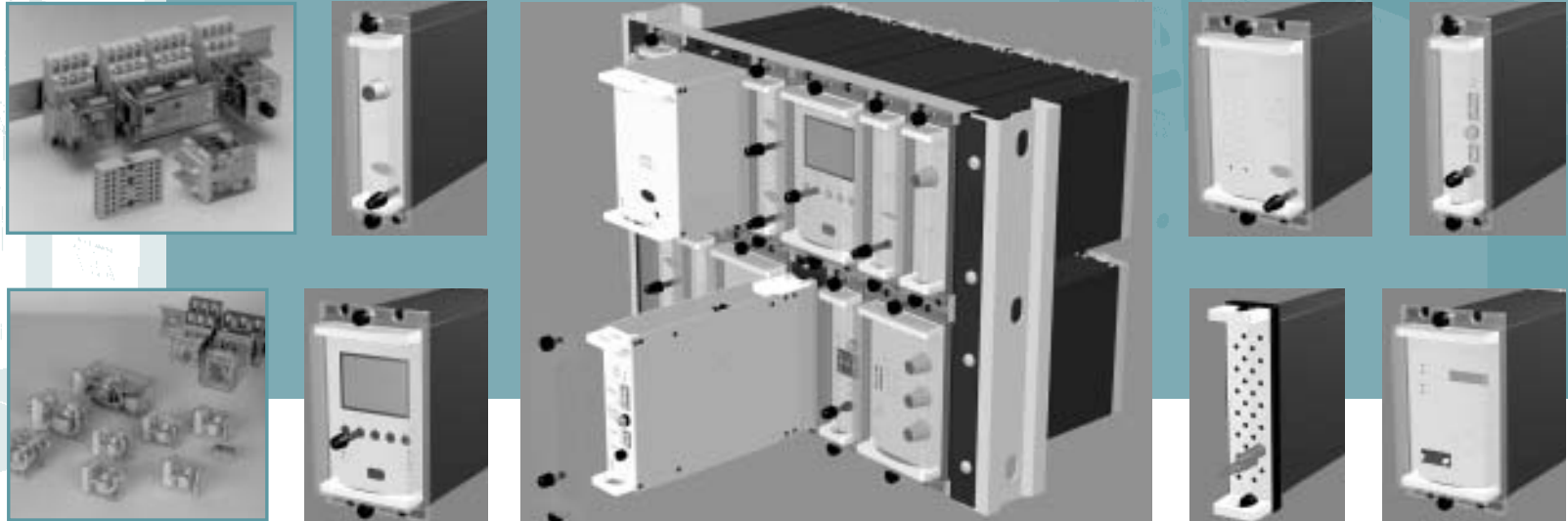


THE RELAY SPECIALISTS



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ABM Active Burden Module



Screw terminal version



Flying lead version

ABM Application



The ABM Active Burden Module is designed for application with solid state status inputs wherever high security signalling is required.

The ABM is intended to be used with digital relays and related products such as RTU's as an aid to improve electrical transient and noise immunity.

