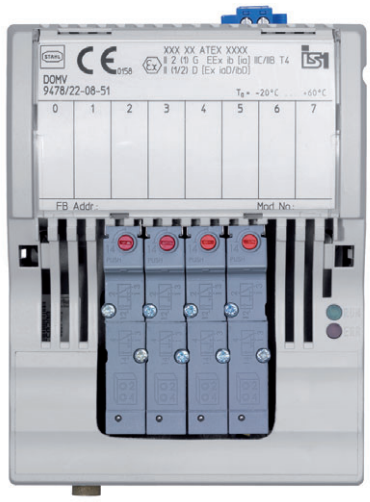
Digital Output Module Valve for Zone 1
Series 9478



14200E00

- 8 integrated 3/2-port directional control valves for pneumatic valves
- Additional Ex i control input for "Plant STOP" (acc. IEC 61508 up to SIL2)
- Monitoring of the electronic control of the 3/2-port directional control valves in regard to short circuit and wire breakage
- Functions adjustable
- Live module can be replaced (hot swap)

A4

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The Digital Output Modules with valves are used to control up to 8 pneumatic valves. On all channels, the electronic control of the 3/2-port directional control valves is monitored in regard to short circuit and wire breakage, independent of the status of the electronic control.
The interface of the Digital Output Module with the internal data bus of the BusRail is designed with redudancy.

	ATEX / IECEx					
Zone	0	1	2	20	21	22
Installation in		x	x		x	x

	NEC 505 Class I			NEC 506		
Zone	0	1	2	20	21	22
Installation in		x	x		x	x

	NEC 500					
	Class I		Class II		Class III	
Division	1	2	1	2	1	2
Installation in	x	x	x	x	x	x

WebCode 9478A

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Selection Table

Version	Channels	Pressure range	Order number	Weight kg
Digital Output Module Valve for Zone 1	8	2.5 ... 7 bar	**9478/22-08-51**	0.950

Explosion Protection

Global (IECEx)	
Gas	PTB 06.0001X Ex ib IIC T4
Europe (ATEX)	
Gas	PTB 10 ATEX 2030 Ⓔx II 2 G Ex ib IIC T4
Certifications and certificates	
Certificates	IECEx, ATEX, Brazil (INMETRO), Russia (GOST R), USA (FM), Serbia (SRPS), Belarus (operating authorisation)
Ship approval	ABS, DNV, RS
Safety data for digital input (ATEX)	
Ex ia	for disconnecting all outputs ("System OFF")

U_0 [V]	I_0 [mA]	P_0 [mW]	L_0 [mH]		C_0 [nF]	
			IIC	IIB	IIC	IIB
6.6	67	110	8.24	31.4	22	500

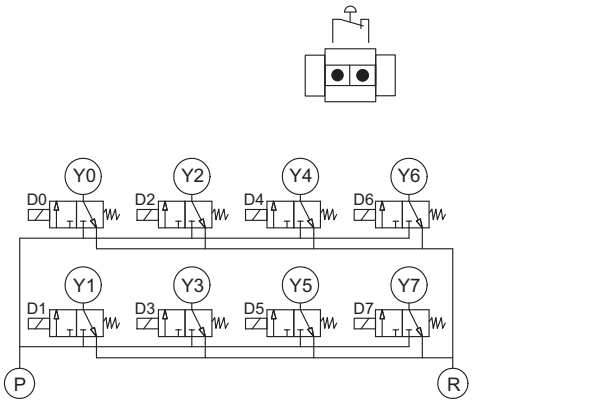
The effective internal capacitances and inductances are negligible.

Further parameters	
Installation in	Zones 1, 2, 21 & 22
Further information	see respective certificate and operating instructions

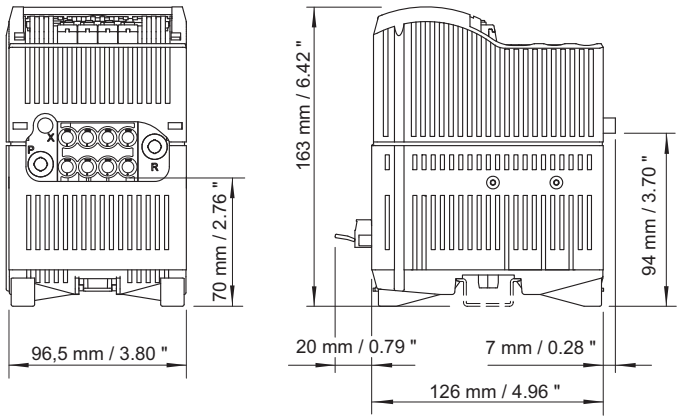
Technical Data

Pneumatic Data	
Media	Compressed air oiled, oil-free, dry neutral gases, (5 µm filter recommended)
Sealing material	FPM, NBR
Manual actuation	yes
Switching times	ca. 1000 c.p.m.
Qn value	at 20 °C air temperature, 6 bar at the valve inlet and 1 bar of differential pressure: 300 l/min
Electrical data	
Ex i control input X3	
Function	System OFF, outputs are depressurized
Suitability	Switch-off up to SIL 2 (IEC61508)
Versorgungsspannung	5 V
Innenwiderstand	1.6 kΩ
Max. voltage for outputs in normal operation	1 V
Min. voltage for depressurizing all outputs ("System OFF")	3.5 V
Settings	
Open-circuit and short-circuit monitoring	ON
Safety position (output during communication faults)	OFF, ON, hold last status

Technical Data

Electrical data	
Diagnostics	
Retrievable parameters	Manufacturer, type, version, serial number
Module faults	• Internal primary bus faults • Internal redundant bus faults • No response • Module does not correspond to configuration • Hardware fault • Hardware disconnection of outputs (by "System OFF")
Auxiliary power	
Behaviour during undervoltage	All outputs are depressurized
Typical power input	5.75 W with activated pilot valves
Electrical connection	
Connection diagram	
Mechanical data	
Module enclosure	Polyamide 6GF
Material	
Valve block	PPS, PA
Fire resistance (UL 94)	V2
Degree of protection (IEC 60529)	IP20
Pneumatic connections	P, R: plug connector ∅ 8 mm Y0 ... Y7: plug connector ∅ 6 mm X: standard silencer (included in the delivery and already fitted)
Dimensions	L = 126 mm, W = 96.5 mm, H = 163 mm
Operator interface	
Operation	LED green "RUN"
Fault	LED red "ERR"
Installation conditions	
Mounting type	on 35 mm DIN rail NS 35/15
Mounting orientation	horizontal and vertical
Ambient conditions	
Ambient temperature	0 ... + 60 °C
Storage temperature	- 20 ... 60 °C
Media temperature	0 ... + 50 °C
Maximum relative humidity	95 % (no condensation)
Sinusoidal vibration (IEC EN 60068-2-6)	5 ... 13.2 Hz amplit. ± 1 mm 13.2 ... 100 Hz 0.7 g
Electromagnetic compatibility	Tested according to the following standards and regulations: DIN 61326-1 (2006)

Dimensional Drawings (All Dimensions in mm / inches) - Subject to Alterations



We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.