

REVISION HISTORY					
Rev.	ECO No.	Description:	Approved:		Date:
A	003133	Initial release	PC	KC	06/30/16
B	004142	Updated Entity Parameters and Barrier Boards	PC	KC	02/01/19
C	004231	Added DI Entity Parameters & flex level sensors	PC	KC	05/24/19
D	004493	Added LCD models, HW5x00-RLx-LCD	PC	KC	05/22/20

NOTES: UNLESS OTHERWISE SPECIFIED

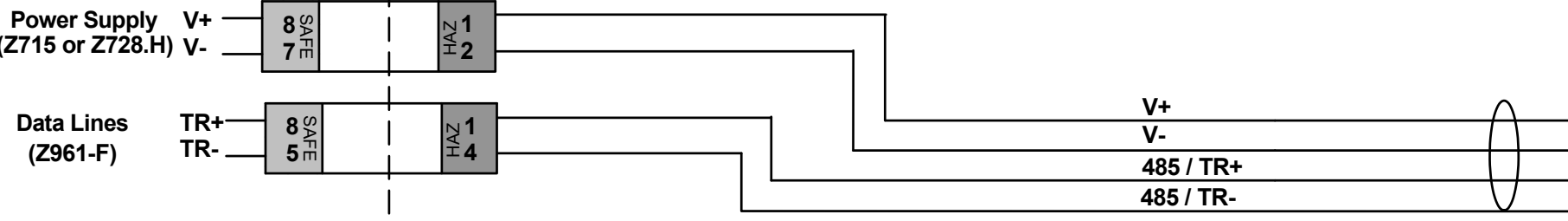
- Minimum operating voltage is 5.8V.
- INSTRUCTIONS.** The selected barrier shall be approved with Intrinsically Safe circuits for Hazardous Location Group and Zone as appropriate for the application and installed in accordance with manufacturer's installation instructions.
- Electronic equipment connected to the Associated Apparatus must not use or generate more than 250 Vrms with respect to earth ground.
- Installations shall comply with the latest edition of the National Electrical Code (ANSI/NFPA 70) and the Canadian Electrical Code (CEC (C 22.1)) and IEC 60079-14.
- All cables must be 24 AWG (0.56 mm SWG) or heavier.
- Installation shall be in accordance with ANSI/ISA RP 12.06.01, Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations.

NON HAZARDOUS AREA

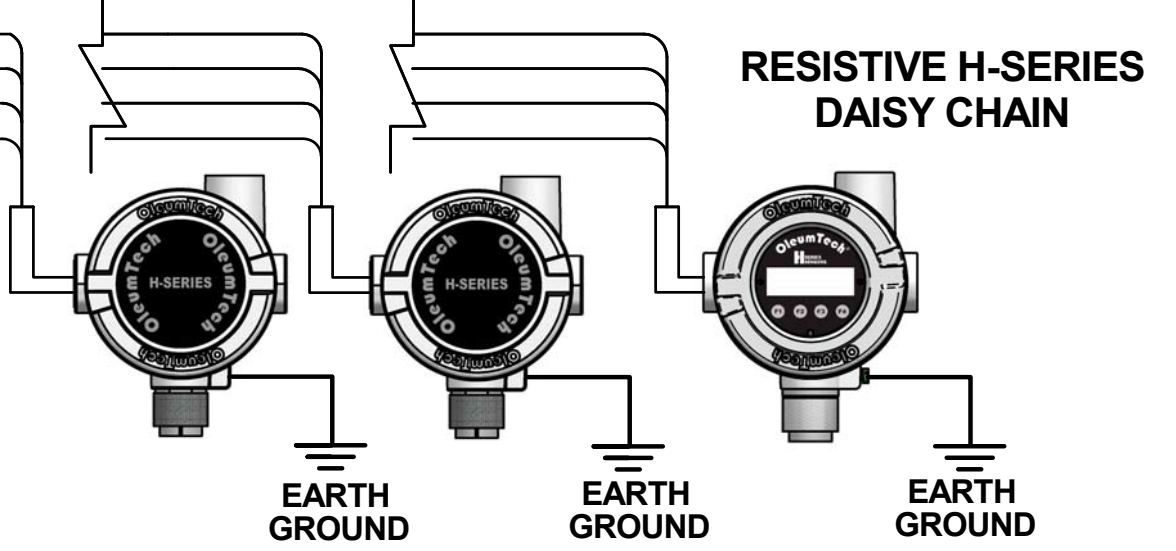


HAZARDOUS AREA

CLASS I DIVISION 1, GROUP A, B, C, D T4
 Ex ia IIC T4 Ga
 CLASS I ZONE 0, AEx ia IIC T4 Ga
 AMB TEMP: -40 °C ≤ Tamb ≤ 70 °C



