

<i>Contents</i>	<i>Page</i>
1 MENU TREE - APPENDIX 1.....	2
1.1 Introduction.....	2
1.2 Menu tree structure	3
1.2.1 Display for Disturbance Report menu	3
1.2.2 Display for Service Report menu.....	4
1.2.3 Display for Settings menu.....	7
1.2.4 Display for Terminal Status menu	17
1.2.5 Display for Configuration menu	18
1.2.6 Display for Test menu.....	26
1.2.7 Display for Front Communication menu	28

1 MENU TREE - APPENDIX 1

1.1 Introduction

This document describes the MMI-tree structure for the REx 5xx series of terminals.

For handling of the built-in man machine interface (MMI), please see “Local man machine communication”, document number 1MRK 580 007-XEN (former document number 1MDX80007-EN).

The following conventions are used in this document:

- The path to the end-nodes is described with white-on-black characters.
- Menu-nodes are presented in plain text.
- Data-nodes (parameters) are presented in italics.
- Dialogues and references to other documents have thicker frames.

Version 1.2
October 1996

1.2 Menu tree structure

1.2.1 Display for Disturbance Report menu

<div>REx5xx</div> <div>Disturb. Report</div> <div>Service Report</div> <div>Settings</div> <div>Terminal Status</div> <div>Configuration</div> <div>Test</div> <div>Front Comm</div>	<div>REx5xx/DistRep</div> <div>Disturbances</div> <div>CalcDistToFlt</div> <div>Manual Trig</div> <div>Clear DistRep</div>	<div>.DistRep/Disturb</div> <div>Disturbance 1</div> <div>Disturbance 2</div> <div>Disturbance 3</div> <div>Disturbance 4</div> <div>Disturbance 5</div> <div>Disturbance 6</div> <div>Disturbance 7</div> <div>Disturbance 8</div> <div>Disturbance 9</div> <div>Disturbance 10</div>	<div>.Disturb/Dist1</div> <div>Time Of Disturb</div> <div>Trig Signal</div> <div>Indications</div> <div>Fault Locator</div> <div>Trip Values</div>	<div>.Dist1/Time</div> <div><i>Time Of Disturb</i></div>	<div>.TripVal/PreFlt</div> <div>UL 1</div> <div>UL 2</div> <div>UL 3</div> <div>U 4</div> <div>U 5</div> <div>IL 1</div> <div>IL 2</div> <div>IL 3</div> <div>IN</div> <div>I 5</div> <div>Frequency</div>
		<div>.DistRep/CalcFlt</div> <div>Disturbance 1</div> <div>Disturbance 2</div> <div>Disturbance 3</div> <div>Disturbance 4</div> <div>Disturbance 5</div> <div>Disturbance 6</div> <div>Disturbance 7</div> <div>Disturbance 8</div> <div>Disturbance 9</div> <div>Disturbance 10</div>	<div>CalcDistToFlt/ Disturbance 1-10</div>	<div>.Dist1/TrigSig</div> <div><i>Trig Signal</i></div>	
			<div>Commands with confirmation, see "Local MMC", 1MRK 580 007-XEN</div>	<div>.Dist1/Indic</div> <div><i>Indications</i></div>	
				<div>.Dist1/FltLoc</div> <div><i>FltLoop</i></div> <div><i>Dist</i></div>	
				<div>.Dist1/TripVal</div> <div>PreFault</div> <div>Fault</div>	<div>.TripVal/Flt</div> <div>UL 1</div> <div>UL 2</div> <div>UL 3</div> <div>U 4</div> <div>U 5</div> <div>IL 1</div> <div>IL 2</div> <div>IL 3</div> <div>IN</div> <div>I 5</div>
		<div>Manual Trig</div>			
		<div>Command with confirmation, see "Local MMC", 1MRK 580 007-XEN</div>			
		<div>Clear DistRep</div>			
		<div>Command with confirmation, see "Local MMC", 1MRK 580 007-XEN</div>			

