

EDI



EDS



EDR



EDRA

Electronic pressure transducers / sensors and controls /

Industries



EDI	Electronic pressure transducer Pressure range up to 16 bar Output signal 4 - 20 mA	P. 85	Compressors gaseous media
EDS	Electronic pressure sensor Pressure range up to 16 bar Output signal 4 - 20 mA	P. 86	Compressors gaseous media
EDR	Electronic pressure control Pressure range up to 16 bar Output signal 0 - 10 V	P. 87	Compressors gaseous media
EDRA	Electronic pressure control with digital display Pressure range up to 16 bar Relay output	P. 89	Compressors gaseous media



GLW 4

Compressors

Industries



GLW 4	Electronic staging and sequencing control	P. 92	Compressors
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Electronic pressure transducer EDI

Pressure transducer EDI



- Pressure range up to 16 bar
- for panel board mounting
- Output signal: 4 - 20 mA

Electronic pressure transducer with integrated relative pressure sensor for panel board mounting, quick-connect for pneumatic tube, analogue output 4 to 20 mA and operating voltage 12...30 V-DC.

Function: the device converts the pressure applied to the sensor into a proportional DC-current (2 - wire technology).

Order reference	Measuring range (bar)*	Max. perm. pressure (bar)	Max. inaccuracy at 25° C	Operating voltage U _B (V-DC)	Weight (in g)	Part No.
EDI 10	0 - 10	25	2,5 %	12...30	85	260219
EDI 16	0 - 16	25	2,5 %	12...30	85	260226

*4 mA = 0 bar / 20 mA = measuring range end value

Technical operating data	
Permissible operating voltage range	± 10 %
Operating voltage influence at ± 10% operating voltage fluctuation	< 0,1%
Duty factor ED	100 %
Permissible ambient and media temperature	-20°C bis +60°C
Permissible ambient humidity rel. humidity, non-condensing	10 % bis 90 %
Permissible storage temperature	-40°C bis +80°C
Clearance and creepage distances	VDE 0110
Working position	beliebig
Power consumption	max. 1 VA

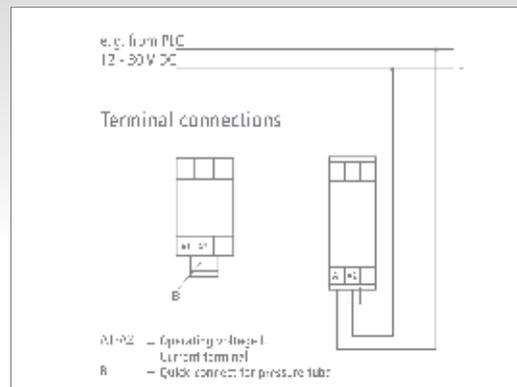
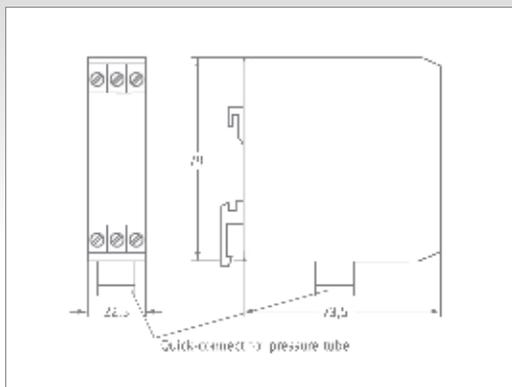
Pressure connection	
Quick-connect suitable pneumatic tube	6 x 1 mm Festo PAN

Output signal	
Analogue output	4 - 20 mA

Enclosure	
Material	ABS flameproof, UL-approved
Mounting	snap on 35 mm DIN-rail connector acc. to EN 50 035
Enclosure-protection	IP 40
Protection against shock	acc. VBG 4
Terminals	Cage clamps
Cross section	2,5 mm ²
Weight	85 g

Electronic Components

Dimensions- / Circuit Diagrams EDI



Pressure sensor EDS



- Pressure range up to 16 bar
- Output signal: 4 - 20 mA

Electronic pressure control with relative pressure sensor for direct installation either on or within a device, G 1/4" connection, analogue output 4 - 20 mA and operating voltage supply 11 ... 30 V DC. Electrical connection is effected in a straight forward and service-friendly manner - via a DIN.