NOTE: MAXIMUM NUMBER OF SENSORS AND CABLE LENGTH DEPENDS ON ENTITY PARAMETERS OF ASSOCIATED APPARATUS



HW5000-RLx, & HW5000-RLx-LCD, HW58000-RLx, HW5800-RLx-LCD ENTITY PARAMETERS

RS485 Serial Port		12 Vdc Power Input		24 Vdc Power Input	
Vi	8.7 V	Vi	15 V	Vi	30 V
Ii	89 mA	Ii	250 mA	Ii	128 mA
Pi	0.25 W	Pi	1 W	Pi	1 W
Ci	0 µF	Ci	0 µF	Ci	0 µF
Li	0 mH	Li	0 mH	Li	0 mH

Recommended Zener Barrier Modules

RS485 Serial Port		12 Vdc Power Input		24 Vdc Power Input	
PEPPERL+FUCHS	Z961-F	PEPPERL+FUCHS	Z715	PEPPERL+FUCHS	Z728.H

**CONTROLLED DOCUMENT
 CHANGES TO THIS DOCUMENT
 REQUIRES AGENCY APPROVAL**

PARAMETER NOTES:

- Power supply and RS485 data lines must be wired to the intrinsic safe barrier separately with minimum insulation thickness of 0.25 mm.
- Unless otherwise known, the cable capacitance of 60pF/ft (197 pF/m) and 0.20 µH/ft (0.66 µH/m) can be used to calculate the cable parameters.

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	Approvals:	Date:	Title:
	Drawn by: P. C.	06/30/16	IS CONTROL DRAWING, HW5X00-RLX, RESISTIVE LEVEL SENSOR
	Engineer: P. C.	06/30/16	Size: B
Materials: / /	Checked: K. C.	06/30/16	Document No.: 09-0219-001
Finish: / /	Scale: NONE		Rev.: D
			Sheet: 1 OF 2