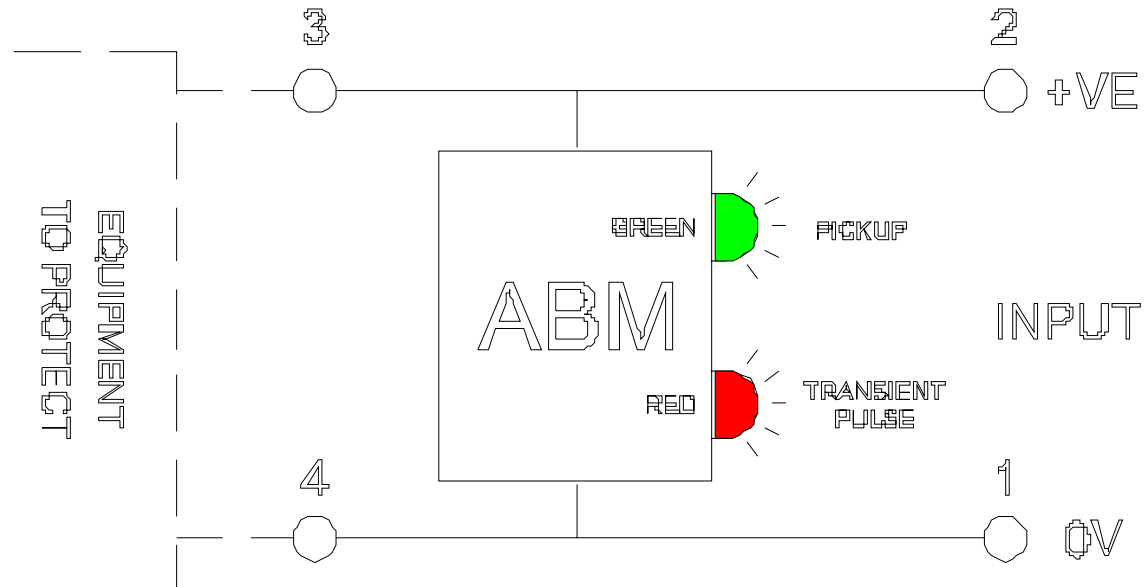
In particular, for added immunity against infrequent and irregular transients such as represented by the capacitor discharge test as defined in standard ENA TS 48-4.

Main Benefits

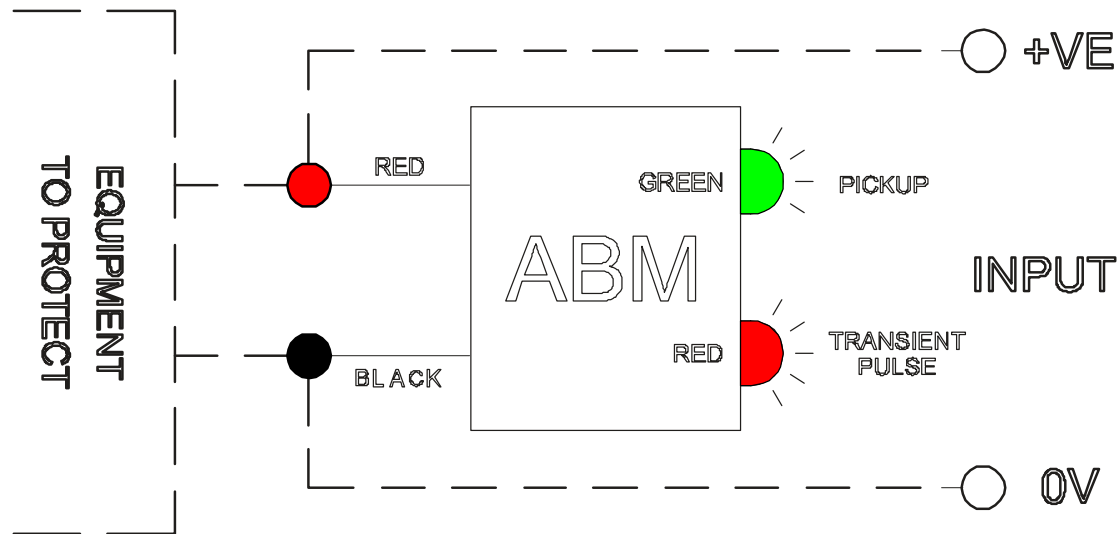


- Improve security of sensitive, high speed digital status inputs
- Provides capacitor discharge protection for solid state status inputs to ENA TS 48-4
- Transient noise withstand to IEC60255 standards
- Compact and easy to fit and retrofit
- Instantaneous burden turn-on with 50ms fixed dwell time