A plug whereby a degree of protection IP 65 is realized.

Function: the device converts the pressure applied to the sensor into a proportional DC current (2 - wire technology).

Order reference	Measuring range (bar)*	Max. perm. pressure (bar)	Max. inaccuracy at 25° C	Operating voltage U_B (V-DC)	Weight (in g)	Part No.
EDS 6	0 - 6	32	2,5 %	11...30	150	260233
EDS 10	0 - 10	32	2,5 %	11...30	150	260240
EDS 16	0 - 16	32	2,5 %	11...30	150	260257

*4 mA = 0 bar / 20 mA = measuring range end value

Accessories EDS

Order reference	Description	Weight (in g)	Part No.
EDS-ST	connection socket EDS, DIN 43650-A	110	260264

Technical operating data

Permissible operating voltage range	± 10 %
Operating voltage influence at ± 10% operating voltage fluctuation	< 0,1 %
Duty factor ED	100 %
Permissible ambient and media temperature	15°C bis +80°C
Permissible ambient humidity rel. humidity, non-condensing	10 % bis 90 %
Permissible storage temperature	-40°C bis +80°C
Clearance and creepage distances	VDE 0110
Working position	any position
Power consumption	max. 1 VA

Pressure connection

Flange	G 1/4"
Outer thread	

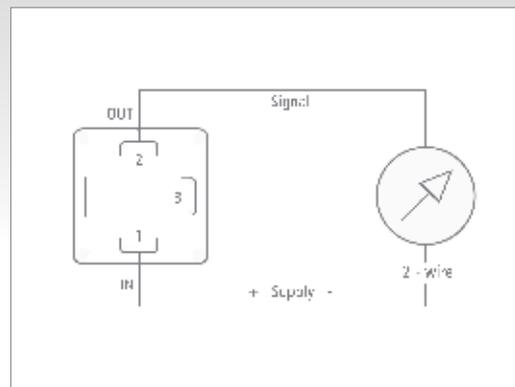
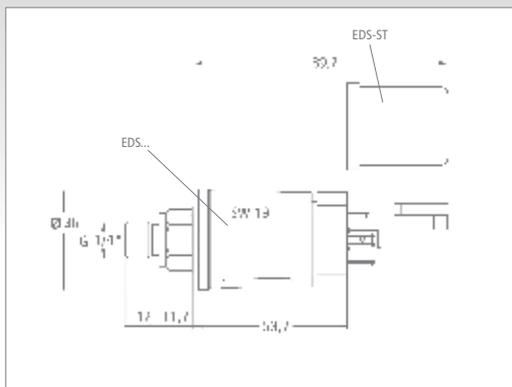
Output signal

Analogue output	4 - 20 mA
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Enclosure

Enclosure-protection	max. IP 65
Terminals	Flachstecker 4,5 mm
Cross section	EDS-ST 1,5 mm ²
Weight	150 g

Dimensions- / Circuit Diagrams EDS



Electronic pressure control EDR



- Pressure range up to 16 bar
- For panel board mounting
- Relay output
- Output signal: 0 – 10 V

Electronic pressure switch with integrated relative pressure sensor for panel board mounting, quick-connect for pneumatic tube, two fixed adjustable switching points, relay output (isolated SPDT), analogue

voltage output 0-10 V via jack plug (look at accessories) and isolating transformer acc. to VDE 0550.

Function: The device evaluates the applied pressure. On exceeding an upper threshold the relay is deactivated; when falling below a lower threshold the relay is activated again. Both thresholds are adjustable.

