Contents *Page*

1 DISTURBANCE REPORT - SETTINGS 2

1.1 General 2

1.2 Settings during normal condition 3
1.2.1 Operation 3
1.2.2 Recording times 4
1.2.3 Binary signals 4
1.2.4 Analogue signals 4
1.2.5 Fault locator 5
1.2.6 Sequence number 5

1.3 Settings during test 5
1.3.1 Test mode 5
1.3.2 Activation of manual trig 6

1.4 Appendix 7
1.4.1 Signal list 7
1.4.2 Setting table 8

1 DISTURBANCE REPORT - SETTINGS

1.1 General

The settings for the disturbance report are found on the built-in man machine interface (MMI) at:

Settings
DisturbReport

The settings include:

Operation	Disturbance report (On/Off)
RecordingTimes	Recording times for the disturbance recorder and the event/indication logging, including pre-fault time, post-fault time and limit time for the whole disturbance
BinarySignals	Selection of binary signals, trig conditions and MMI indication mask
AnalogSignals	Naming of analogue signals, recording mask and trig conditions
Fault Locator	Filter time and distance unit (km/miles/%)

An additional setting is found at:

Service Report
DisturbReport

where the following parameter can be read and set:

SequenceNo	Sequence number (0-255) (normally not necessary to set)

1.2 Settings during normal condition

Table 1: How the settings affects different functions in the Disturbance report

MMI Setting menu	Function	Disturbance Summary (scrolled on MMI)	Disturbance Recorder	Indications	Event list (SMS)	Trip values	Fault locator
Operation	Operation (On/Off)	Yes	Yes	Yes	Yes	Yes	Yes
Recording Times	Recording times: (tPre, tPost, tLim)	No	Yes	No	Yes	No	No
Binary Signals	Trig operation and trig level	Yes	Yes	Yes	Yes	Yes	Yes
	Indication Mask (for automatic scrolling)	Yes	No	No	No	No	No
Analogue Signals	Operation (On/Off)	No	Yes	No	No	No	No
	Trig over/under function	Yes	Yes	Yes	Yes	Yes	Yes
Fault Locator	Fault locator settings: (tFilter, Distance Unit)	No	No	No	No	No	Yes

1.2.1 Operation

MMI-branch:

Settings
DisturbReport
Operation

Operation can be set to On or Off. If Off is selected, note that no disturbance report will be recorded, including indications, fault locator, event recorder and disturbance recorder.

Operation = Off:

- Disturbances are not stored.
- LED information (yellow - start, red - trip) is not stored or changed.
- No disturbance summary is scrolled on the built-in MMI.

Operation = On:

- Disturbances are stored, disturbance data can be read from the built-in MMI and from a front connected personal computer (PC) or Station Monitoring System (SMS).
- LED information (yellow - start, red - trip) is stored
- Disturbance summary is scrolled automatically on the built-in MMI for the two latest recorded disturbances until cleared.

1.2.2 Recording times

MMI-branch:

Settings
DisturbReport
RecordingTimes

Under this menu the different recording times for the disturbance report are set, i.e. the pre-fault time, post-fault time and limit time. These recording times affects the functions Disturbance recorder and Event recorder. The total recording time, tRecording, of a recorded disturbance will be:

tRecording = tPre + tFault + tPost, or tPre + tLim, depending on which criterion that stops the current disturbance recording.

1.2.3 Binary signals

MMI-branch:

Settings
DisturbReport
BinarySignals

Up to 48 binary signals can be selected from the signal list, where all available signals are grouped under its respective function. The 48 signals can selected among internal logical signals and binary input signals. Each selected signal will be registered by the functions Disturbance recorder, Event recorder and Indications during a recording. For each of the 48 signals, it is also selected if the signal is to be used as a trigger of the disturbance report (TrigOperation), and if the trig should be activated on a 1 or a 0 (TrigLevel).
The indications in the Disturbance Summary that is scrolled automatically on the MMI when a disturbance has been recorded, are also selected from these 48 signals with the Indication Mask.

1.2.4 Analogue signals

MMI-branch:

Settings
DisturbReport
AnalogSignals

This MMI-branch is only available when the Disturbance recorder function is installed.
For each of the up to ten analogue signals (up to five voltages and currents), Operation = On means that it will be recorded by the Disturbance recorder. If fewer than ten signals are selected, the maximum storing capacity in the flash memories regarding total recording time will be increased.

A user defined name for each of the signals can be entered. It can consist of up to 13 characters.

Both undervoltage and overvoltage can be used as trig condition. The same applies for the current signals. The triggering itself is independent of the setting of Operation, and will trigger even if operation is set to Off.

1.2.5 Fault locator

See item “Fault locator and phasors of currents and voltages”, 1MRK 580 020-XEN, for more information.