ABM Application Diagram Screw Terminal Version



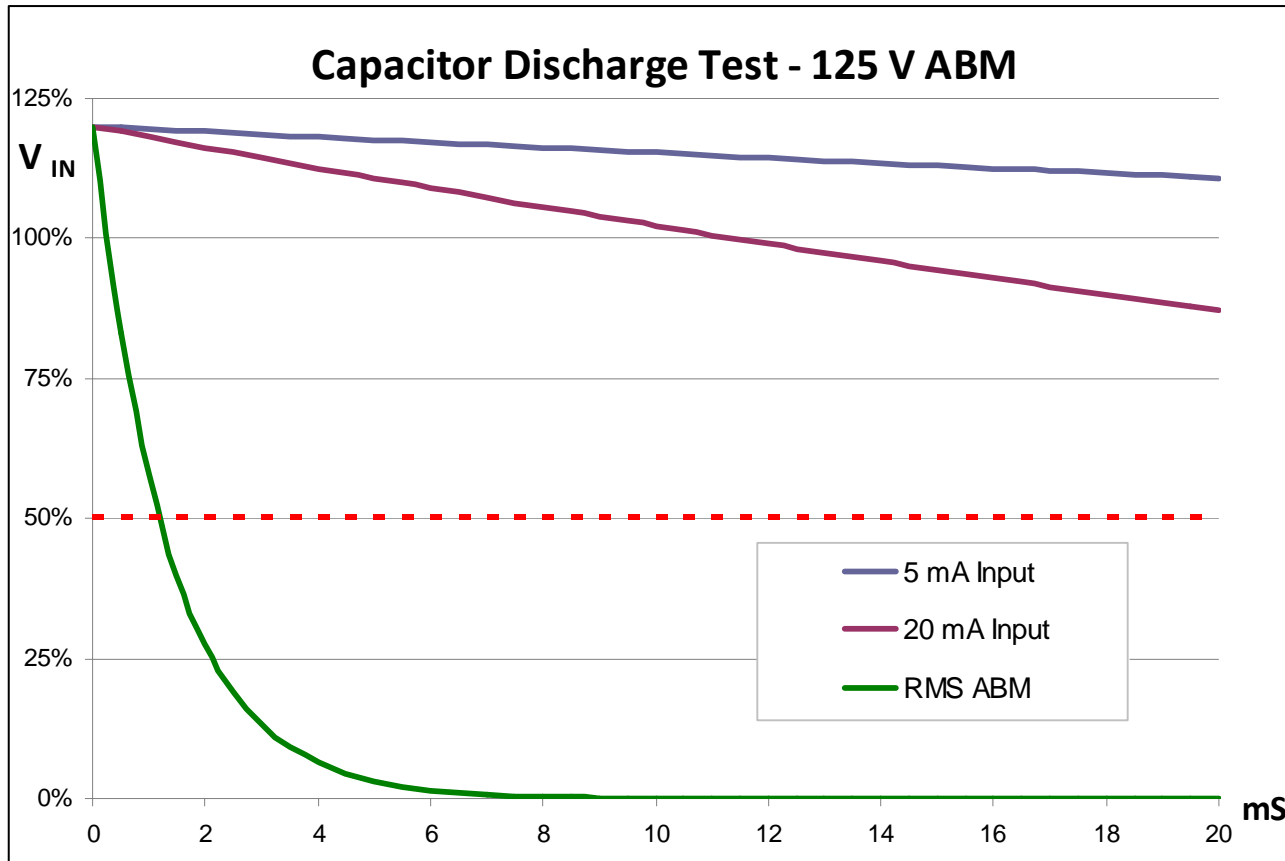
ABM Application Diagram Flying Lead Version



