

ACD-02

An efficient and reliable source of information

The **ACD-02** continuously monitors alternating voltage of a three-phase system to detect abnormal power conditions that may cause premature equipment failures or inefficiencies caused by the loss of the phases. Although the **ACD-02** is suitable for control applications, Multitel promotes it for monitoring purposes in the following applications:

- Detection of electrical power utility failure (Service entrance, AC Mains, etc..)
- Monitoring of voltage quality supplied by the electrical power utility company
- Surveillance of the generator operation condition
- Validation of the status of a UPS, inverter system output
- Monitoring of one or many strategic power supply circuit(s)
- Detection of the automatic transfer switch position

OPERATION

When alternating voltage is applied on the circuit input, a internal relay is energized to eventually report different possible alarm conditions. The **ACD-02** is designed for 50/60Hz AC circuits and includes two SPDT isolated dry contacts.

The relay contacts (screw #3, #4 and #5) are maintained in operation as long as the selected rated voltage is continuously maintained at the input (screw L1, L2 and L3). An alarm will be activated by the relay contact when at least one of the following conditions is met:

1. The input voltage varies by more than +/- 12 % of the selected rated voltage.
2. There is a voltage unbalance between the phases of more than +/-10% of the rated voltage.

ADJUSTMENT

The adjustments parameters of the device have been selected by Multitel on the basis of a remote monitoring application:

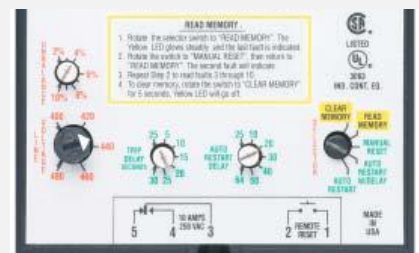
1. Line voltage 208VAC for the **M-4152** model – **LINE VOLTAGE** knob
2. Line voltage 600VAC for the **M-4151** model– **LINE VOLTAGE** knob
3. Line unbalance 10%; – **UNBALANCED** knob
4. Alarm delay 0.25s; – **TRIP DELAY** knob
5. Restart delay 0,25s; – **AUTO RESTART DELAY** knob
6. Automatic restart – **SELECTOR** knob

Note: If this device is to be used for other purposes (control application), please validate the specifications with the manufacturer at WWW.SSAC.COM. The models are: 600Vca = WVM011AL or 240Vca = WVM611AL.



Advantages

- Protects infrastructures against phase losses or inversion
- Detects abnormally low voltages and unbalanced phases
- Automatically resets itself
- Optimizes maintenance routines by modifying their frequency and duration thus reducing the number of dispatches to the site
- Allows remote notification in case of utility power failure or non-functioning of the redundancy power supply



Partial illustration of the ACD-02

SPECIFICATIONS

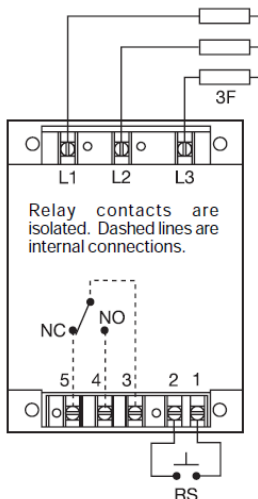
ORDERING INFORMATION

General Specifications	
Color	Black
Manufacturer	ABB
Operating temperature	-40 °C à 65 °C (-40 °F à 150 °F)
Overall dimension	66.3cm X 119.5 cm X 190.5 cm (2.6 in. X 4.7 in. X 7.5 in.)
Weigh	0.7 kg (1.1 lb)
Housing	Plastic
Input Signal	
AC three phase voltage	3 phases Delta or Wye
M-4152 Operating AC voltage	208V
M-4151 Operating AC voltage	600V
Input terminal	Input screw terminal (6 type 6-32 screws) zinc
Frequency	50 and 60 Hz
ACD-02 Operation	
Overvoltage activation	115% of rated voltage
Overvoltage reset	- than 2%
Low voltage activation	88% of rated voltage
Low voltage reset	+ than 2%
Phases unbalance	10%
Phase loss	Less than 15%
Output Signal – Dry Contact	
Relay type	2 Electro-mechanical relay
Terminal type	Screw terminal (6 type 6-32 screws) nickel
Contact types	SPDT
Contact rating	10A @ 250Vac
Certifications	
CSA/UL and CE	Yes



M-4152 = 208Vac
M-4151 = 600Vac

CONNECTIONS DRAWING AND TABLE



DESCRIPTION	
Inputs	3 Screw terminal 6-32 zinc plated
L 1	AC INPUT Phase A
L 2	AC INPUT Phase B
L 3	AC INPUT Phase C
Outputs (dry Contact)	3 Screw terminal 6-32 zinc plated
SCREW 3	COMMON
SCREW 4	NORMALLY OPENED (NO)
SCREW 5	NORMALLY CLOSED (NC)
RS (Not used)	3 Screw terminal 6-32 zinc plated
SCREW 1	INPUT FOR REMOTE REBOOT (NOT USED)
SCREW 2	INPUT FOR REMOTE REBOOT (NOT USED)



Multitel reserves the right to change characteristics without notice.

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3710 Wilfrid Hamel Blvd
Quebec (Quebec)
G1P 2J2 Canada
Tél: 418.847.2255
Fax: 418.847.1966
info@multitel.com
www.multitel.com