1.2.2 Display for Service Report menu

REx5xx	REx5xx/ServRep	.ServRep/MeanVal	.Phasors/Primary
Disturb. Report	Mean Values	<i>U</i>	<i>UL1</i>
Service Report	Diff Values	<i>I</i>	<i>UL2</i>
Settings	Phasors	<i>P</i>	<i>UL3</i>
Terminal Status	LogicalSignals	<i>Q</i>	<i>U4</i>
Configuration	Binary Inputs	<i>Frequency</i>	<i>U5</i>
Test	ARCounters		<i>IL1</i>
Front Comm	DiffCommunic	.ServRep//DiffVal	<i>IL2</i>
	Direction	<i>IDiffL1</i>	<i>IL3</i>
	Disturb Report	<i>IBiasL1</i>	<i>IN</i>
	Active Group	<i>IDiffL2</i>	<i>I5</i>
	Internal Time	<i>IBiasL2</i>	
		<i>IDiffL3</i>	.Phasors/Second
		<i>IBiasL3</i>	<i>UL1</i>
			<i>UL2</i>
		.ServRep/Phasors	<i>UL3</i>
		Primary	<i>U4</i>
		Secondary	<i>U5</i>
			<i>IL1</i>
			<i>IL2</i>
			<i>IL3</i>
			<i>IN</i>
			<i>I5</i>

REx5xx	REx5xx/ServRep	SIGNAL LIST	.BinInp/IOModB
Disturb. Report	Mean Values	<i>All signals in signal list are grouped under function sub-menus</i>	<i>IOB--BI1</i>
Service Report	Diff Values		<i>IOB--BI2</i>
Settings	Phasors		-
Terminal Status	LogicalSignals	FixedSignals	-
Configuration	Binary Inputs	Trip Logic	<i>IOB--BI23</i>
Test	ARCounters	Differential	<i>IOB--BI24</i>
Front Comm	DiffCommunic	ImpZones	
	Direction	ImpComm	.BinInp/IOMod5
	Disturb Report	ImpPhSel	<i>IO5--BI1</i>
	Active Group	ImpGFC	<i>IO5--BI2</i>
	Internal Time	ImpPSB	-
		ImpSOTF	-
		EarthFault	<i>IO5--BI23</i>
		Sensitive EF	<i>IO5--BI24</i>
		EarthFlt4Step	
		FuseFailure	.ARCount/Count
		CTSupervision	<i>1-ph Shot1</i>
		OverLoad	<i>3-ph Shot1</i>
		BrokenConduct	<i>3-ph Shot2</i>
		OverVoltage	<i>3-ph Shot3</i>
		HiSetOverCurr	<i>3-ph Shot4</i>
		UnderVoltage	<i>NoOfReclosings</i>
		Stub	
		LossOfVoltage	Clear Counters
		BreakerFailure	
		PoleDiscord	Command with
		AutoRecloser	confirmation, see
		SyncroCheck	"Local MMC",
		TimeOverCurr	1MRK 580 007-XEN
		DisturbReport	
		InternSignals	
		Control	
		LogicAND	
		LogicOR	
		LogicTM	
		LogicTP	
		.ServRep/BinInp	
		I/O-module B	
		I/O-module 1	
		I/O-module 2	
		I/O-module 3	
		I/O-module 4	
		I/O-module 5	
		.ServRep/ARCount	
		Counters	
		Clear Counters	

REx5xx	REx5xx/ServRep	.ServRep/DiffCom	.DiffCom/ChInfo
Disturb. Report	Mean Values	Channel Info	<i>TransmDelay</i>
Service Report	Diff Values	Clear Counters	<i>NoOfShInterr</i>
Settings	Phasors		<i>NoOfMedInterr</i>
Terminal Status	LogicalSignals	.ServRep/Direct	<i>NoOfLongInterr</i>
Configuration	Binary Inputs	<i>L1-L2</i>	<i>CommStatus</i>
Test	ARCounters	<i>L2-L3</i>	<i>NoOfTXD</i>
Front Comm	DiffCommunic	<i>L3-L1</i>	<i>NoOfRXD</i>
	Direction		<i>SyncError</i>
	Disturb Report	.ServRep/DistRep	Clear Counters
	Active Group	Memory Used	
	Internal Time	Sequence No	Command with
		AnalogTrigStat	confirmation, see
			"Local MMC",
		.ServRep/ActGrp	1MRK 580 007-XEN
		<i>Active Group</i>	
		.ServRep/IntTime	.DistRep/Memory
		<i>Date & Time</i>	<i>Memory Used</i>
			.DistRep/SeqNo
			<i>Sequence No</i>
			.DistRep/AnaTrig
			<i>UL1></i>
			<i>UL1<</i>
			<i>UL2></i>
			<i>UL2<</i>
			<i>UL3></i>
			<i>UL3<</i>
			<i>U4></i>
			<i>U4<</i>
			<i>U5></i>
			<i>U5<</i>
			<i>IL1></i>
			<i>IL1<</i>
			<i>IL2></i>
			<i>IL2<</i>
			<i>IL3></i>
			<i>IL3<</i>
			<i>IN></i>
			<i>IN<</i>
			<i>I5></i>
			<i>I5<</i>