Order reference	Measuring range (bar)*	Max. perm. pressure (bar)	Max. inaccuracy at 25° C	Operating voltage U _B (V-DC)	Weight (in g)	Part No.
EDR 2	0,2 - 2	3	2,5 %	230	135	260271
EDR 16	1 - 16	25	2,5 %	230	135	260288

*adjustable in 0.1 bar steps

0 V = 0 bar / 10 V = measuring range end value

Accessories EDR

Order reference	Description	Weight (in g)	Part No.
KL-S	Jack 2.5 mm for analogue output connection (cable length 5 m)	15	260332

Technical operating data

Permissible operating voltage range	± 10 %
Operating voltage influence at ± 10% operating voltage fluctuation	< 0,1 %
Duty factor ED	100 %
Permissible ambient and media temperature	-20°C bis +60°C
Permissible ambient humidity rel. humidity, non-condensing	10 % bis 90 %
Permissible storage temperature	-40°C bis +80°C
Clearance and creepage distances	VDE 0110
Working position	any position
Power consumption	max. 1 VA

Pressure connection

Quick-connect suitable pneumatic tube e.g.	6 x 1 mm Festo PAN
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Output signal

Analogue voltage signal max. 5 mA short-circuit proof	0 - 10 V
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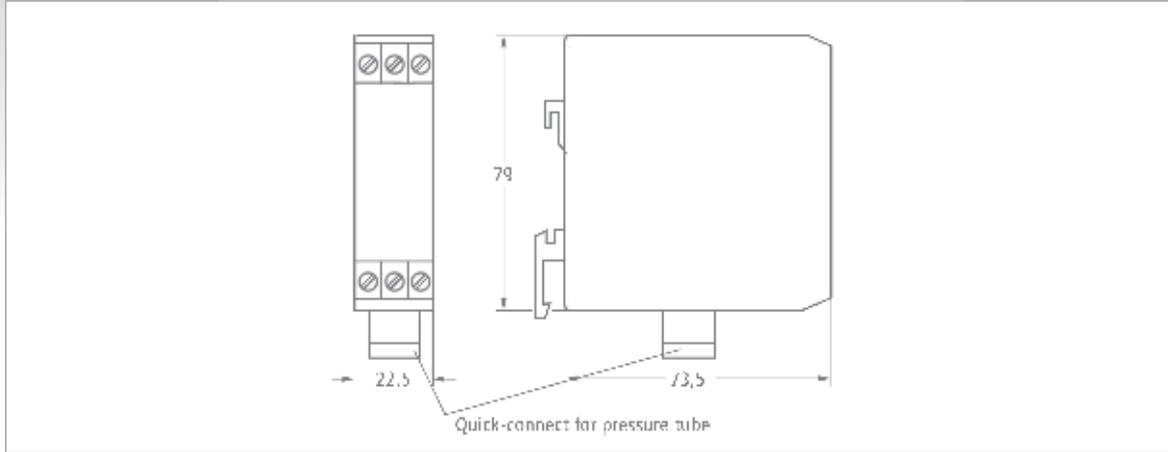
Enclosure

Material	ABS flameproof, UL-approved
Mounting	snap on 35 mm DIN-rail connector acc. to EN 50 035
Enclosure-protection	IP 40
Protection against shock	acc. VBG 4
Terminals	Cage clamps
Cross section	2,5 mm ²
Weight	135 g
Male jack plug Jack 2,5 mm	2,5 mm

