

Phase Sequence Tester

Model 480400



Introduction

Congratulations on your purchase of the Extech Model 408400 Phase Sequence Tester. This handheld instrument detects the phase sequence of three-phase systems. Color-coded test leads are provided for connecting to the three mains phases of the system under test. This meter is shipped fully tested and calibrated and, with proper use, will provide years of reliable service.

Safety

International Safety Symbols



Caution ! Refer to the explanation in this Manual



Caution ! Risk of electric shock



Earth (Ground)



Double Insulation or Reinforced insulation



AC, Alternating Current or Voltage



DC, Direct Current or Voltage

Safety Procedures

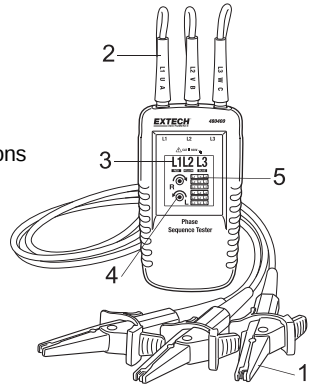
To avoid possible electric shock or fire, observe the following:

- Read the following information carefully before using or servicing the instrument.
- Adhere to local and national safety codes.
- Individual protective equipment must be used to prevent shock and injury.
- Use of instrument in a manner not specified by the manufacturer may impair safety features/protection provided by the equipment.
- Avoid working alone.
- Inspect the test leads for damaged insulation or exposed metal. Check test lead continuity. Damaged leads must be replaced. Do not use the phase Rotation indicator if it appears damaged.
- Use care when working above 30V ac rms, 42V ac peak and 60V dc. Such voltages pose a shock hazard.
- When using the probes, keep fingers away from probe contacts. Keep fingers behind the finger guards on the probes.
- Measurements can be adversely affected by impedances of additional operating circuits connected in parallel or by transient currents.
- Verify operation prior to measuring hazardous voltages (voltages above 30V ac rms, 42V ac peak and 60V dc).
- Do not use the phase Rotation indicator with any of the parts removed.
- Do not use the phase Rotation indicator around explosive gas, vapor, or dust.
- Do not use the meter in a wet environment.

Description

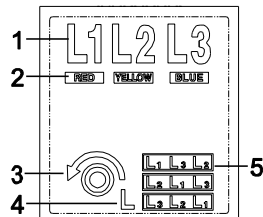
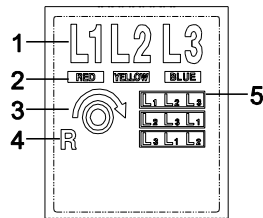
Meter Description

1. Test Lead alligator clips
2. Test lead input jacks
3. L1, L2, L3 display icons
4. Clockwise Rotation LCD Indicator R (right) and L (left) icons
5. Sequence grid



Display Description

1. Line designators (L1, L2, and L3)
2. Color codes for test leads
3. Clockwise / Counter-Clockwise indicator
4. LEFT (L) or RIGHT (R) rotation direction
5. Phase Sequence grid



Operation

Determine Phase Rotation Direction

1. Connect the supplied color-coded test leads to the meter's test lead input jacks at the top of the meter.
2. Connect the test probes to the three mains phases for the system under test.
3. L1, L2, and L3 indicators will illuminate one at a time, on the meter's LCD display, as each phase is connected.
4. The clockwise and counter-clockwise arrows with the left 'L' or right 'R' icons display the phase rotation direction of the device under test.
5. The Phase sequence grid (5) shows the three line sequences for Clockwise 'R' and the three line sequences for Counter-Clockwise 'L'.

Note: The rotational arrow indicators illuminate even if one of the test probes is connected to a neutral or ground conductor instead of one of the mains phases.

Specifications

Nominal Voltage	40 to 600 VAC
Frequency Range (fn)	15 to 400HZ
Current pickup	1 mA
Nominal Test current (in per phase)	1 mA
Maximum Operating Voltage (Ume)	600 V
Operating Temperature	32 to 104°F (0 to 40°C)
Type of protection	IP 40
Dimensions	(H x W x D): 5.1 x 2.7 x 1.3"(130 x 69 x 32mm)
Weight	4.6 oz (130g)
Approvals	CE (EU directives)
Safety	For indoor use and in accordance with the requirements for double insulation to EN/IEC 61010-1:2010 and EN 61010-2-030:2010 Overvoltage Category III 600V and Category IV 300V, Pollution Degree 2.

