common wiring of the valve-lines:2x M32
	:	1.2. Kabelverschraubungen zur Einzelverdrahtung der Ventilleitungen, geben Sie bitte die Anzahl xx an: 12, 18, 25 x M16 z.B. PG25 ORDER-INDEX: -PGxx- Cable glands for a separate wiring of the valve-cables, please name the number xx of cable-connectors: 12, 18, 25 x M16
	:	1.3. Kabelverschraubungen M40 mit jeweils 9 Mehrfacheinführungen für Kabel mit Durchmesser bis 6,9 mm zur Einzelverdrahtung der Ventilleitungen..... ORDER-INDEX: -PG40- Cable glands M40 each with 9 multiple inlets for cable with diameter up to 6,9 mm for a separate wiring of the valve-cables
Vorschriften / Rules	:	EN 60 204-1, EN 61010, EN 61000, BGV A3.

Bestell-Nr.	:	TFS-12 - Volt - Ventile - Gehäuse - CE
	:	- - VENT -
ORDER-INDEX	:	TFS-12 - Voltage - Valves - Housing - CE
Beispiel 1 / example 1	:	TFS-12 - 240AC - 12 - PG - CE
Beispiel 2 / example 2	:	TFS-12 - 24 AC - 18 - PG18 - CE
Beispiel 3 / example 3	:	TFS-12 - 110AC - 25 - PG40 - CE

Änderungen vorbehalten / subject to change Z1216001_003_TFS12_GB, date 03.07.2015, **µmes** Made in Germany