Capacitor Discharge

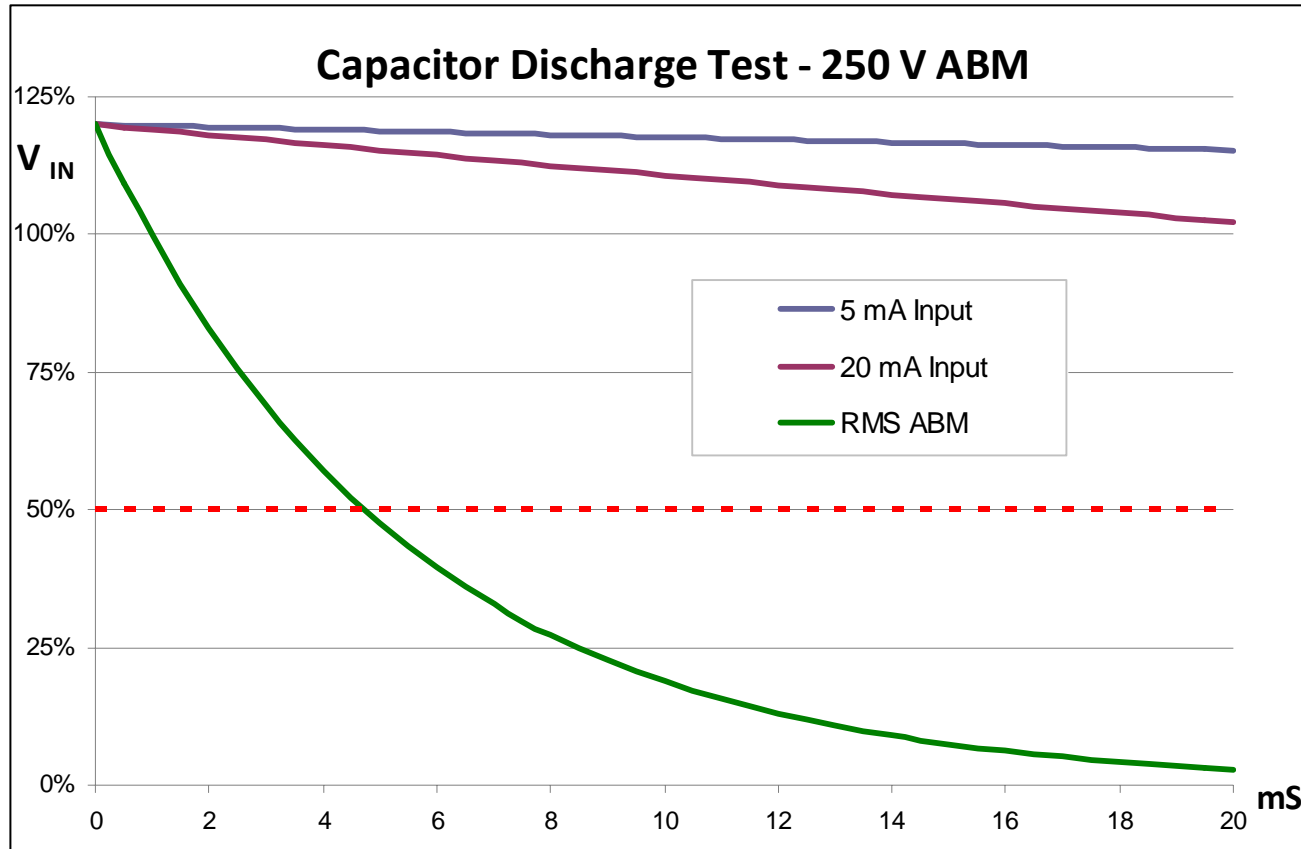
- ENA TS 48-4 for classes EB 1 and EB 2
- The ABM module is specifically designed to absorb electrical energy associated with transient impulses that may be coupled onto digital input lines from electrical switching events and other such sources of disturbance.