1.2.6 Sequence number

MMI-branch:

ServiceReport
DisturbReport
SequenceNo

This setting possibility will normally never be used. Each disturbance is given a number by the disturbance recorder. The first disturbance each day will normally be given SequenceNo = 0. The value of SequenceNo. that can be read in the Service Report, is the number that will be given to the next disturbance recorded during that day.

In normal use, the sequence number is increased by one for each new disturbance until it is reset to 0 each midnight.

1.3 Settings during test

1.3.1 Test mode

During testing, the operation of the Disturbance report is essential.The setting of this operation is found at MMI-branch:

Test
Test Mode
DisturbReport
Operation, DisturbSummary

When TestMode is set to On (Test/Mode/Operation = On), the setting of the Disturbance report parameters have the following impact:

Operation = Off DisturbSummary = Off

- Disturbances are not stored.
- LED information is not shown on the MMI and not stored.
- No Disturbance summary is scrolled on the MMI.

Operation = Off DisturbSummary = On

- Disturbances are not stored.
- LED information (yellow - start, red - trip) are shown on the built-in MMI, but not stored in the terminal.
- Disturbance summary is scrolled automatically on the built-in MMI for the two latest recorded disturbances, until cleared. The information is not stored in the terminal.

Operation = On DisturbSummary = Off or On

- The Disturbance report works as in normal mode.
- Disturbances are stored. Data can be read from the built-in MMI, a front connected PC or SMS.
- LED information (yellow - start, red - trip) is stored.
- Disturbance summary is scrolled automatically on the built-in MMI for the two latest recorded disturbances, until cleared.
- All disturbance data stored during test mode will be remained in the terminal when changing back to normal mode.

1.3.2 Activation of manual trig

A disturbance report can be trigged manually from the built-in MMI, a front connected PC or SMS. When the trig is activated, the manual trig signal will be generated. This feature is especially useful for testing purposes.

1.4 Appendix

1.4.1 Signal list

CONNECTIONS:	**TO:**	**SETTING:**	**DESCRIPTION:**
DREP-CLRLEDS	BI		Clear built-in MMI LEDs, scrolling of Disturbance summaries and signal DREP-RECMADE
IMPORTS:	**ORIGIN:**	**SETTING:**	**DESCRIPTION:**
-	-		
PRODUCTION:	**TO:**	**SETTING:**	**DESCRIPTION:**
DREP-OFF	BO		Disturbance report operation during normal condition is set to Off
DREP-RECSTART	BO		Disturbance recording started
DREP-RECMADE	BO		Disturbance recording made and stored in flash memory
DREP-MEMUSED	BO		Disturbance recorder memory in flash used up to 80%

