

# Navigator LM | Navigator LM HV

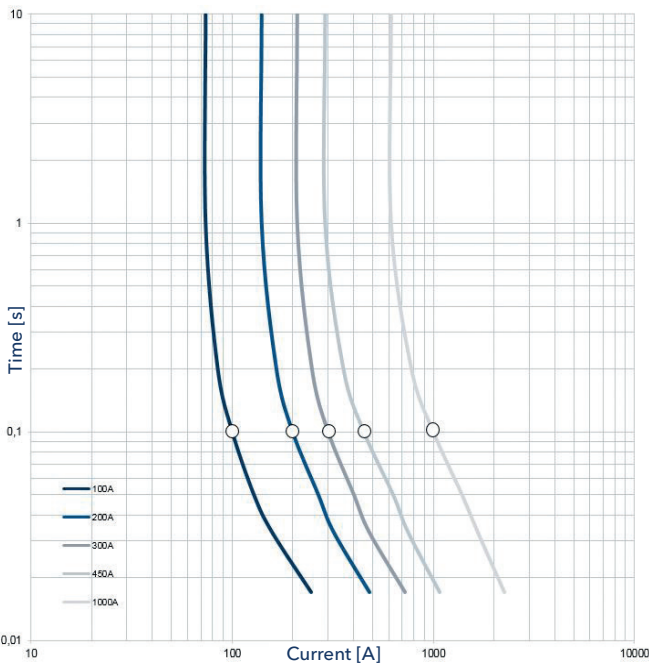
Overhead faulted circuit indicator



Navigator LM



Navigator LM HV



Load current [A]	0-25	50	78	100	170
Trip current [A]/100 ms	100	200	300	450	1,000

Current/time characteristic

## Product features

- Fault detection
- LED indication with 360 degrees of visibility
- Double-flashing mode upon detection of a second fault
- Battery status indication
- Reset depending on type: manual, current restoration, voltage restoration
- Mounting on live overhead lines possible
- Navigator-LM HV: permissible voltage  $\leq 161$  kV

The Navigator fault passage indicator is an electronic device which is designed for medium voltage utility overhead lines.

The indicator is provided with a self-adjusting load-dependent control of the trip current level. This function allows the indicator to continuously sample the load current on overhead lines and automatically set a corresponding trip value for fault detection as a function of the load current. The maximum load current sampled by the indicator, is kept in a memory for a period of at least 72 hours. Thus, the indicator is most favourably adapted to the network to be monitored, even if low load is currently present.

The indicator is provided with a built-in battery control. When the battery capacity decreases from a total indicating time of 500 hours to a residual time of 50 hours, the yellow LED of the display starts flashing for a period of 6 months.

The Navigator LM differentiates between two subsequent short-circuit detections. Upon the detection of a first short-circuit, the LED indicator light starts flashing at equal rates. The detection of a second short-circuit (e. g. after ARC) switches the LED to double flashing mode.

Reset options provided by the various versions.

Technical data	Navigator LM   Navigator LM HV			
	Version A	Version B	Version C	Version E
Trip current	≥100 A/≥100 ms, load-dependent self-adjustment (see current/time characteristic)			
Accuracy	±10 % at 20 °C			
Self-adjustment	>30 A load current			
Trip factor	4–6 x load current (see current/time characteristic)			
Adjustment delay	60 s			
Peak load memory	72 h			
Indication (short-circuit/earth fault)	<ul style="list-style-type: none"> <li>4 red LEDs (&gt;5.000 mcd resp. 7.000 mLm per piece)</li> <li>2 yellow LEDs (&gt;5.000 mcd resp. 7.000 mLm per piece)</li> </ul>			
Visibility	>50 m/day, >150 m/night, 360 degrees of visibility			
Flash rate	30 flashes per minute, total indication time >500 h			
Reset	Version A	Version B	Version C	Version E
Manual	By magnet	By magnet	By magnet	By magnet
Automatic time reset:	4 h ±10 % (2 or 8 h)	4 h ±10 % (2 or 8 h)	4 h ±10 % (2 or 8 h)	4 h ±10 % (2 or 8 h)
Current restoration	Load current >3 A	–	Red LEDs turn off, yellow flash until manual or time reset	–
Voltage restoration	–	–	–	Line voltage ≥5 kV
Power supply	Lithium battery, replaceable, shelf life ≥20 years			
Battery check	1 yellow LED, flash rate: 6 per minute, 6 month			
Max. permissible voltage	<ul style="list-style-type: none"> <li>Navigator LM: ≤46 kV/50 Hz or 60 Hz</li> <li>Navigator LM HV: ≤161 kV/50 Hz or 60 Hz</li> </ul>			
Withstand current	<ul style="list-style-type: none"> <li>Navigator LM: 25 kA/3 s</li> <li>Navigator LM HV: 40 kA/1 s</li> </ul>			
Cable diameter range	<ul style="list-style-type: none"> <li>Navigator LM: 8–29 mm</li> <li>Navigator LM HV: 13–36 mm</li> </ul>			
Housing	UV resistant polycarbonate/polyamide, IP68 Clamping yoke: stainless steel			
Temperature range	–30 to +75 °C (IEEE 495: –40 to +85 °C)			

Dimension drawing in catalogue on page 159, M8

Order no.						
41 –	2	0	01 –	1	1	1
Navigator series	Navigator LM	Flash rate	Conductor diameter	Reset	Trip current	Automatic time reset
41	2	0 = Single flash 1 = Single and double flash	01 = 8–29 mm (LM version) 08 = 13–36 mm (HV version)	1 = Version A 2 = Version B 3 = Version C 5 = Version E	1 = 200 A/100 ms (50/60 Hz) 2 = 200 A/200 ms (50/60 Hz) 3 = 100 A/100 ms (50/60 Hz)	0 = 2 h 1 = 4 h (Standard) 2 = 8 h 6 = 24 h

Navigator PM without self-adjustment facility provided with fixed trip currents available ex works after consultation with the manufacturer

#### Accessories

Installation tool

Hot stick for installation tool

Magnet (Test/Reset)

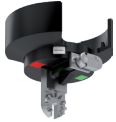
Hot stick with hook

# Accessories

For overhead line faulted circuit indicators



	Order no.
Magnet (Test / Reset)	49-6001-002



Installation tool	Order no.
To install and remove overhead faulted circuit indicators of the Navigator series	49-6006-004
To install and remove Smart Navigator 2.0	49-6006-005



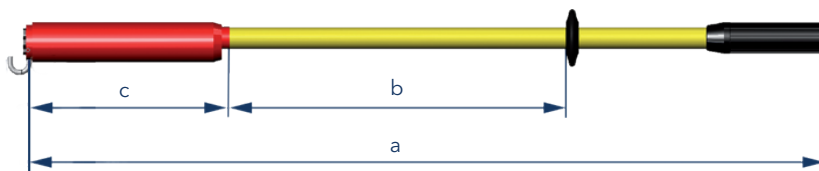
	Order no.
Telescopic stick with universal end fitting (length with stick extended: 6.43 m, length with stick inserted: 1.63 m) Rated voltage: 123 kV (only when fully extended)	65-0305-001



	Order no.
USB transmitter for Smart Navigator 2.0	28-5000-001

## Hot stick with hook

for overhead faulted circuit indicator installations and removals in dry weather conditions



Hot stick with hook

Nominal voltage range [kV]	Dimensions [mm]			Order no.
	a	b	c	
1–24	1,200	500	310	65-0301-001
1–36	2,000	900	310	65-0301-002
1–36	3,000	900	1,310	65-0301-003
1–52	2,000	900	310	65-0301-004