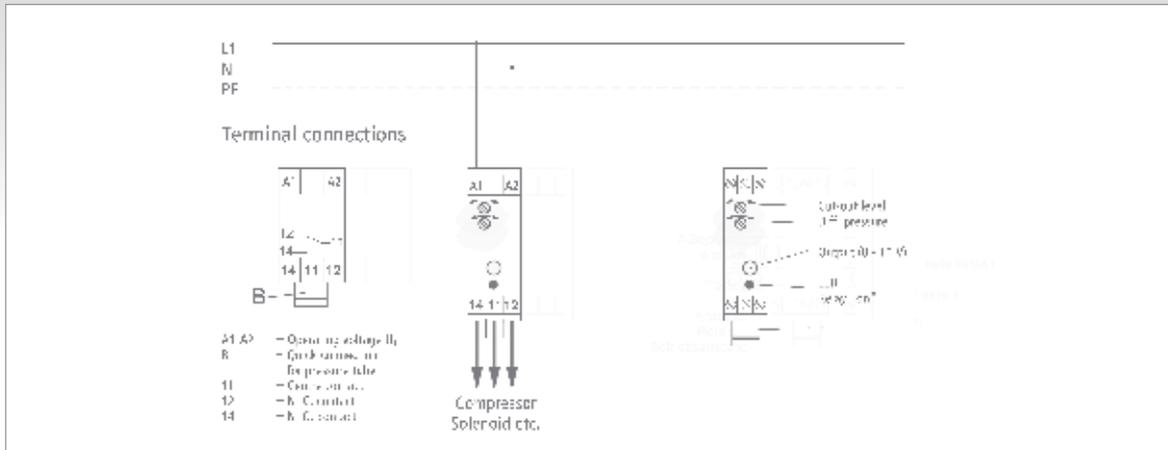
Power section

Series voltage acc. to VDE 0660 and VDE 0110 Group C	250 V-AC
Maximum continuous current per contact	6 A-AC
Maximum switching capacity per contact	1.500 VA (AC) 50 W (DC)
Mechanical life Cycles	ca. 1 x 10 ⁷
Electrical life (max. load) Cycles	ca. 2 x 10 ⁵

Dimensions EDR



Circuit Diagram EDR



Pressure control EDRA



- Pressure range up to 16 bar
- For panel board mounting
- Relay output
- Digital display

Electronic pressure switch with integrated relative pressure sensor for panel board mounting, quick-connect for pneumatic tube, digital display for mains pressure indication and threshold programming (two switching points), relay output (isolated SPDT) and isolating transformer acc. to VDE 0550.

Function: The device evaluates the applied pressure to the sensor. On exceeding an upper threshold the relay is deactivated; when falling below a lower threshold the relay is activated again. Both thresholds also are adjustable without medium. The on/off thresholds can be programmed via the display during operation - the actual pressure status is shown on the display.

Order reference	Measuring range (bar)*	Max. perm. pressure (bar)	Max. inaccuracy at 25° C	Operating voltage U _B (V-DC)	Weight (in g)	Part No.
EDRA 16	1 - 16	25	2,5 %	230	255	260295

*adjustable in 0.1 bar steps

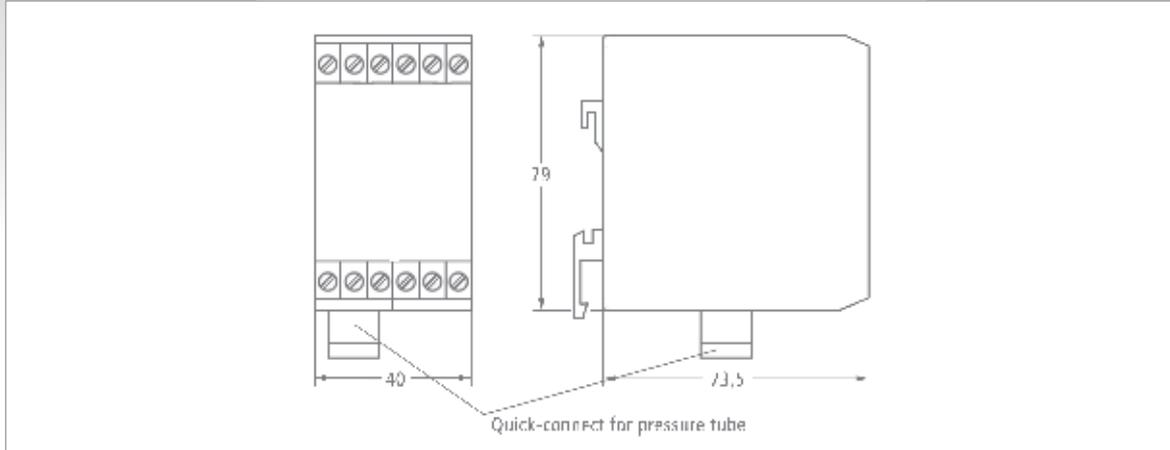
Technical operating data	
Permissible operating voltage range	± 10 %
Operating voltage influence at ± 10% operating voltage fluctuation	< 0,1 %
Duty factor ED	100 %
Permissible ambient and media temperature	-20°C bis +60°C
Permissible ambient humidity rel. humidity, non-condensing	10 % bis 90 %
Permissible storage temperature	-40°C bis +80°C
Clearance and creepage distances	VDE 0110
Working position	any position
Power consumption	max. 1 VA

