

Transducer mounting kits

- Robust design for field use
- Strong fixation for accurate measurement
- Versatile tools for different circuit breaker types



Description

The transducer mounting kit is a set of tools designed for mounting different transducer types on various types of circuit breakers. User is usually allowed to mount transducers on accessible parts of the circuit breaker's mechanical linkage. Transducers are connected to a rotating shaft of the circuit breaker or to an operating rod or the main contact.

Transducers are connected to transducer input channels of DV Power's CAT series - circuit breaker timers and analyzers (models: CAT34, CAT64, CAT64A, CAT35, CAT65, CAT66, CAT124A, CAT125, CAT126 and CAT500). Either an analog or a digital transducer can be connected to these universal channels.

Transducer mounting kits are designed as a fixation tool for rotary digital and analog transducers:

- Emeta MA306-10-2500-3 (digital)
- Novotechnik IP6501-A502 (analog)

Novotechnik rod type and side actuated linear transducers **TS**, **TLH** or **LWG** series can be used with DV Power transducer mounting kits.

Universal transducer mounting kit

The kit is basic set of fixation tools, which can be used for mounting different types of transducers to different positions on the circuit breakers poles and operating mechanisms.

Parts included in the Universal transducer mounting kit are:

- **Big clamping base**
- **Small clamping base**
- **Articulated arm**
- **Magnetic base**

The clamping base or magnetic base is used on the one end of the articulated arm to fix the entire tool on the circuit breaker construction. Articulated arm can be positioned easily in any desired position. All joints are fixed precisely and held securely with the central tightening knob. Second clamping base is used as transducer holder and it is connected to the other end of the articulated arm.



Universal transducer mounting kit
(art.# UTM-KIT-0000)



Big clamping base
(Clamping range 80-85 mm)
(art.# UTM-LCB-0080)



Small clamping base
(Clamping range 30-35 mm)
(art.# UTM-SCB-0030)



Articulated arm (M8 screw holder; Length: 288 mm)
(art.# UTM-AA-0288)



Magnetic base
(M8 screw holder; Holding force: 800 N; Base size: 63 mm x 50 mm x 55 mm)
(art.# UTM-MAG-0800)

Universal transducer mounting kit – Extended version

Universal transducer mounting kit – Extended version contains the same parts as the Universal transducer mounting kit except additional set of clamping bases and an articulated arm:

- **Big clamping base (2x)**
- **Small clamping base (2x)**
- **Articulated arm (2x)**
- **Magnetic base**



Universal transducer mounting kit – Extended version (art.# UTM-KIT-0001)



Universal transducer mounting kit – Extended version (unpacked)

Digital rotary transducer

CAT series circuit breaker analyzers and timers can be used with digital rotary transducers (manufactured by EMETA; model: MA306-10-2500-3):

- 58 mm radius
- 10mm solid rotating shaft with face
- Weight: up to 300 g (without cables)
- Short circuit and reversed polarity proof
- Protection class IP65
- Power supply: 5V
- Puls rate: 2500
- Axial 6-pin male MS connector



Digital rotary transducer with 5 m connection cable (art.# DRT-250-C605)



Carrier (L profile) for digital rotary transducer (art.# DRT-CRL-0090)



Bellow coupling M10 (art.# DRT-COUP-001)



Four mechanical adapters 10 mm (M6, M8, M10, M12) (art.# DRT-MADP-004)

Digital rotary transducer accessories

Connection of the digital rotary transducer to a rotating shaft of the circuit breaker requires additional accessories:

- **Carrier (L - profile)** for digital rotary transducer
- **Bellow coupling (M10)** – should be used for connecting the transducer shaft to the test object
- **Mechanical adapters 10 mm (M6, M8, M10, M12)** - different adapter bolts can be used to connect the rotary transducer shaft to the test object

Analog rotary transducer

CAT series circuit breaker analyzers and timers can also be used with analog rotary transducers (manufactured by NOVOTECHNIK; model: IP6501):