1.2.3 Display for Settings menu

REx5xx	REx5xx/Set	.Set/Func	.Grp1/Grp1	.Grp1/LineRef
Disturb. Report	Functions	Group 1	Line Reference	<i>Length Unit</i>
Service Report	ChangeAct Grp	Group 2	Differential	<i>Line Length</i>
Settings	Disturb Report	Group 3	Impedance	<i>X1</i>
Terminal Status	Internal Time	Group 4	EarthFault	<i>R1</i>
Configuration			Sensitive EF	<i>X0</i>
Test			EarthFlt4Step	<i>R0</i>
Front Comm			FuseFailure	<i>X1SA</i>
			CTSupervision	<i>R1SA</i>
			OverLoad	<i>X1SB</i>
			BrokenConduct	<i>R1SB</i>
			OverVoltage	<i>Xm0</i>
			HiSetOverCurr	<i>Rm0</i>
			UnderVoltage	
			Stub	
			LossOfVoltage	
			BreakerFailure	
			PoleDiscord	
			AutoRecloser	
			SyncroCheck	
			TimeOverCurr	
			Trip	

REx5xx/Set	.Set/Func	.Func/Grp1	.Grp1/Imp	.Imp/GFC	.Comm/Extens
Functions	Group 1	Line Reference	GFC	Operation	Operation
ChangeAct Grp	Group 2	Differential	Zone 1	I>	
Disturb Report	Group 3	Impedance	Zone 2	IN>	.Comm/LossOfL
Internal Time	Group 4	EarthFault	Zone 3	X1GFCFw	Operation
		Sensitive EF	Zone 4	X1GFCRv	
		EarthFlt4Step	Zone 5	X0GFCFw	.Comm/SchType
		FuseFailure	Zone 5	X0GFCRv	
		CTSupervision	Communication	RFGFC	SchemeType
		OverLoad	PhaseSelection	RFNGFC	tCoord
		BrokenConduct	HighImp Net	RLd	tSendMin
		OverVoltage	PowerSwingBlck	ARGLd	Unblock
		HiSetOverCurr	SwitchOntoFlt	tPhase	tSecurity
		UnderVoltage		tN	CurrRev
		Stub			tPickUp
		LossOfVoltage		.Imp/Zone1	tDelay
		BreakerFailure		Operation	WEI
		PoleDiscord		X1Z1	
		AutoRecloser		R1Z1	
		SyncroCheck		X0Z1	
		TimeOverCurr		R0Z1	
		Trip		RFZ1	
				RFNZ1	
				Timer t1	
				t1	
				DirZ1	
				Z1Block	
				.Imp/Zone5	
				Operation	
				X1Z5	
				R1Z5	
				X0Z5	
				R0Z5	
				RFZ5	
				RFNZ5	
				Timer t5	
				t5	
				DirZ5	
				Z5Block	
				.Imp/Comm	
				Extension	
				LossOfLoad	
				SchemeType	

Version 1.2
October 1996

REx5xx	REx5xx/Set	.Set/Func	.Func/Grp1	.Grp1/Imp	.Imp/PhSel
Disturb. Report	Functions	Group 1	Line Reference	GFC	<i>X1PHS</i>
Service Report	ChangeAct Grp	Group 2	Differential	Zone 1	<i>RFPHS</i>
Settings	Disturb Report	Group 3	Impedance	Zone 2	<i>X0PHS</i>
Terminal Status	Internal Time	Group 4	EarthFault	Zone 3	<i>RFNPHS</i>
Configuration			Sensitive EF	Zone 4	
Test			EarthFlt4Step	Zone 5	.Imp/HighImp
Front Comm			FuseFailure	Zone 5	<i>PhasePref</i>
			CTSupervision	Communication	<i>3I0></i>
			OverLoad	PhaseSelection	<i>3U0></i>
			BrokenConduct	HighImp Net	
			OverVoltage	PowerSwingBlck	.Imp/PSB
			HiSetOverCurr	SwitchOntoFlt	<i>Operation</i>
			UnderVoltage		<i>X1PSB</i>
			Stub		<i>RFPSB</i>
			LossOfVoltage		
			BreakerFailure		.Imp/SOTF
			PoleDiscord		<i>Operation</i>
			AutoRecloser		<i>Automatic</i>
			SyncroCheck		
			TimeOverCurr		
			Trip		