Pressure connection	
Quick-connect suitable pneumatic tube e.g	6 x 1 mm Festo PAN

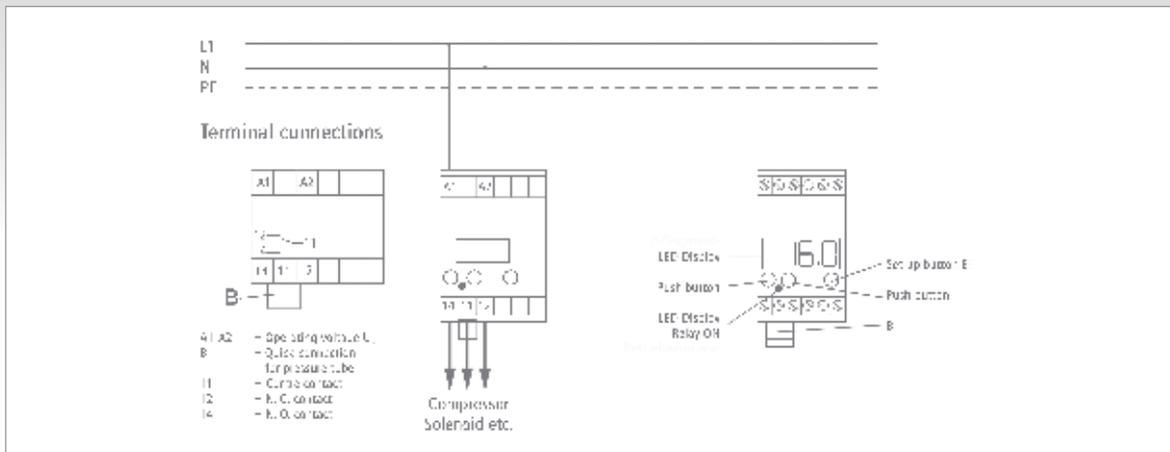
Enclosure	
Material	ABS flameproof, UL-approved
Mounting	snap on 35 mm DIN-rail connector acc. to EN 50 035
Enclosure-protection	IP 40
Protection against shock	acc. VBG 4
Terminals	Cage clamps
Cross section	2,5 mm ²
Weight	255 g