- Mechanical travel: 360°
- Defined electrical travel: 355° ±2°
- 55 mm radius
- 6 mm rotating shaft
- Weight: 180 g (without cables)
- Short circuit and reversed polarity proof
- Dust and splash proof up to IP67
- Max. permissible applied voltage: 42 V
- Axial 6-pin male MS connector



Analog rotary transducer with 5 m connection cable (art.# ART-250-C605)

Analog rotary transducer accessories

Connection of the analog rotary transducer to a rotating shaft of the circuit breaker requires additional accessories:

- **Carrier** for analog rotary transducer
- **Bellow coupling (M6)** – should be used for connecting the transducer shaft to the test object
- **Mechanical adapters 6 mm (M6, M8, M10, M12)** - different adapter bolts can be used to connect the rotary transducer shaft to the test object



Carrier for analog rotary transducer (art.# ART-CRL-0000)



Bellow coupling (M6) (art.# DRT-COUP-003)



Four mechanical adapters 6 mm (M6, M8, M10, M12) (art.# DRT-MADP-604)

Universal adapter for rotary transducer mounting

Universal adapter is designed to enable rotary transducer mounting to wide range of circuit breakers (e.g. Siemens, ABB, Alstom, etc.).



Universal adapter for rotary transducer mounting (Art.# RDTR-ADPT-00)

Three phase digital rotary transducer kit

Measurement of circuit breaker motion parameters is usually performed on all three phases. This practice is common when testing single pole circuit breakers.

In that case it is convenient to have available one plastic case for three transducers along with all required mounting accessories.

Three phase digital rotary transducer kit contains 3 sets of digital rotary transducers with connection cable, as well all required mounting accessories packed in cable plastic case & bag:

- **Digital rotary transducers with connection cable (3x)**
- **Big clamping base (3x)**
- **Carrier (L profile) for digital rotary transducer (3x)**
- **Articulated arm (3x)**
- **Bellow coupling (M10) (3x)**
- **Magnetic base (3x)**
- **Four mechanical adapters 10 mm (M6, M8, M10, M12) (3x)**
- **Cable bag (for transducer cables)**
- **Plastic case for 3 digital rotary transducer sets**



Three phase digital rotary transducer kit (with 10 m connection cable) (art.# TPH-DRTS-010)



Three phase digital rotary transducer kit (with 10 m connection cable) - unpacked

Analog linear transducers

CAT series circuit breaker analyzers and timers can be used with Novotechnik rod type and side actuated linear transducers TS, TLH or LWG series:

- very high operating speed
- outstanding linearity - up to $\pm 0.02\%$
- high resolution – better than 0.01 mm
- protection class IP 54 -
- Housing: aluminium, anodized
- Resistance element: conductive plastic



Analog linear transducer TLH series



Analog linear transducer LWG series



Analog linear transducer TS series

The above linear analog transducers are available in several lengths. Please contact DV Power for more information.

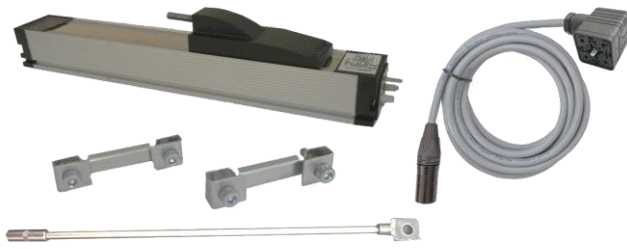
TLH series – analog linear transducer

TLH series of analog linear transducers are available in different lengths. The most common lengths are: 150 mm, 225 mm, 300 mm and 500 mm.

TLH series analog linear transducer is delivered with:

- **connection cable** with corresponding connectors*
- **lateral holders**
- **linear transducer rod** (for direct connection to the circuit breaker moving part)

*Connection cables are available in several lengths. Please contact DV Power for more information



Certain type of circuit breakers requires additional tools to mount analog linear transducer. For that purpose, DV Power specially designed **Mounting brackets** which will firmly hold analog linear transducer during circuit breaker operation.

Linear analog transducer (TLH) 225 mm with 5 m connection cable and linear transducer rod (LAT-225-C305)

In case when measurement of circuit breaker motion parameters is required on all three phases of single pole circuit breakers, it is convenient to have available one plastic case for three transducers along with all required mounting accessories.