Capacitor Discharge Immunity



Voltage versus time delay curve for different status input burdens

Capacitor Discharge Immunity



Voltage versus time delay curve for different status input burdens

ABM Demonstrator



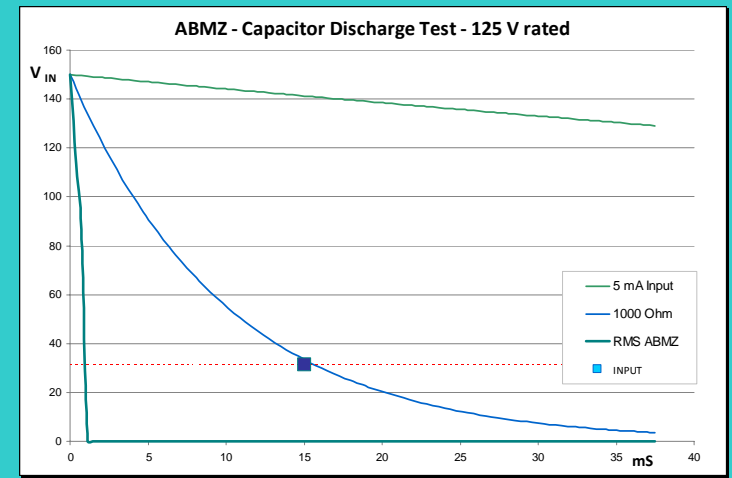
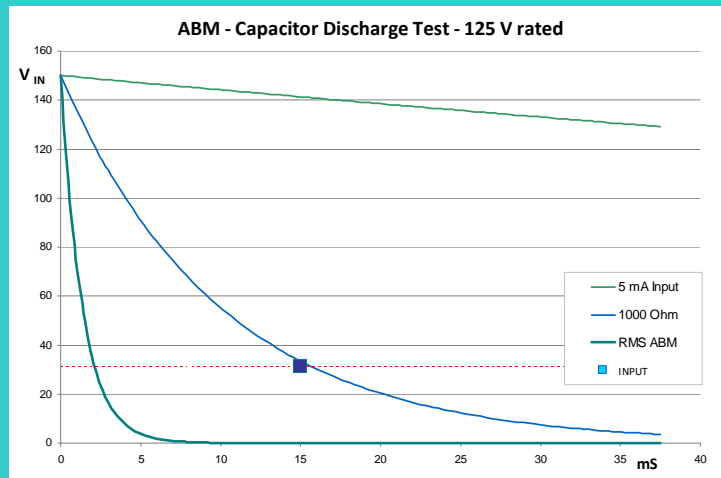
ABM/ABMZ Capacitor Discharge Test Performance



Rating
125 V

Input
31.25 V
Input THRESHOLD 25 %
Software FILTERING 15 mS

Alternate Fixed Resistor
1 k Ohm
Continuous Operate POWER 16 W

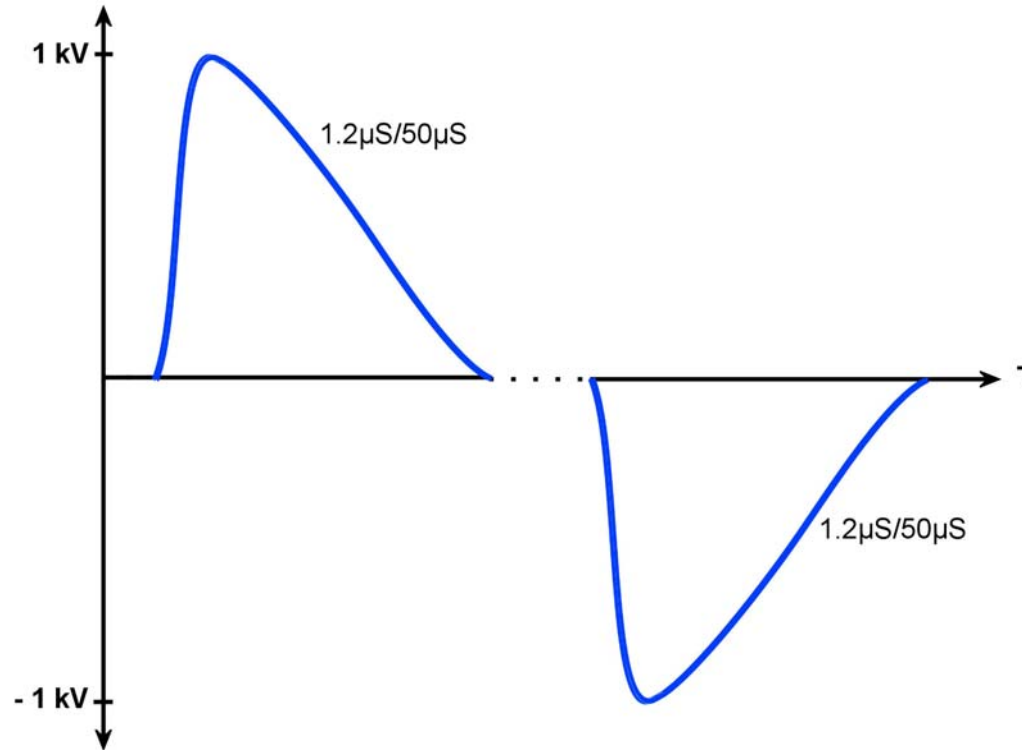


Use the ABM Demonstrator to check status input susceptibility and compare improvements using an ABM or a shunt resistor.