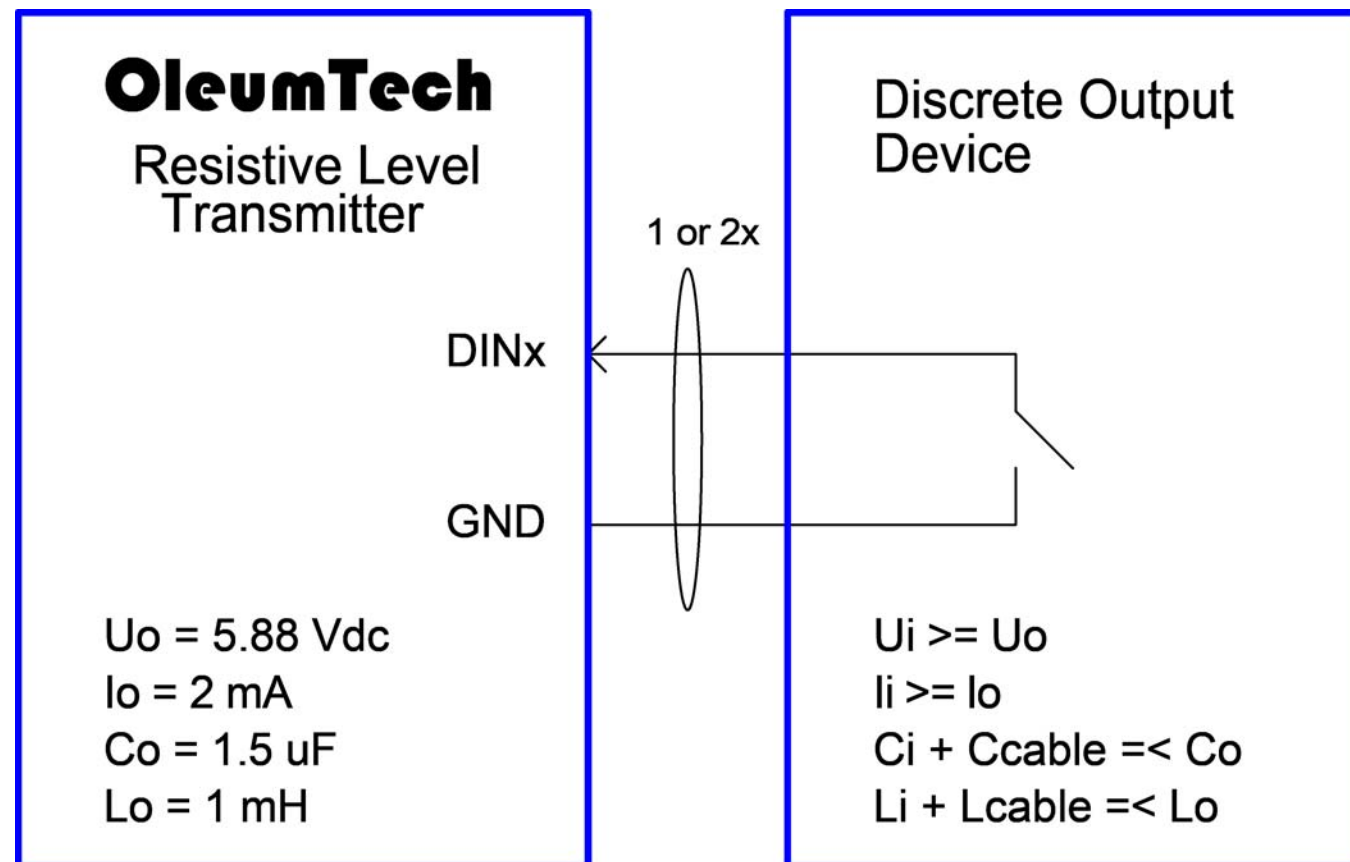
HAZARDOUS (CLASSIFIED) LOCATIONS

CLASS I DIVISION 1, GROUP A, B, C, D T4

Ex ia IIC T4 Ga

CLASS I ZONE 0, AEx ia IIC T4 Ga

AMB TEMP: $-40\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq 70\text{ }^{\circ}\text{C}$



NOTES: UNLESS OTHERWISE SPECIFIED

1. The discrete inputs contain internal weak pull-up resistors. Do not apply any power source or pull-up to these inputs.
2. Third party discrete output device may be attached to the Transmitter that meet the Intrinsic Safety Entity concept, which allows the interconnection of two Intrinsically Safe devices with entity parameters not specifically examined in combination as a system when: $U_i \geq U_o$, $l_i \geq I_o$, $C_i + C_{\text{cable}} \leq C_o$, $L_i + L_{\text{cable}} \leq L_o$.
3. Unless otherwise known, a cable capacitance of 60 pF/ft (197pF/m) and 0.20 uH/ft (0.66 uH/m) can be used to calculate the cable parameters.
4. Installation must be in accordance with ANSI/ISARP12.6, and the National Electrical Code, NFPA 70 Article 504 or CEC Part 1, Appendix F.

The Level Sensors below mate to the HW5000-RLx, HW5000-RLx-LCD, HW5800-RLx & HW5800-RLx-LCD Resistive Transmitters

60-4001-XXX, Level Sensor, 1/2" Resolution, Resistive, Rigid

60-4002-XXX, Level Sensor, 1/4" Resolution, Resistive, Rigid

XXX = Level Sensor length 24" (024) up to 312" (312)

60-4101-XXX, Level Sensor, 1/2" Resolution, Resistive, Flex

60-4102-XXX, Level Sensor, 1/4" Resolution, Resistive, Flex

XXX = Level Sensor length 24" (024) up to 720" (720)

TITLE: IS CONTROL DRAWING, HW5X00-RLX, RESISTIVE LEVEL SENSOR		
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Scale: NONE		Sheet: 2 OF 2