2010ASP Conflict Monitor

Advanced Signal Processing CMU

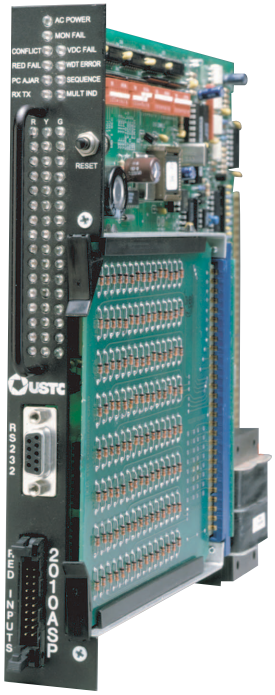
Overview

The 2010ASP conflict monitor from U.S. Traffic Corporation offers a high level of functionality and versatility. Dual processor based, the unit accepts inputs from sixteen signal channels, each channel having three indicators, and can calculate the RMS voltage for each input. The 2010ASP stores log files of events for downloading and viewing on a personal computer using a front panel, 9-pin serial connector and Microsoft Windows® compatible software.

Additionally, the unit provides features such as switch fail monitoring for multiple indications along with "Plus" features including yellow timing and watchdog monitoring, and compatibility with both 170-Type and 2070-Type controllers. The 2010ASP utilizes microprocessor-based technology that has proven itself for over a decade in intersections throughout the country.

Call U.S. Traffic Corporation for more information.

Features & Benefits



- Compatible with both 170 and 2070-Type controllers
- 16 channels, each with red, yellow, and green monitoring capability
- 3 indicator lights per channel
- True RMS calculations for AC input signals (32 samples per cycle)
- PC communications software
- 24 volt monitoring
- Switch fail monitoring for multiple indications on a single channel
- "PLUS" features including yellow timing and watchdog monitoring

Specifications

Power requirements

• Operating line voltage	85 to 135 VAC RMS
• Operating line frequency	60 (+/-3) Hertz
• Power consumption (nom.)	9 VA

AC inputs

• Green signal input*	(OFF)	<15 VAC RMS
	(ON)	>25 VAC RMS
• Yellow signal input*	(OFF)	<15 VAC RMS
	(ON)	>25 VAC RMS
• Red signal input*	(OFF)	<50 VAC RMS
	(ON)	>70 VAC RMS

(Both positive and negative 60Hz half-wave measurements)

• Red monitor enable input		
	(OFF)	<50 VAC RMS
	(ON)	>70 VAC RMS
• MC Coil Input (PIN EE)		
	(INACTIVE)	< 50 VAC RMS
	(ACTIVE)	> 70 VAC RMS

DC inputs

• +24 DC monitor	(OFF)	< + 18 VDC
	(ON)	> + 22 VDC
• Watchdog monitor	(HI)	> + 12 VDC or open circuit
	(LO)	< + 4 VDC
• External reset	(HI)	> + 12 VDC or open circuit
	(LO)	< + 4 VDC

Outputs

• Relay contacts	3 Amp @ 120 VAC
• Stop time (sink)	50 mA @ 30 VDC

Operating temperature	-35°F to + 165°F -37°C to + 74°C
Humidity range	0 to 95% (relative)

Specifications

Timing functions

- Conflict timings — (no fault): <200 ms.
  (fault): >500 ms.
- Watchdog monitor — (fault): >1.1 S (or 1.6 S)
  (DIP switch selectable) between signal changes
- Red fail — (no fault): <1200 ms.
  (fault): >1500 ms.
- Yellow timing — (fault): >2.7 S plus
  (DIP switch selectable) offset

Dimensions

- Height: 9.30 inches (23.62 cm)
- Width: 1.38 inches (3.51 cm)
- Depth: 11.00 inches (27.94 cm)
  (measured from handle to card edge connector)

Connectors — Mates with 28/56 pin double-sided card connector with 0.156" centers. The 2010ASP has two additional connectors on the front panel for red enable/red channel AC inputs and serial communications.

Red Connector Pins

Pin	Function	Pin	Function
1	Channel 15 Red	11	Channel 9 Red
2	Channel 16 Red	12	Channel 8 Red
3	Channel 14 Red	13	Channel 7 Red
4	Chassis Ground	14	Channel 6 Red
5	Channel 13 Red	15	Channel 5 Red
6	Special Function 2	16	Channel 4 Red
7	Channel 12 Red	17	Channel 3 Red
8	Special Function 1	18	Channel 2 Red
9	Channel 10 Red	19	Channel 1 Red
10	Channel 11 Red	20	Red Enable

Connector Pin Assignments

Pin	Function	Pin	Function
1	Channel 2 Green	A	Channel 2 Yellow
2	Channel 13 Green	B	Channel 6 Green
3	Channel 6 Yellow	C	Channel 15 Green
4	Channel 4 Green	D	Channel 4 Yellow
5	Channel 14 Green	E	Channel 8 Green
6	Channel 8 Yellow	F	Channel 16 Green
7	Channel 5 Green	H	Channel 5 Yellow
8	Channel 13 Yellow	J	Channel 1 Green
9	Channel 1 Yellow	K	Channel 15 Yellow
10	Channel 7 Green	L	Channel 7 Yellow
11	Channel 14 Yellow	M	Channel 3 Green
12	Channel 3 Yellow	N	Channel 16 Yellow
13	Channel 9 Green	P	Not Assigned
14	Not Assigned	R	Channel 10 Green
15	Channel 11 Yellow	S	Channel 11 Green
16	Channel 9 Yellow	T	Not Assigned
17	Not Assigned	U	Channel 10 Yellow
18	Channel 12 Yellow	V	Channel 12 Green
19	Not Assigned	W	Not Assigned
20	Chassis Ground	X	Not Assigned
21	AC–	Y	DC Ground
22	Watchdog Timer	Z	External Rest
23	+24 VDC	AA	+24 VDC
24	Tied to Pin 25	BB	Stop Time (Output)
25	Tied to Pin 24	CC	Not Assigned
26	Not Assigned	DD	Not Assigned
27	Relay N/C	EE	Relay Com
28	Relay N/O	FF	AC+

Communication Port

Pin	Function	Pin	Function
1	Not Connected	6	Not Connected
2	TX Data	7	Not Connected
3	DX Data	8	Not Connected
4	Not Connected	9	Not Connected
5	Signal Ground		

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