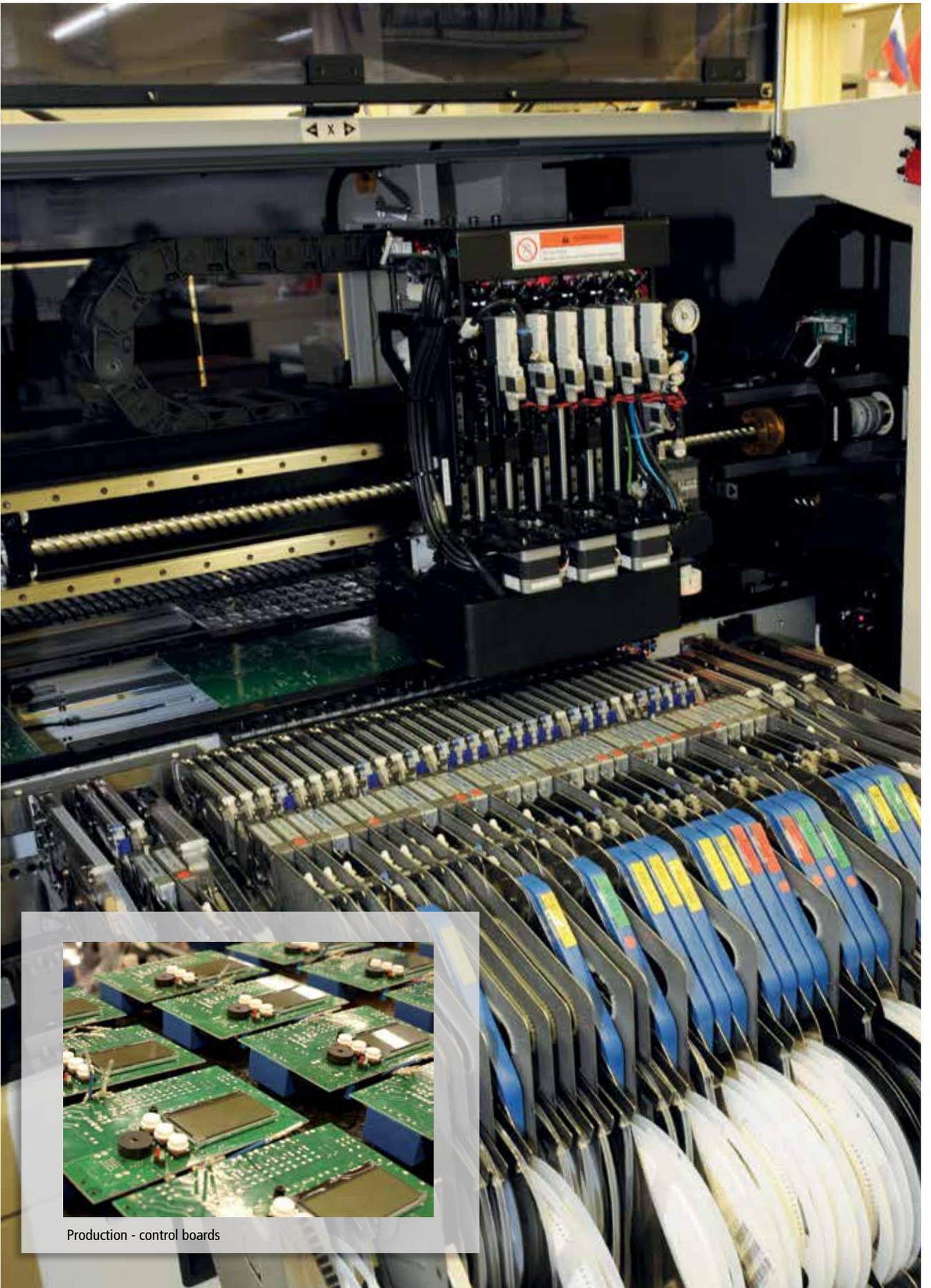
Power section	
Series voltage acc. to VDE 0660 and VDE 0110 Group C	250 V-AC
Maximum continuous current per contact	6 A-AC
Maximum switching capacity per contact	1.500 VA (AC) 50 W (DC)
Mechanical life Cycles	approx. 1 x 10 ⁷
Electrical life (max. load) Cycles	approx. 2 x 10 ⁵

Dimensions EDRA



Circuit Diagram EDRA





Production - control boards

Staging and Sequencing Control for Compressors



More and more companies today need an economic operating air pressure system.

an internal timer is available e.g. shift work applications.

Thereby, several compressors are often connected to each other. Since 1995 Condor GLW controls have been used to monitor up to 4 compressors in primary load set up.

