

PD8-154/PD8-158

ProtEX-MAX™ Explosion-Proof Alarm Annunciators



Model PD8-154 / 4-Point

Model PD8-158 / 8-Point

FM APPROVED SF Ex CE IECEx

DUAL-INPUT
PROCESS

- Modern, Sleek and Practical Enclosure
- Display Mountable at 0°, 90°, 180°, & 270° Degrees
- Explosion-Proof, IP68, NEMA 4X Enclosure
- Vigilante® II Functionality
- SafeTouch® Through-Glass Button Programming
- Sunlight Readable Displays
- 8 Field Selectable Sequences
- All Common ISA Sequences Including First-Out
- Switch, Transistor, and Logic Level Inputs
- 4 or 8-Point Monitoring
- Free Custom Message Labels
- Universal Power Supply 85-265 VAC
- 12-36 VDC/12-24 VAC Power Option
- 2 SPDT Relays for Alarm Activated Devices
- 24 VDC Isolated Power Supply (AC Models)
- Multiple-Unit First-Out Indication
- Silence, Acknowledge, and Reset Functions
- Sunlight Readable Indication

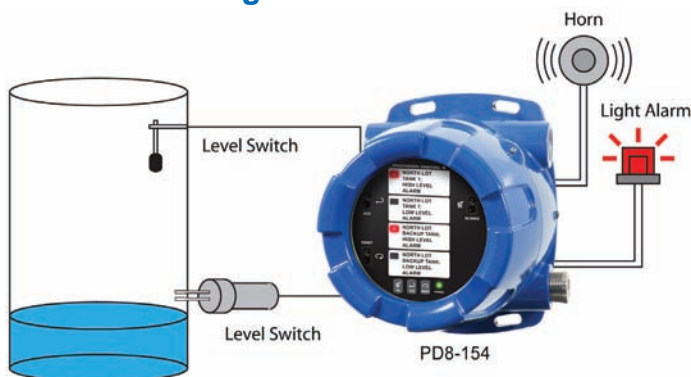
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APPLICATIONS

Level Monitoring with Level Switches



The ProtEX-MAX Annunciator is ideal for tank level switch monitoring.

- Up to 8 Individually Labeled Level Switch Inputs
- 24 VDC Level Switch Power Supply
- Relays for External Horns and Light Alarms
- Easy NEMA 4X Mounting Enclosures
- Sunlight Readable Indication

Temp Monitoring with ProtEX-MAX Meters



Connect PD8-765 and PD8-7000 alarm relays to the PD8-154 or PD8158 for temperature alarm monitoring.

- First-Out Indication for Heating/Cooling Systems
- Multiple Unit First-Out Indication
- Remote Silence, Acknowledge, and Reset
- Fail-Safe Relays for Critical Applications

Multiple Unit First-Out Alarm Indication



Multiple Unit First-Out Indication

If multiple ProtEX-MAX™ annunciators are connected for multiple unit first-out indication, only one input from all connected devices will display as a first-out alarm.

First-Out Alarm Indication

The ProtEX-MAX™ Annunciator can be programmed for multiple sequences with first-out alarm indication. This feature indicates the first point of failure of a system when multiple alarms occur.

ALARM SEQUENCES

The ProtEX-MAX™ Alarm Annunciator can be programmed for all common ISA sequences including A, F1A, F2A, F3A, M, F1M. Selectable ISA -1 (Silence Button), -4 (No Lock-In), and horn disable options. Two popular sequences are detailed below.

ISA Alarm Sequence A

Acknowledgement and Automatic Reset

Momentary Alarm

Condition	LED	Horn
Normal	Off	Off
Alert	Flash	On
Normal	Flash	On
User Acknowledged		
Acknowledge	Off	Off

Maintained Alarm

Condition	LED	Horn
Normal	Off	Off
Alert	Flash	On
User Acknowledged		
Acknowledge	Steady	Off
Normal	Off	Off

ISA Alarm Sequence F2A

First-Out Alarm Indication with Acknowledgement and Automatic Reset

Momentary Alarm

Condition	LED		Horn
	1 st Pt	Next Pt	
Normal	Off	Off	Off
Alert	Flash	Steady	On
Normal	Flash	Steady	On
User Acknowledged			
Ack	Off	Off	Off

Maintained Alarm

Condition	LED		Horn
	1 st Pt	Next Pt	
Normal	Off	Off	Off
Alert	Flash	Steady	On
User Acknowledged			
Ack	Steady	Steady	Off
Normal	Off	Off	Off

FRONT PANEL

Button			
Description	Silence Horn	Acknowledge Alarm	Reset Inputs
LED	Description		
	Point status indicators		
	Indicates power is on		

LED Test: Press and release the SILENCE and ACK pushbuttons to flash the channel indicator LEDs for an LED function test.

Full Function Test: Press and hold the SILENCE and ACK pushbuttons for 3 seconds to initiate a full function test.

External Connections: All three pushbuttons may be activated remotely via rear terminal connections.