1.4.2 Setting table

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Disturbance report			**Disturbance report**
Operation	On / Off		Operation of the whole disturbance report
Recording times			**Recording times**
tPre	0,05 - 0,30 s		Pre-fault recording time
tPost	0,1 - 3,0 s		Post-fault recording time
tLim	0,5 - 4,0 s		Limit time
Binary signals (for Signal 1 - 48)			**Binary signals (for Signal 1 - 48)**
Signal 1	Se signal list for each function		Signal connected to signal input No. 1 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 2	See signal list for each function		Signal connected to signal input No. 2 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 3	See signal list for each function		Signal connected to signal input No. 3 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 4	See signal list for each function		Signal connected to signal input No. 4 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 5	See signal list for each function		Signal connected to signal input No. 5 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 6	See signal list for each function		Signal connected to signal input No. 6 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 7	See signal list for each function		Signal connected to signal input No. 7 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 8	See signal list for each function		Signal connected to signal input No. 8of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 9	See signal list for each function		Signal connected to signal input No. 9of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked=thesignalwillnotbescrolledautomatically Show = will be scrolled automatically on the MMI in the Dis-turbance summary
Signal 10	See signal list for each function		Signal connected to signal input No. 10 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 11	See signal list for each function		Signal connected to signal input No. 11 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 12	See signal list for each function		Signal connected to signal input No. 12 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 13	See signal list for each function		Signal connected to signal input No. 13of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 14	See signal list for each function		Signal connected to signal input No.14 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 15	See signal list for each function		Signal connected to signal input No. 15 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 16	See signal list for each function		Signal connected to signal input No. 16 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 17	See signal list for each function		Signal connected to signal input No. 17of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 18	See signal list for each function		Signal connected to signal input No. 18 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 19	See signal list for each function		Signal connected to signal input No. 19 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 20	See signal list for each function		Signal connected to signal input No. 20 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 21	See signal list for each function		Signal connected to signal input No. 21 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 22	See signal list for each function		Signal connected to signal input No. 22 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 23	See signal list for each function		Signal connected to signal input No. 23 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 24	See signal list for each function		Signal connected to signal input No. 2 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 25	See signal list for each function		Signal connected to signal input No. 25 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 26	See signal list for each function		Signal connected to signal input No. 26 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 27	See signal list for each function		Signal connected to signal input No. 27 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 28	See signal list for each function		Signal connected to signal input No. 28 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 29	See signal list for each function		Signal connected to signal input No. 29 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 30	See signal list for each function		Signal connected to signal input No. 30 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 31	See signal list for each function		Signal connected to signal input No. 31 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 32	See signal list for each function		Signal connected to signal input No. 32 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 33	See signal list for each function		Signal connected to signal input No. 33 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 34	See signal list for each function		Signal connected to signal input No. 34 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 35	See signal list for each function		Signal connected to signal input No. 35 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 36	See signal list for each function		Signal connected to signal input No. 36 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 37	See signal list for each function		Signal connected to signal input No. 37 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 38	See signal list for each function		Signal connected to signal input No. 38 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 39	See signal list for each function		Signal connected to signal input No. 39 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 40	See signal list for each function		Signal connected to signal input No. 40 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 41	See signal list for each function		Signal connected to signal input No. 41 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 42	See signal list for each function		Signal connected to signal input No. 42 of the disturbance report
TrigOperation	On / Off		On = the signal will beused for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 43	See signal list for each function		Signal connected to signal input No. 43 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 44	See signal list for each function		Signal connected to signal input No. 44 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 45	See signal list for each function		Signal connected to signal input No. 45 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 46	See signal list for each function		Signal connected to signal input No. 46 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
Signal 47	See signal list for each function		Signal connected to signal input No. 47of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
Signal 48	See signal list for each function		Signal connected to signal input No. 48 of the disturbance report
TrigOperation	On / Off		On = the signal will be used for trig Off = the signal will not be used for trig
TrigLevel	Trig on 1 Trig on 0		Trig level for the binary signal
IndicationMask	Masked Show		Masked = the signal will not be scrolled automatically Show = will be scrolled automatically on the MMI in the Disturbance summary
UL1			**Analogue signals**
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig U>	On / Off		Over trig operation
U>	(0 - 200)% of U_r		Over trig value
Trig U<	On / Off		Under trig operation
U<	(0 - 110)% of U_r		Under trig value

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
UL2			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig U>	On / Off		Over trig operation
U>	(0 - 200)% of U_r		Over trig value
Trig U<	On / Off		Under trig operation
U<	(0 - 110)% of U_r		Under trig value
UL3			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig U>	On / Off		Over trig operation
U>	(0 - 200)% of U_r		Over trig value
Trig U<	On / Off		Under trig operation
U<	(0 - 110)% of U_r		Under trig value

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
U4			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig U>	On / Off		Over trig operation
U>	(0 - 200)% of U_r		Over trig value
Trig U<	On / Off		Under trig operation
U<	(0 - 110)%of U_r		Under trig value
U5			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig U>	On / Off		Over trig operation
U>	(0 - 200)% of U_r		Over trig value
Trig U<	On / Off		Under trig operation
U<	(0 - 110)% of U_r		Under trig value

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
IL1			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig I>	On / Off		Over trig operation
I>	(0 - 5000)% of I_r		Over trig value
Trig I<	On / Off		Under trig operation
I<	(0 - 200)% of I_r		Under trig value
IL2			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig I>	On / Off		Over trig operation
I>	(0 - 5000)% of I_r		Over trig value
Trig I<	On / Off		Under trig operation
I<	(0 - 200)% of I_r		Under trig value

PARAMETER:	SETTING RANGE:	SETTING:	DESCRIPTION:
		ACTUAL	
IL3			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig I>	On / Off		Over trig operation
I>	(0 - 5000)% of I_r		Over trig value
Trig I<	On / Off		Under trig operation
I<	(0 - 200)% of I_r		Under trig value
IN			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig I>	On / Off		Over trig operation
I>	(0 - 5000)% of I_r		Over trig value
Trig I<	On / Off		Under trig operation
I<	(0 - 200)% of I_r		Under trig value

PARAMETER:	SETTING RANGE:	SETTING:t1	DESCRIPTION:
		ACTUAL	
I5			
Operation	On / Off		On = the signal is recorded in the Disturbance recorder
Name	13 character string		User-defined named
Trig I>	On / Off		Over trig operation
I>	(0 - 5000)% of I_r		Over trig value
Trig I<	On / Off		Under trig operation
I<	(0 - 200)% of I_r		Under trig value
Service Report / DisturbReport / Sequence No.			**Sequence No.**
Sequence No	0 - 255		Disturbance sequence number