

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration.

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

Input for "Plant-stop"  
only at type 9475/33-08-\*2



Approved intrinsically safe  
solenoid valves, indicating lamps

**Wiring legend**

Connection allocation – Digital Output Module Type 9475/33-08-\*\*

DOM (8 channels) 9475/33-08-**		Connection X1
Channel no.		Terminal no.
0		1(+), 2(-)
1		3(+), 4(-)
2		5(+), 6(-)
3		7(+), 8(-)
4		9(+), 10(-)
5		11(+), 12(-)
6		13(+), 14(-)
7		15(+), 16(-)

**Notes:**

- Intrinsically safe apparatus shall be solenoid valves or LEDs 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 on sheet 2 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.

The Type 9475 Digital Output Module is designed to receive a digital signal from the IS1 CPU & Power Module and output a corresponding discrete signal to solenoid valves, LED initiators and audible alarms. The module is nonincendive for installation in a 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.

Entity parameters for wiring configuration to the left are as follows:

CL I,II,III, DIV 1, Group A-G or CL I, Zone 0, Group IIC

	V <sub>OC</sub> [V]	I <sub>SC</sub> [mA]	P <sub>O</sub> [mW]	C <sub>i</sub> [nF]	L <sub>i</sub> [mH]
9475/33-08-4*	11.5	74.8	216	5.2	0
9475/33-08-5*	19.4	143	692	16.5	0
9475/33-08-6*	25.7	107	688	5.2	0

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

	V <sub>OC</sub> [V]	I <sub>SC</sub> [mA]	P <sub>O</sub> [mW]	C <sub>i</sub> [nF]	L <sub>i</sub> [mH]
9475/33-08-4*	11.5	39.2	194	5.2	0
9475/33-08-5*	19.4	37.8	506	16.5	0
9475/33-08-6*	25.7	26.3	468	5.2	0

"Plant-stop I" at 9475/33-0-\*2 only, Connection X3

CL I,II,III, DIV 1, Group A-G or CL I, Zone 0, Group IIC

Terminal 1(+),2(-) (3-4 open)	V <sub>OC</sub> [V]	I <sub>SC</sub> [mA]	P <sub>O</sub> [mW]	C <sub>i</sub> [μF]	L <sub>i</sub> [mH]
9475/33-08-*2	5.1	0.44	0.50	5.2	0

Plant-stop I: Only for connection to passive equipment, such as contacts or optocouplers!

It must be galvanically separated from other intrinsically safe and non-intrinsically safe electric circuits and from the earth and must not be connected to electric circuits "Plant STOP" of other modules.

"Plant-stop II" at 9475/33-08-\*2 only, Connection X3


CL I,II,III, DIV 1, Group A-G or CL I, Zone 0, Group IIC

Terminal 3(+), 4(-) (1-2 open)	V <sub>i</sub> [V]	R <sub>i</sub> [Ω]	C <sub>i</sub> [nF]	L <sub>i</sub> [mH]
9475/33-08-*2	30	4940	0	0

Plant-stop II: In the operating mode "Active input" at terminals X3.3 and X3.4, "Plant STOP" is galvanically separated from all other electric circuits and may be connected in parallel to other modules.

- Suitable separation must be maintained between wiring of each I.S. input channel.
- 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.

Weitergabe sowie Vervielfältigung dieses Dokuments, Verwertung und Mitteilung seines Inhalts sind verboten, soweit nicht ausdrücklich gestattet. Zuwiderhandlungen verpflichten zu Schadensersatz. Alle Rechte für den Fall der Patent-, Gebrauchsmuster- oder Geschmacksstoffeintragung vorbehalten.

2016	Date	Name	Certification drawing		Scale	
Drawn by	25.10.	Bagusch	<b>Digital Output Module</b> <b>Type 9475/33-08-e* (e = 4, 5 or 6)</b>		none	
Checked		Kaiser			Sheet	1 of 2
			9475 6 031 004 1		Agency	FM
					Version	Date
01	09.03.2018	Bagusch				

F 4830 503

### Capacitance and Inductance values for circuit with concentrated inductors and capacitors

The internal capacitance per channel is already taken into account in the La and Ca values shown in the tables below. The internal inductance is negligibly small.

Type 9475/33-08-4\* Capacitance and Inductance values

CL I, DIV 1, Group A,B CL I, Zone 0, Group IIC		CL I, DIV 1, Group C-G CL I, Zone 0, Group IIB/IIIC	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
7.9	≤ 285	34.0	≤ 1195
5.0	395	20.0	1695
2.0	585	10.0	2195
1.0	735	5.0	2695
0.5	905	1.0	4295
0.2	1195	0.2	6995
≤ 0.05	1635	≤ 0.02	11195

Type 9475/33-08-4\* Capacitance and Inductance values

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	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
22.0	≤ 155	100.0	≤ 565
10.0	345	50.0	1295
5.0	475	20.0	1895
2.0	635	5.0	2895
1.0	775	1.0	4395
0.5	935	0.2	6995
≤ 0.05	1635	≤ 0.02	11195

Type 9475/33-08-5\* Capacitance and Inductance values

CL I, DIV 1, Group A,B CL I, Zone 0, Group IIC		CL I, DIV 1, Group C-G CL I, Zone 0, Group IIB/IIIC	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
1.44	-	7.5	≤ 673
1.4	≤ 103	5.0	883
0.65	113	2.0	943
0.5	113	0.5	943
0.2	153	0.2	1083
0.1	183	0.1	1183
≤ 0.05	227	≤ 0.02	1493

Type 9475/33-08-5\* Capacitance and Inductance values

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	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
6.3	≤ 113	58.0	≤ 363
2.0	113	20.0	723
0.65	123	10.0	953
0.5	123	5.0	963
0.2	153	0.2	1083
0.1	193	0.1	1283
≤ 0.05	227	≤ 0.02	1493

Type 9475/33-08-6\* Capacitance and Inductance values

CL I, DIV 1, Group A,B CL I, Zone 0, Group IIC		CL I, DIV 1, Group C-G CL I, Zone 0, Group IIB/IIIC	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
1.57	-	11.0	≤ 335
1.1	≤ 49	5.0	335
1.0	52	1.0	395
0.9	54	0.5	485
0.5	69	0.2	635
0.2	95	0.1	785
≤ 0.1	97	≤ 0.05	785


Type 9475/33-08-6\* Capacitance and Inductance values

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	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
7.0	≤ 32	100.0	≤ 245
5.0	36	50.0	365
2.0	49	1.0	425
1.0	64	0.5	505
0.5	81	0.2	655
0.2	97	0.1	785
≤ 0.05	97	≤ 0.05	785

Type 9475/33-0\*-2,  
"Plant-stop I" Capacitance and Inductance values

CL I, DIV 1, Group A,B CL I, Zone 0, Group IIC		CL I, DIV 1, Group C-G CL I, Zone 0, Group IIB/IIIC	
La [mH]	Ca [nF]	La [mH]	Ca [nF]
100	≤ 2195	100	≤ 9995
10	2595	10	12995
2.0	3295	2.0	16995
1.0	3695	1.0	19995
0.2	5495	0.2	31995
≤ 0.01	15995	≤ 0.01	15995

F 4830 503

		2016	Date	Name	Certification drawing <b>Digital Output Module</b> Type 9475/33-08-e* (e = 4, 5 or 6)	Scale
		Drawn by	25.10.	Bagusch		none
		Checked		Kaiser		Sheet
					9475 6 031 004 1	2 of 2
01	09.03.2018	Bagusch				Agency
Version	Date	Name				FM
					Rep. f.	Rep. t.
						A4