PD8-154/PD8-158 ProtEX-MAX™ Explosion-Proof Annunciators

Inputs

Input Types: NO or NC switches: No external excitation required.
Open collector transistor (NPN): Open circuit voltage approx. 3.3 VDC. Logic Levels: LOW = 0 to 0.9 VDC, HIGH = 2.4 to 28 VDC
Update Rate: 41 ms following alarm state; 1 ms for alarm state clear.
Sequences: Input follower, ISA Sequences A, F1A, F2A, F3A, M, F1M, and F3M per ISA Standard ISA-18.1-1979 R2004.
Sequence Options: A, F1A, F2A, F3A, M, F1M, F2M, and input follower with selectable options -1 (silence pushbutton), -4 (no lock-in), and -6 (no horn) per ISA Standard ISA-18.1-1979 R2004.

Relays

Rating: 2 SPDT (Form C); rated 3 A @ 30 VDC or 3 A @ 250 VAC resistive load; 1/14 HP @ 125/250 VAC for inductive loads.
Electrical Noise Suppression: A suppressor (snubber) should be connected to each relay contact switching inductive loads to prevent disruption to the microprocessor's operation. Recommended suppressor value: 0.01 µF/470 Ω, 250 VAC (PDX6901).
Relay Operation: Relay 1: Alarm state until alarm is acknowledged. Relay 2: Alarm state if any channel indicating alarm condition.
Fail-Safe Operation: Programmable independent for each relay.
Note: In fail-safe mode, relay coil is energized in non-alarm condition. In case of power failure, relay will go to alarm state.

Product Ratings and Approvals

FM: Type 4X; IP66

- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III, Division 1, T5/T6
- Class I, Zone 1, AEx d, IIC Gb T5/T6
- Zone 21, AEx tb IIIC T90°C; Ta -40°C to +65°C
- T6 Ta = -40°C to +60°C; T5 Ta = -40°C to +65°C
- Certificate Number: 3047283

CSA: Class I, Division 1, Groups B, C, D

- Class II, Division 1, Groups E, F, G
- Class III, Division 1
- Class I Zone 1 Ex d IIC
- Zone 21 Ex tb IIIC T90°C
- 40°C < Tamb. < +60°C; Temperature Code T6
- 40°C < Tamb. < +65°C; Temperature Code T5
- Enclosure Type 4X & IP66
- Certificate Number: 2531731

ATEX: II 2 G D

- Ex d IIC T* Gb
- Ex tb IIIC T90°C Db IP68
- Ta = -40°C to +*°C
- *T6 = -40°C to +60°C
- *T5 = -40°C to +65°C
- Certificate number: Sira 12ATEX1182

IECEx: Ex d IIC T* Gb

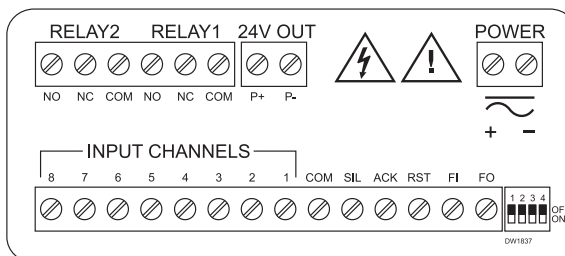
- Ex tb IIIC T90°C Db IP68
- Ta = -40°C to +*°C
- *T6 = -40°C to +60°C
- *T5 = -40°C to +65°C
- Certificate Number: IECEx SIR 12.0073

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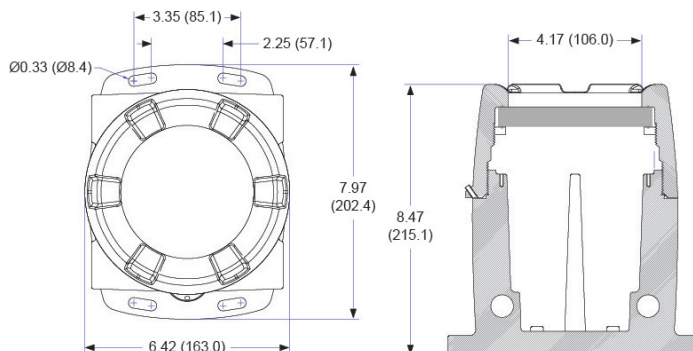
CONNECTIONS

PD158 connections for 85-265 VAC powered model.



DIMENSIONS

Units: Inches (mm)



ORDERING INFORMATION

PROTEX-MAX™ PD8-154 and PD8-158 Models		
85-265 VAC Model	12-36 VDC Model	Description
PD8-154-6R2-1	PD8-154-7R2-0	4-Point Annunciator
PD8-158-7R2-0	PD8-158-7R2-0	8-Point Annunciator

Accessories	
Model	Description
PDAPLUG75	3/4" NPT 316 Stainless Steel Stopping Plug with Approvals
PDA7485-I	RS-232 to RS-422/485 Isolated Converter
PDA7485-N	RS-232 to RS-422/485 Non-Isolated Converter
PDA8485-I	USB to RS-422/485 Isolated Converter
PDA8485-N	USB to RS-422/485 Non-Isolated Converter
PDA6846	Pipe Mounting Kit Zinc Plated (Requires 2)
PDA6846-SS	Pipe Mounting Kit Stainless Steel (Requires 2)

Your Local Distributor is:

LDS8-158_B 07/17