Surge Immunity

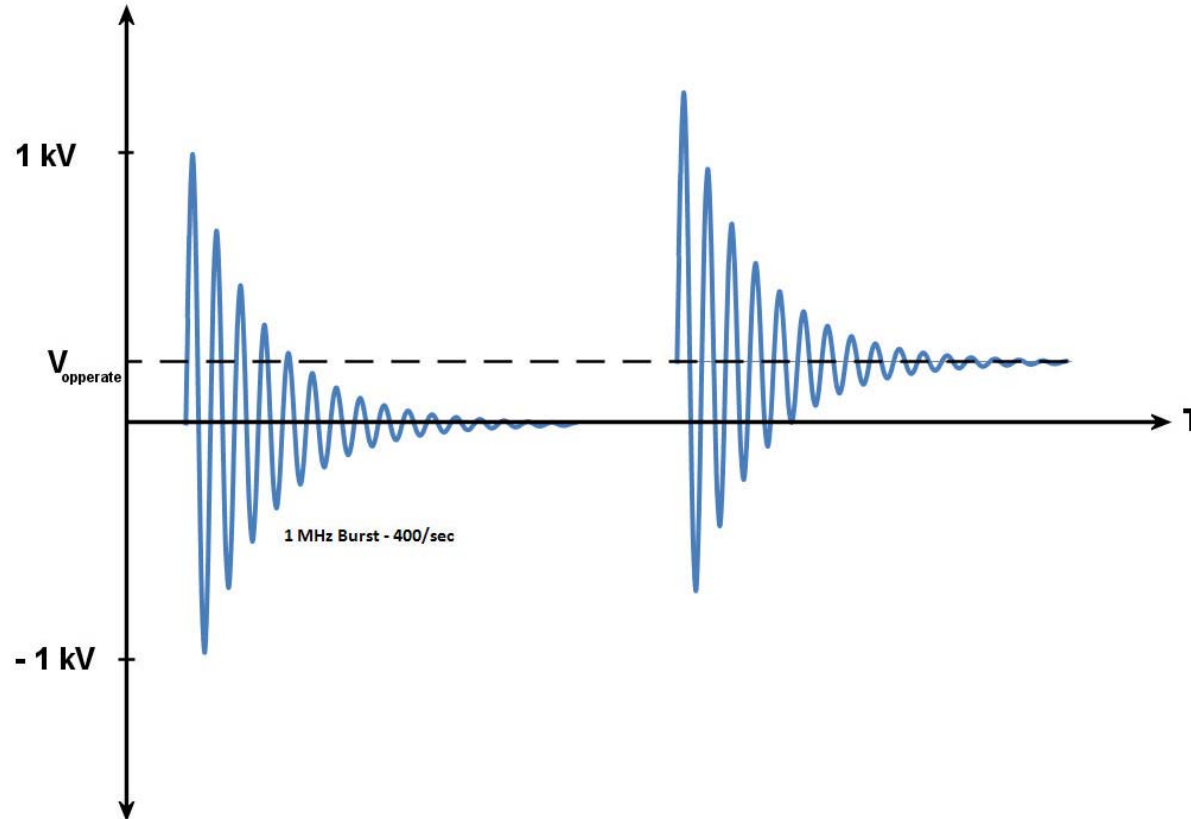


- IEC 60255-22-5



High Frequency Disturbance

- IEC 60255-22-5





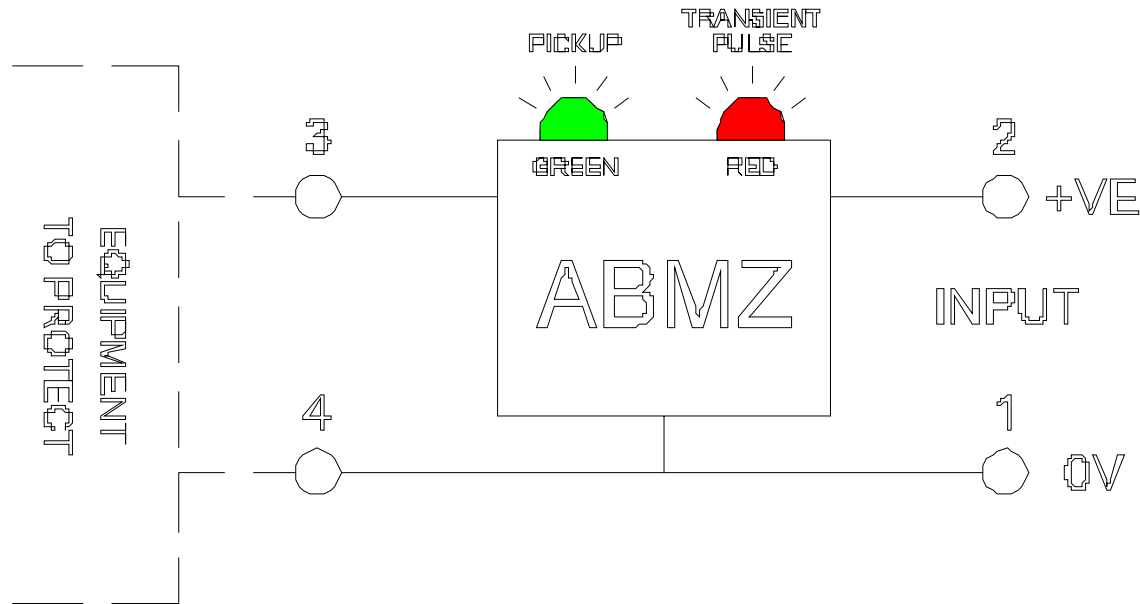
Main Features

- Wide voltage operating range
- Thermal cut out protection
- Operation check LED
- DIN rail version with status input pick-up LED
- ABMZ version with minimum voltage pick-up threshold