The GLW 4 evaluates the mains pressure and rotates the connected compressors on a time-dependent basis. If desired,

Following functions can be activated:

- Internal pressure transducer 0 to 16 bar
- Connection of an external pressure transducer, two-wire 4 to 20mA
- Programmable internal time switch (controls up to 6 profiles)
- Programmable primary load and load changeover functions, allowing for the primary load compressor to operate without taking part in the rotation process. Only the load changeover compressors are rotated.
- Programmable ball valve control with max. 3 compressors
- Direct switchover after the load changeover time has elapsed.
- Four digital inputs (e.g. for hourmeter)
- Input: bridge time switch
- Input: remote release
- Parameter password protection
- Units reversible bar/psi

Type overview GLW 4

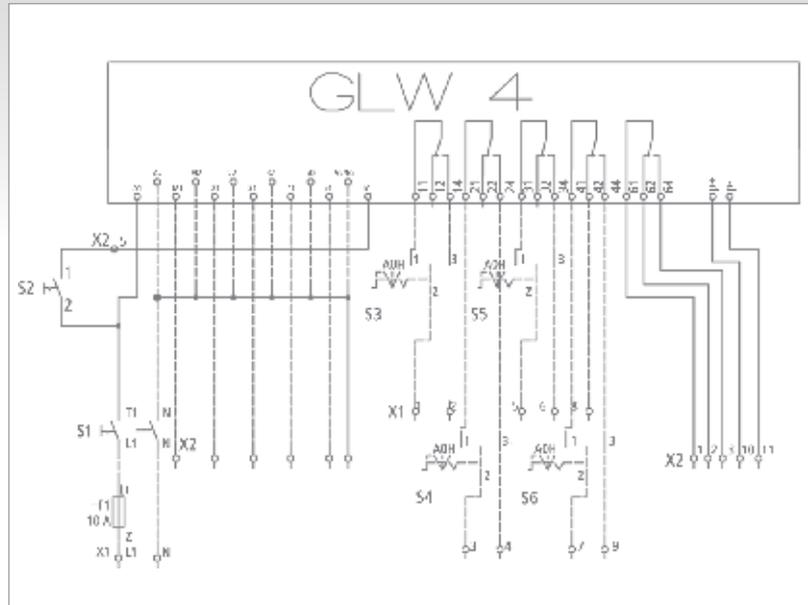
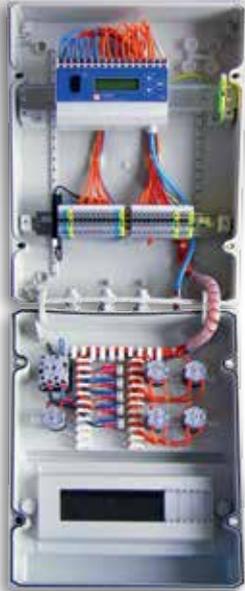


Order reference	Description	Weight (in g)	Part No.
GLW 4	GLW 4 without wiring, enclosure	520	237761
GLW 4-S	GLW 4 in pre-wired plastic enclosure, (dimensions: 420x300 x170mm), DIN-Rail mounting, internal terminal blocks and wiring diagram.	2350	255475
GLW 4-S kompl.	GLW 4 in pre-wired plastic enclosure, (dimensions: 420x300 x170mm), DIN-Rail mounting, internal terminal blocks and wiring diagram. Additionally wired for 4 compressors: isolator, rotary switch „bridge timer“, rotary switch compressor 1 - 4, indicator lamps for voltage supply and compressors 1 – 4.	3550	255482

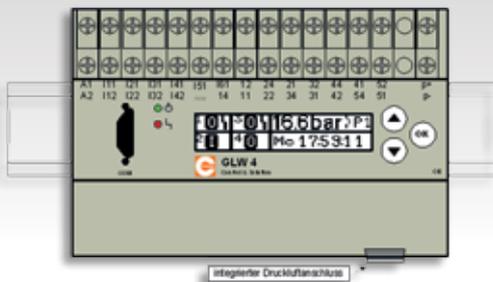
Additional styles on demand!