Save as Grp 1
Save as Grp 2
Save as Grp 3
Save as Grp 4

Command **with**
confirmation, see
“Local MMC”,
1MRK 580 007-XEN

REx5xx/Set	.Set/Func	.Func/Grp1	.Grp1/EarthFI	.EarthFI/NoDirEF
Functions	Group 1	Line Reference	NonDir EF (*)	Operation
ChangeAct Grp	Group 2	Differential	Directional EF (*)	CurveType
Disturb Report	Group 3	Impedance	Communication (*)	3I0>
Internal Time	Group 4	EarthFault (*)		IMin
		Sensitive EF	.Grp1/SenseF	t1
		EarthFlt4Step	Operation	K
		FuseFailure	t1	tMin
		CTSupervision	t2	
		OverLoad	t3	
		BrokenConduct		.EarthFI/DirEF
		OverVoltage		Operation
		HiSetOverCurr		CurveType
		UnderVoltage		3I0>
		Stub		IMin
		LossOfVoltage		t1
		BreakerFailure		K
		PoleDiscord		tMin
		AutoRecloser		Direction
		SyncroCheck		3I0D>
		TimeOverCurr		
		Trip		.EarthFI/Comm
				SchemeType
				tCoord
				CurrRev
				tPickUp
				tDelay
				WEI
				3U0>

(*) The following sub-menus can be shown for EF:

1. NonDirEF
2. DirEF
3. DirEF + Comm

Save as Grp 1
Save as Grp 2
Save as Grp 3
Save as Grp 4

Command **with** confirmation, see "Local MMC", 1MRK 580 007-XEN

Version 1.2
October 1996

REx5xx/Set	.Set/Func	.Func/Grp1	.Grp1/EF4Step	.EF4Step/Step1
Functions	Group 1	Line Reference	Step 1	<i>Operation</i>
ChangeAct Grp	Group 2	Differential	Step 2	3I01>
Disturb Report	Group 3	Impedance	Step 3	t1
Internal Time	Group 4	EarthFault	Step 4	
		Sensitive EF	Direction	.EF4Step/Step2
		EarthFlt4Step	2ndHarmStab	<i>Operation</i>
		FuseFailure	Communication	3I02>
		CTSupervision	SwitchOntoFlt	t2
		OverLoad		
		BrokenConduct		.EF4Step/Step3
		OverVoltage		<i>Operation</i>
		HiSetOverCurr		3I03>
		UnderVoltage		t3
		Stub		
		LossOfVoltage		.EF4Step/Step4
		BreakerFailure		<i>Operation</i>
		PoleDiscord		Timer t4
		AutoRecloser		3I0>Inv
		SyncroCheck		K
		TimeOverCurr		3I04>
		Trip		t4
				t4Min
				.EF4Step/Dir
				3I0>Dir
				.EF4Step/2ndHarm
				2ndHarmStab
				BlkParTransf
				.EF4Step/Com
				<i>Operation</i>
				tCoord
				Harm Stab
				CurrRev
				tPickUp
				tDelay
				WEI
				3U0<Wei
				.EF4Step/SOTF
				<i>Operation</i>
				t4U

Save as Grp 1

Save as Grp 2

Save as Grp 3

Save as Grp 4

Command with

confirmation, see

"Local MMC",

1MRK 580 007-XEN

REx5xx	REx5xx/Set	.Set/Func	.Func/Grp1	.Grp1/FuseF
Disturb. Report	Functions	Group 1	Line Reference	<i>Operation</i>
Service Report	ChangeAct Grp	Group 2	Differential	<i>U></i>
Settings	Disturb Report	Group 3	Impedance	<i>I></i>
Terminal Status	Internal Time	Group 4	EarthFault	
Configuration			Sensitive EF	.Grp1/CTSup
Test			EarthFlt4Step	<i>Operation</i>
Front Comm			FuseFailure	<i>IminOp</i>
			CTSupervision	
			OverLoad	.Grp1/OvLoad
			BrokenConduct	<i>Operation</i>
			OverVoltage	<i>I></i>
			HiSetOverCurr	<i>t</i>
			UnderVoltage	
			Stub	.Grp1/BrkCond
			LossOfVoltage	<i>Operation</i>
			BreakerFailure	<i>t</i>
			PoleDiscord	
			AutoRecloser	.Grp1/OvVolt
			SyncroCheck	<i>Operation</i>
			TimeOverCurr	<i>U></i>
			Trip	<i>t</i>
				.Grp1/HiSetOC
				<i>Operation</i>
				<i>I>></i>
				.Grp1/UnVolt
				<i>Operation</i>
				<i>U<</i>
				<i>t</i>
				.Grp1/Stub
				<i>Operation</i>
				.Grp1/LOVolt
				<i>Operation</i>
				.Grp1/BrkFail
				<i>Operation</i>
				<i>I></i>
				<i>t2</i>
				<i>RetripType</i>
				<i>t1</i>
				.Grp1/PolDisc
				<i>Operation</i>
				<i>t</i>