Two-year Warranty

FLIR Systems, Inc. warrants this Extech brand instrument to be free of defects in parts and workmanship for two years from date of shipment (a six-month limited warranty applies to sensors and cables). To view the full warranty text please visit: <https://www.extech.com/warranty>.

Calibration and Repair Services

FLIR Systems, Inc. offers calibration and repair services for the Extech brand products we sell. We offer NIST traceable calibration for most of our products. Contact us for information on calibration and repair availability, refer to the contact information below. Annual calibrations should be performed to verify meter performance and accuracy. Product specifications are subject to change without notice. Please visit our website for the most up-to-date product information: www.extech.com.

Contact Customer Support

Customer Support Telephone: U.S. (866) 477-3687; International +1 (603) 324-7800

Calibration, Repair, and Returns email: repair@extech.com

Technical Support: <https://support.flir.com>

Copyright © 2014-2020 FLIR Systems, Inc.

All rights reserved including the right of reproduction in whole or in part in any form
www.extech.com

Garantía de dos años

FLIR Systems, Inc., garantiza este Instrumento marca Extech a estar libre de defectos en partes o mano de obra durante **dos años** a partir de la fecha de embarque (se aplica una garantía limitada a seis meses para cables y sensores). *Para ver el texto completo de la garantía, visite:* <https://www.extech.com/warranty>.

Servicios de reparación y calibración

FLIR Systems, Inc., ofrece servicios de reparación y calibración para los productos marca Extech que vendemos. Ofrecemos calibración rastreable de NIST para la mayoría de nuestros productos. Póngase en contacto con nosotros para obtener información sobre la disponibilidad de calibración y reparación, consulte la información de contacto a continuación. Se deben realizar calibraciones anuales para verificar el funcionamiento y la precisión del medidor. Las especificaciones del producto están sujetas a cambios sin aviso. Por favor, visite nuestro sitio Web para obtener la información de producto más actualizada: www.extech.com

Póngase en contacto con el servicio de atención al cliente

Teléfono de atención al cliente EE.UU. (866) 477-3687; Internacional +1 (603) 324-7800

Correo electrónico de Calibración, Reparación, y Devoluciones: repair@extech.com

Soporte Técnico: <https://support.flir.com>

Copyright © 2014-2020 FLIR Systems, Inc.

Reservados todos los derechos, incluyendo el derecho de reproducción total o parcial en cualquier medio

www.extech.com

Garantie de deux ans

FLIR Systems, Inc. garantit que cet instrument de la marque Extech est exempt de défauts de pièces et de fabrication; cette garantie est d'une durée **deux ans à compter de la date d'expédition (une garantie limitée de six mois s'applique aux capteurs et aux câbles). Pour voir le texte complet de la garantie, veuillez visiter :** <https://www.extech.com/warranty>.

Services d'étalonnage et de réparation

FLIR Systems, Inc. offre des services d'étalonnage et de réparation pour les produits de la marque Extech que nous vendons. Nous offrons un étalonnage traçable NIST pour la plupart de nos produits. Pour plus d'informations sur la disponibilité des services d'étalonnage et de réparation, contactez-nous (reportez-vous aux informations de contact ci-dessous). Des étalonnages annuels doivent être réalisés afin de vérifier les performances et la précision du compteur. Les spécifications produit sont sujettes à modification sans préavis. Veuillez consulter notre site Web pour obtenir les informations les plus récentes sur nos produits:

www.extech.com

Contacter l'assistance clientèle

Téléphone de l'assistance clientèle: États-Unis: (866) 477-3687; International +1 (603) 324-7800

E-mail dédié à l'étalonnage, à la réparation et aux retours: repair@extech.com

Support technique: <https://support.flir.com>

Copyright © 2014-2020 FLIR Systems, Inc.

Tous droits réservés, y compris la reproduction partielle ou totale sous quelque forme que ce soit

www.extech.com