For that purpose, DV Power offers various Plastic cases where three analog linear transducers of the same length, along with their corresponding rods could be easily positioned and preserved.



Plastic case for three linear analog transducer (TLH) 500 mm sets (PLCAS-LAT-3500)



Mounting bracket for analog linear transducer (LAT-MNTB-000)

Application examples



Digital rotary transducer mounted on ABB LTB 245 kV SF6 circuit breaker

Mounting kit accessories used:

- Clamping base
- Articulated arm
- Carrier (L-profile)
- Bellow coupling
- Mechanical adapter
- Digital rotary transducer



Digital rotary transducer mounted on Siemens 3AP1FI 245 kV SF6 circuit breaker

Mounting kit accessories used:

- Clamping base
- Articulated arm
- Carrier (L-profile)
- Bellow coupling
- Mechanical adapter
- Universal adapter for mounting of rotary transducer
- Digital rotary transducer



Analog linear TLH transducer mounted on Mitsubishi SF6 138 kV 120-SFMP-40HE

Mounting kit accessories used:

- Clamping base (4x)
- Articulated arm (2x)
- Analog linear transducer (TLH series)



Mounting kit accessories used:

- Clamping base (4x)
- Articulated arm (2x)
- Analog linear transducer (TLH series)

Analog linear TLH transducer mounted on ABB 145 PM 40-20, SF6 dead tank circuit breaker

Order info

Transducers	Article No
Digital rotary transducer with 5 m (16.4 ft) connection cable	DRT-250-C605
Digital rotary transducer with 10 m (32.8 ft) connection cable	DRT-250-C610
Digital rotary transducer with 5 m (16.4 ft) connection cable with accessories	DRT-SET-0005
Digital rotary transducer with 10 m (32.8 ft) connection cable with accessories	DRT-SET-0010
Analog rotary transducer with 5 m connection cable with accessories	ART-SET-0005
Analog rotary transducer with 10 m connection cable with accessories	ART-SET-0010
Analog rotary transducer with 15 m connection cable with accessories	ART-SET-0015
Linear analog transducer 150 mm (5.9 in) with 5 m (16.4 ft) connection cable	LAT-150-C305
Linear analog transducer 225 mm (8.85 in) with 5 m (16.4 ft) connection cable	LAT-225-C305
Linear analog transducer 300 mm (11.8 in) with 5 m (16.4 ft) connection cable	LAT-300-C305
Linear analog transducer 500 mm (19.68 in) with 5 m (16.4 ft) connection cable	LAT-500-C305
Linear analog transducer (LWG) 150 mm with 5 m connection cable	LWG-150-C305
Linear analog transducer (LWG) 150 mm with 10 m connection cable	LWG-150-C310
Linear analog transducer (LWG) 225 mm with 5 m connection cable	LWG-225-C305
Linear analog transducer (LWG) 225 mm with 10 m connection cable	LWG-225-C310
Transducer mounting kits	
Universal transducer mounting kit	UTM-KIT-0000
Universal transducer mounting kit - extended version	UTM-KIT-0001
Big clamping base	UTM-LCB-0080
Small clamping base	UTM-SCB-0030
Articulated arm	UTM-AA-0288
Magnetic base	UTM-MAG-0800
Carrier (L profile) for digital rotary transducer	DRT-CRL-0090
Carrier for analog rotary transducer	ART-CRL-0000
Bellow coupling (M10)	DRT-COUP-001
Bellow coupling (M6)	DRT-COUP-003
Four mechanical adapters 10 mm (M6, M8, M10, M12)	DRT-MADP-004
Four mechanical adapters 6 mm (M6, M8, M10, M12)	DRT-MADP-604
Plastic case for 3 digital rotary transducer set	PLCAS-TRN-R3
Three phase digital rotary transducer kit (with 5 m connection cable)	TPH-DRTS-050
Three phase digital rotary transducer kit (with 10 m connection cable)	TPH-DRTS-010

The above linear analog transducers are available in several lengths.
Please contact DV Power for more information