ABMZ Application Diagram



- Minimum voltage pick-up version
- Screw terminal version

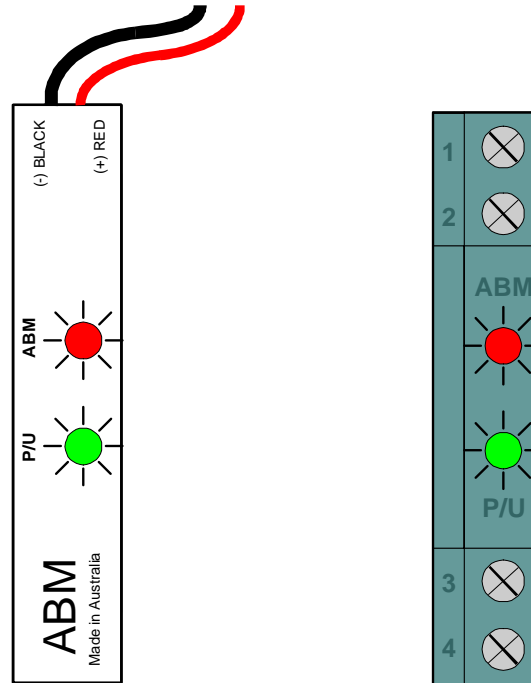




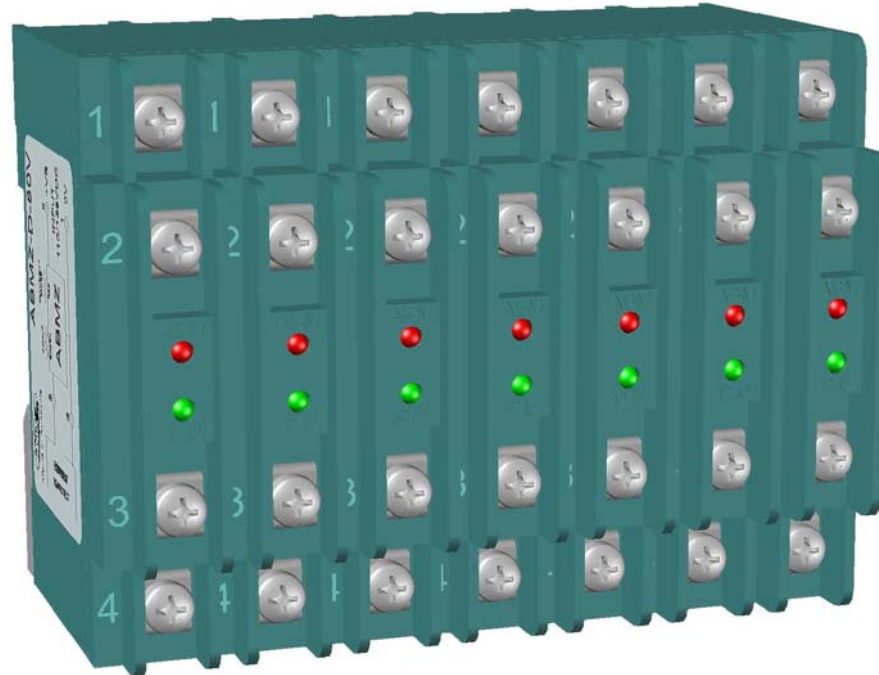
ESI 48-4 Standard for Class EB1 & EB2

DC System Nominal Voltage	30	48	110	220 ^T
Relay Rated Voltage	30	48	125	250
Nominal Working Voltage	39	54	125	250
Operative Voltage range	18-36	29-60	66-143	150-300
Energizing Current Current (mA) at or below which relay shall not operate:				
For EB 1 Relays	10	10	25	25
For EB 2 Relays	20	20	50	50
Capacitance discharge test				
For EB 1 Relays	Not Required	Not Required	Not Required	Not Required
For EB 2 Relays	Not Required	10 μ F 60 V	10 μ F 150 V	10 μ F 300 V
Thermal Withstand Voltage at 40°C Ambient	39	60	143	300
Maximum Percentage AC ripple permitted on DC supply	\pm 12% of rated Voltage	\pm 12% of rated Voltage	\pm 12% of rated Voltage	\pm 12% of rated Voltage

