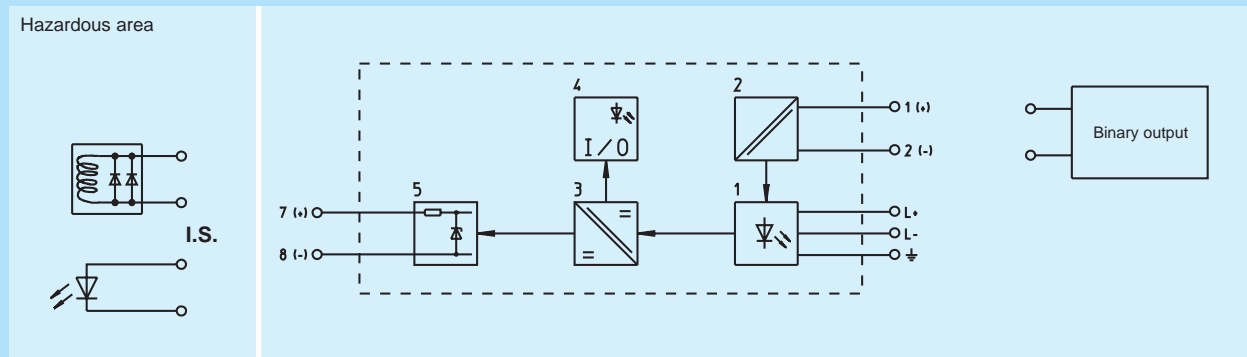


I.S. Isolators (DIN Rail Mounting) Digital Output Type 9351

- Intrinsically safe output [IEEx ia] IIC
- Galvanic isolation between input, output and power supply
- Power supply 18 .. 35 V DC
- One device for two operating modes:
 - with control input and power supply
 - loop powered
- Versions for practically all valves
- Installation in Zone 2 (Div 2) possible
- EMC tested, CE marking



Basic function: binary/digital output, 1 channel.
The digital outputs are used for intrinsically safe operation of solenoid valves, LED indicating lamps etc.



Selection table	
Output signal (safety values)	Ordering code
5 V / 200 mA	9351 / 10-10-10
8 V / 150 mA	9351 / 10-11-10
12,6 V / 150 mA	9351 / 10-12-10
16 V / 250 mA	9351 / 10-13-10
19 V / 330 mA	9351 / 10-14-10
24 V / 85 mA	9351 / 10-15-10
28 V / 110 mA	9351 / 10-16-10
28 V / 270 mA	9351 / 10-17-10

Safety data for output	
Certifications	BVS (Europe, CENELEC), CSA (Canada), SEV (Switzerland), FTZU (Czech Republic), EVPU (Slovakia), BKI (Hungary), KDB (Poland), VNIIEF (Russia), FM (USA)
Marking	[EEx ia] IIC/IIB according to CENELEC
Classification	associated electrical apparatus

Safe maximum values (CENELEC)									
Types 9351 / ...		10-10-10	10-11-10	10-12-10	10-13-10	10-14-10	10-15-10	10-16-10	10-17-10
Max. voltage	U_m [V]	5	8	12,6	16	19	24	28	28
Max. current	I_m [mA]	200	150	150	250	330	85	110	270
Max. power	P_m [mW]	394	300	473	1000	1567	510	770	1890
Max. capacitance for									
[EEx ia] IIC / IIB	C_a [μ F]	200/3000	13/160	1.2/5	0.5/1.9	0.24/1.1	0.12/0.68	0.07/0.5	-/0.5
Max. inductance for									
[EEx ia] IIC / IIB	L_a [mH]	0.5/4	1.3/7	1.3/7	0.27/2.7	0.18/1.45	5.5/20	3/12	-/2.2

Further information and combination of values, see certifications

Technical data

Power supply

Rated voltage U_N
 Voltage range

24 V DC
 18..35 V

Types 9351 /		10-10-10	10-11-10	10-12-10	10-13-10	10-14-10	10-15-10	10-16-10	10-17-10
Rated current (for $R_{L,min}$)	I_N [mA] ≤	70	80	90	105	120	95	105	125
Power consumption (for $R_{L,min}$)	[W]	1.7	1.9	2.2	2.5	2.9	2.3	2.5	3.1

Input

Control input:

Voltage for ON

≥ 5 V

Voltage for OFF

≤ 2 V

Current

≤ 5 mA

Max. permissible voltage

35 V

Signal input (control input disconnected):

Voltage for ON U_E

≥ 18 V

Voltage for OFF

≤ 8 V

Current

≤ 200 mA

Max. permissible voltage

35 V

Output

Types 9351 / ...		10-10-10	10-11-10	10-12-10	10-13-10	10-14-10	10-15-10	10-16-10	10-17-10
Internal resistance	R_i [Ω] ≤	20	75	115	85	80	370	310	140
Min.permissible load resistance	$R_{L,min}$ [Ω] ≥	25	0	30	85	200	100	300	375

Dimensions (Casing type A), mechanical data, ambient conditions and accessories see page 3/58f.

Selection and application					
Solenoid valve			Solenoid valve		
Asco	IM 12	9351/10-16-10	Honeywell	488660	9351/10-16-10
Bürkert	6013/AC10	9351/10-16-10	Honeywell	488670	9351/10-16-10
	6014/AC10	9351/10-16-10		490885	9351/10-15-10
	6104/G1 642 735	9351/10-16-10		490890	9351/10-15-10
	6106/AC21	9351/10-16-10		490895	9351/10-15-10
Herion	2001 (Booster)	9351/10-15-10	Nass Magnet	1259 060450/5142	9351/10-16-10
	2002 (Booster)	9351/10-15-10	Numatics	92088	9351/10-16-10
	2010	9351/10-13-10		92089	9351/10-16-10
	2011	9351/10-13-10		L1-I	9351/10-16-10
	2012	9351/10-14-10		L2-I	9351/10-16-10
	2013	9351/10-14-10	SPA3	9351/10-16-10	
	2014	9351/10-16-10	Samson	3701, 3775, 3962, 3963	
	2015	9351/10-16-10		-11	9351/10-11-10
2016	9351/10-16-10	-12		9351/10-15-10	
Hoerbiger	Piezo 2000 P8 381-RFC	9351/10-16-10		-14	9351/10-11-10
				-15	9351/10-15-10
Honeywell	481850 481860 482160 483330.01 (Booster) 483960 488650	9351/10-16-10 9351/10-16-10 9351/10-13-10 9351/10-16-10 9351/10-16-10 9351/10-16-10	-16	9351/10-15-10	
			-17	9351/10-16-10	
			Telektron	L	9351/10-16-10
			Versa	P-3205-98-XISF-24V	9351/10-15-10
Indicating lamps:					
R. STAHL	8415	9351/10-16-10			

Operating mode 1 (loop powered) is recommended as the normal operating mode. Because no additional power is fed to the isolator, functional safety of the output is increased. No fault inside the isolator can switch the output to "ON", if the (safe) signal "OFF" is applied to the signal input.

Operating mode 2 (with power supply) must be used, if the controlling binary/digital output of the automation system cannot supply the required current (see technical data). In addition, the mode with power supply permits a faster switching action.