



2877/2878

SOLENOID/ALARM DRIVER,
BUS POWERED

- Single (2877) and Dual (2878) channel.
- Bus powered.
- Fault bus output.
- $I_o = 93 \text{ mA}$ Safety Parameter.

Application

Energises intrinsically safe solenoid valves, alarm sounders or displays in a Hazardous Area controlled by a Safe Area contact, transistor or logic-level signal.

Line faults (open and shorted) can be detected and signalled by LED and fault output signal. Status of each channel is signalled by an LED. Similar to HiD2873/2874 but with $I_o = 93 \text{ mA}$.

Specification

DC Supply

CURRENT CONSUMPTION: 60 mA at 24 V, 300 Ω load (per channel).

POWER DISSIPATION: 1 W at 24 V, 300 Ω load (per channel).

Hazardous Area Signal (output)

OUTPUT CHARACTERISTIC: see diagram below.

RESPONSE TIME (AT 300 Ω LOAD): Turn-on time 1 msec. Turn-off time 2 msec. Max. operating frequency 250 Hz.

Safe Area Signal (input)

CONTROL INPUT: External switch (dry contact or open collector) non isolated or logic level input fully floating.

OPERATION MODE: Output on with contact close, transistor on or logic level $> 4 \text{ V}$. Output off with contact open, transistor off or logic level $< 1.5 \text{ V}$.

NOMINAL LOAD: $> 100 \Omega$ to $< 5 \text{ K}\Omega$.

SHORT WIRE FAULT DETECT: $< 25 \Omega$ typical.

OPEN WIRE FAULT DETECT: $> 100 \text{ K}\Omega$ typical.

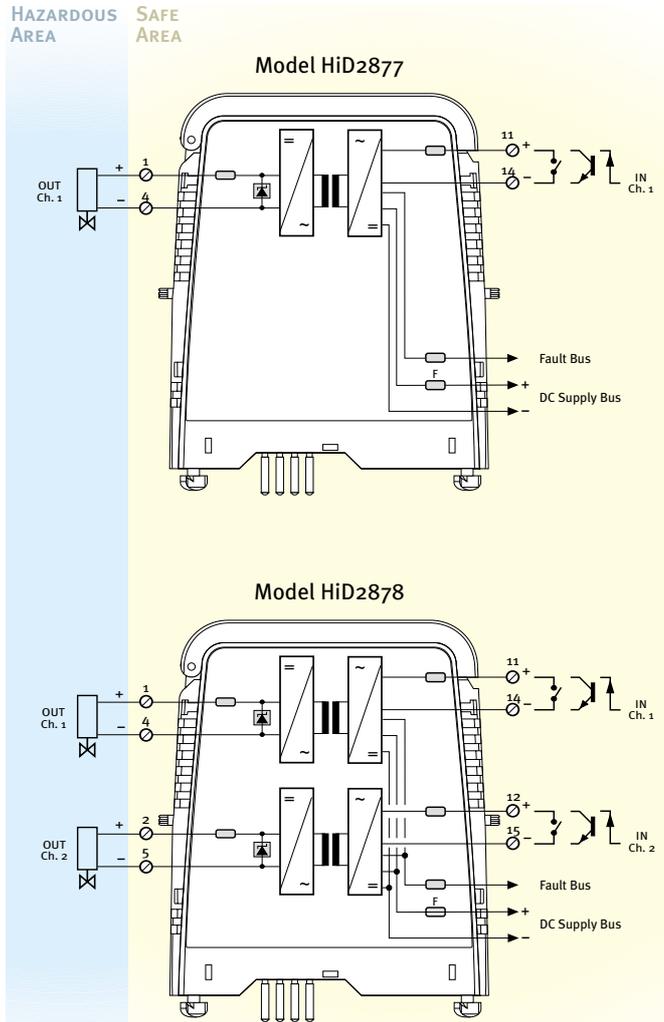
FAULT DETECT CURRENT: 4 mA typical.

SELECTOR SWITCHES: Input logic level (fully floating). Input dry contact or open collector.

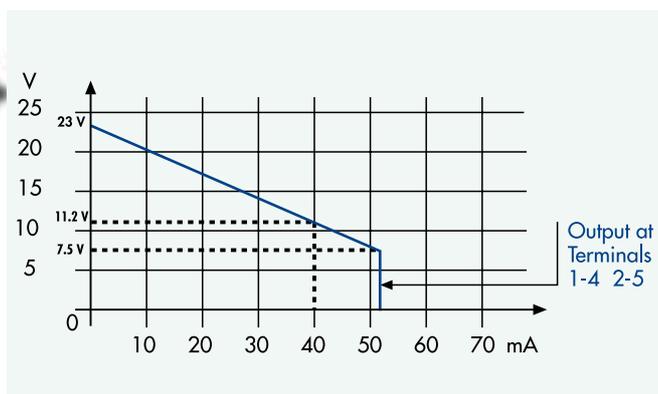
FACTORY SET AS: Input dry contact.

LED INDICATORS: Power ON (green). Output status (yellow, per channel). Line fault (red, per channel).

FAULT OUTPUT: Open collector transistor (common to both channels).



Output Characteristic



Safety Description	Maximum External Parameters				
	GROUPS CENELEC	USA	Co (μF)	Lo (mH)	L/R ($\mu\text{H}/\Omega$)
$U_o = 26.25 \text{ V}$	II C	A-B	0.097	4.1	58
$I_o = 93 \text{ mA}$	II B	C-E	0.74	16.5	230
$P_o = 610 \text{ mW}$	II A	D-F-G	2.51	33	470

NOTE: when both channels of HiD2878 are operated in normally energised condition, either the load must be reduced or increased spacing/ventilation be applied to reduce the temperature rise. Contact Pepperl + Fuchs Elcon for guidance, or consult the Instruction Manual for more details.