ABM Front Panel Layout



ABM DIN Rail Mounting Array

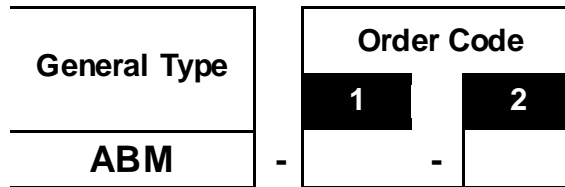


ABM Ordering Code



ABM – ACTIVE BURDEN MODULE

Generate the required ordering code as follows: e.g. ABM-D-2



1 NOMINAL AUXILIARY VOLTAGE

- C 48 / 54V DC
- D 110 / 125V DC
- F 220 / 250V DC

2 TERMINATION STYLE

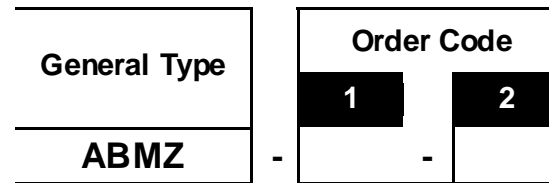
- 1 Flying leads as per figures 11 and 12
- 2 Screw terminals as per figures 13 to 15

ABMZ Ordering Code

- Minimum voltage pick-up version

ABMZ – ACTIVE BURDEN MODULE & MINIMUM VOLTAGE THRESHOLD

Generate the required ordering code as follows: e.g. ABMZ-D-80V



1 NOMINAL AUXILIARY VOLTAGE

- C 48 / 54V DC
- D 110 / 125V DC
- F 220 / 250V DC

2 INPUT THRESHOLD VOLTAGE

- 30V 30V DC
- 80V 80V DC
- 150V 150V DC

Note: The ABMZ is only available in the 'Screw terminal' version.