Electronic staging and sequencing control GLW 4

Wiring diagram GLW 4-S (completely assembled)

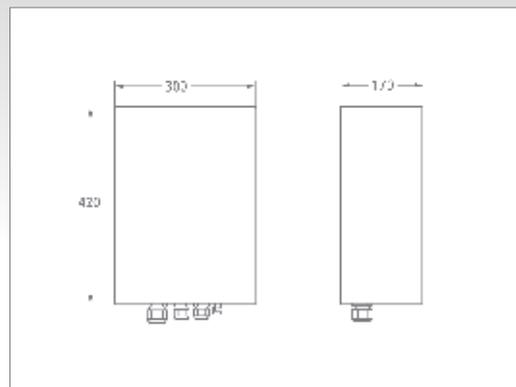
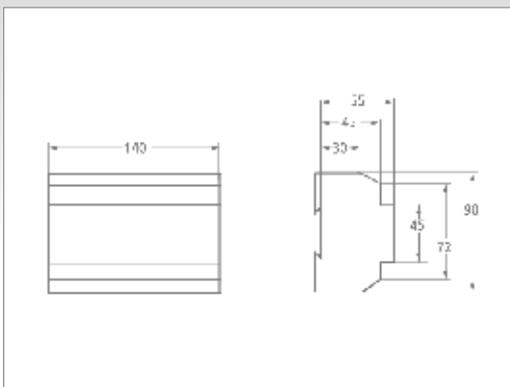


Housing GLW 4 Terminal connections



- A1 / A2 = Mains voltage supply 90 – 265 V AC; 50/60 Hz
- I 11 bis I 42 = 4 digital inputs, 250V AC1, e. g. operating hours
- I 51 = External release input, 250V AC1
- I 61 = Bridge time switch input, 250V AC 1
- 11 bis 44 = Isolated SPDT outputs for max. 4 compressors 230V AC, max. 5A AC1
- 51, 52, 54 = Isolated alarm relay 230V AC, max. 5A AC1
- p+ / p- = External analogue connection 4..20mA Two wire
 $U_b = 18-21V$ DC
- COM = V 24-Interface for PC programming

Dimensions GLW 4 / GLW 4-S





Electronic staging and sequencing control GLW 4

Technical operating data	
Permissible operating voltage range U_B	90 – 265 V AC 50 – 60 Hz
Operating voltage influence at $\pm 10\%$ operating voltage fluctuation	< 0,1 %
Duty factor ED	100 %
Permissible ambient and media temperature	0°C up to +40°C
Permissible ambient humidity rel. humidity, non-condensing	10 % up to 90 %
Permissible storage temperature	-40°C up to +80°C
Clearance and creepage distances	VDE 0110
Working position	Any position
Power consumption Control	10 VA

Power section	
Series voltage acc. to VDE 0660 and VDE 0110 Group C	250 V-AC
Maximum continuous current per contact	6 A-AC
Maximum switching capacity per contact	1.500 VA (AC) 50 W (DC)
Mechanical life Cycles	approx. 1×10^7
Electrical life (max load) Cycles	approx. 2×10^5

Measuring accuracy and Requirements	
Input external pressure transducer	$\pm 2\%$ of end value
Internal pressure transducer	$\pm 2\%$ of end value
EM-Directive	89 / 336 / EWG
Low Voltage Directive	73 / 23 / EW

Digital in- and outputs	
4 Relay outputs isolated SPDT's	230V-AC; 5 A (AC1)
1 Alarm relay isolated SPDT	230V-AC; 5 A (AC1)
Internal buzzer	typical 70dBA
4 digital inputs 250V	AC 1 (I11/I12 I41/I42)
Input 250V-AC1 (I51/52)	External release signal
Bridge time switch	250V-AC1 (I61/62)

Analogue Interface	
Input analogue pressure transducer U_B 4...20mA wire	18 – 21V-DC
Integrated pressure transducer With quick connect	0...16 bar

Enclosure	
Material	ABS flameproof, UL-approved
Mounting	snap on 35 mm DIN-rail connector acc. to EN 50 035
Enclosure-protection	IP 40
Protection against shock	acc. VBG 4
Terminals	Cage clamps
Cross section	2,5 mm ²
Weight	520 g

Pressure connection	
Pneumatic tube diameter suitable pneumatic tube e.g.	6 x 1 mm Festo PAN