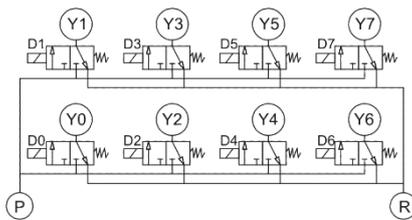


Nonhazardous
Class I, II, III, Division 1, Group A-G
or Class I, Zone 1, Group IIC/IIB

and also

Class I, II, III, Division 2, Group A-G
or Class I, Zone 2, Group IIC/IIB
Hazardous (Classified) Locations



Wiring legend

Connection allocation

Deviating from the other output modules, there are no terminals for field circuits, except the "Plant-stop" circuit. The output signals are transmitted by means of build-in electro pneumatic valves and compressed air.

Connector X2, terminals (-/+)1/2 "Plant-stop"

The Type 9478/22-08-51 Digital Output Module with valves is designed to receive a digital signal from the IS1 CPU & Power Module and control up to 8 pneumatic valves.

The module is intrinsically safe for installation in a Class I, II, III, Division 1, Group A-G or Class I, Zone 1, Group IIC/IIB and also Class I, II, III, Division 2, Group A-G or Class I, Zone 2, Group IIC/IIB hazardous location according to NEC Article 504/505 or Canadian Electrical Code, CSA C22;

Providing intrinsically safe connections for Class I, Division 1, Groups A-G or Class I, Zone 0, Group IIC/IIB hazardous locations listed below.

Entity parameters with values for circuit with concentrated inductors and capacitors:

"Plant-stop"
CL I,II,III, DIV 1, Group A-G or CL I, Zone 1, Group IIC

$$\begin{aligned} V_{OC} &= 6.6 \text{ V} \\ I_{SC} &= 67 \text{ mA} \\ P_O &= 110 \text{ mW} \end{aligned}$$

CL I, DIV 1, Group A,B CL I, Zone 1, Group IIC		CL I, DIV 1, Group C-G CL I, Zone 1, Group IIB/IIIC	
L _o [mH]	C _o [μF]	L _o [mH]	C _o [μF]
<u>10</u>	0.84	<u>20.0</u>	5.2
1	2.1	1.0	12
0.1	<u>3.9</u>	0.1	<u>24</u>

Notes:

- Intrinsically safe apparatus shall be switches or an Approved System or Entity device connected in accordance with the manufacturer's installation instructions.
- For Entity concept use the appropriate parameters from above to ensure the following:

$$V_{OC} \text{ or } V_t \leq V_{max} \quad C_a \geq C_i + C_{leads}$$

$$I_{SC} \text{ or } I_t \leq I_{max} \quad L_a \geq L_i + L_{leads}$$
- The values of L_a and C_a in the tables above are the maximum values for combined inductance and capacitance (including cable inductance and capacitance). The values for L_a and C_a marked in grey are the values determined according to curves and tables of IEC 60079-11, Annex A. These grey marked values may be used for assessment as per IEC 60079-14, intrinsically safe circuits with only one source of power.
- Suitable separation must be maintained between wiring of each I.S. input channel.
- For Installation in Division 1 or Zone 1 see Certification drawing for IS1 resp. IS1+ Remote I/O System No. 9400 6 031 003 1 as part of the documentation of the CPU & Power Modules.
- For Installation in Division 2 or Zone 2 see Certification drawing for IS1 resp. IS1+ Remote I/O System No. 9400 6 031 004 1 or 9400 6 031 006 1 as part of the documentation of the CPU & Power Modules.
- Installation in Division 2 or Zone 2 is also allowed according to NEC Article 504/505 or Canadian Electrical Code, CSA C22.

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			2016	Date	Name	Certification drawing Digital Output Module with Valve Type 9478/22-08-51	Scale	none
			Drawn by	03.03.	Bagusch		Sheet	1 of 1
			Checked		Kaiser		Agency	FM
01	09.03.2018	Bagusch	STAHL			9478 6 031 001 1		
Version	Date	Name				Rep. f.	Rep. t.	A4