Save as Grp 1
 Save as Grp 2
 Save as Grp 3
 Save as Grp 4

Command **with**
 confirmation, see
 "Local MMC",
 1MRK 580 007-XEN

<div>REx5xx</div> <div>Disturb. Report</div> <div>Service Report</div> <div>Settings</div> <div>Terminal Status</div> <div>Configuration</div> <div>Test</div> <div>Front Comm</div>	<div>REx5xx/Set</div> <div>Functions</div> <div>ChangeAct Grp</div> <div>Disturb Report</div> <div>Internal Time</div>	<div>.Set/Func</div> <div>Group 1</div> <div>Group 2</div> <div>Group 3</div> <div>Group 4</div>	<div>.Func/Grp1</div> <div>Line Reference</div> <div>Differential</div> <div>Impedance</div> <div>EarthFault</div> <div>Sensitive EF</div> <div>EarthFlt4Step</div> <div>FuseFailure</div> <div>CTSupervision</div> <div>OverLoad</div> <div>BrokenConduct</div> <div>OverVoltage</div> <div>HiSetOverCurr</div> <div>UnderVoltage</div> <div>Stub</div> <div>LossOfVoltage</div> <div>BreakerFailure</div> <div>PoleDiscord</div> <div>AutoRecloser (*)</div> <div>SyncroCheck</div> <div>TimeOverCurr</div> <div>Trip</div>	<div>.Grp1/AutoRec</div> <div>Operation</div> <div>Program</div> <div>Extend t1</div> <div>t1S</div> <div>t1</div> <div>t2</div> <div>t3</div> <div>t4</div> <div>tSync</div> <div>tPulse</div> <div>CutPulse</div> <div>tReclaim</div> <div>tInhibit</div> <div>CBReady</div> <div>tTrip</div> <div>Priority</div> <div>tWait</div>	AR1MB
		<div>Save as Grp 1</div> <div>Save as Grp 2</div> <div>Save as Grp 3</div> <div>Save as Grp 4</div> <div></div> <div>Command with confirmation, see "Local MMC", 1MRK 580 007-XEN</div>			
			<div>(*) Only one sub-menu is shown for AR in each product.</div>	<div>.Grp1/AutoRec</div> <div>Operation</div> <div>Program</div> <div>Extend t1</div> <div>t1S</div> <div>t1</div> <div>t2</div> <div>t3</div> <div>t4</div> <div>tSync</div> <div>tPulse</div> <div>CutPulse</div> <div>tReclaim</div> <div>tInhibit</div> <div>CBReady</div> <div>tTrip</div>	AR1
				<div>.Grp1/AutoRec</div> <div>Operation</div> <div>Program</div> <div>Extend t1</div> <div>t1</div> <div>t2</div> <div>t3</div> <div>t4</div> <div>tSync</div> <div>tPulse</div> <div>CutPulse</div> <div>tReclaim</div> <div>tInhibit</div> <div>CBReady</div> <div>tTrip</div>	AR3

REx5xx	REx5xx/Set	.Set/Func	.Func/Grp1	.Grp1/SyncCh
Disturb. Report	Functions	Group 1	Line Reference	<i>Operation</i>
Service Report	ChangeAct Grp	Group 2	Differential	<i>InputPhase</i>
Settings	Disturb Report	Group 3	Impedance	<i>USelection (*)</i>
Terminal Status	Internal Time	Group 4	EarthFault	<i>Energizing</i>
Configuration			Sensitive EF	<i>UHigh</i>
Test			EarthFlt4Step	<i>ULow</i>
Front Comm			FuseFailure	<i>FreqDiff</i>
			CTSupervision	<i>PhaseDiff</i>
			OverLoad	<i>UDiff</i>
			BrokenConduct	<i>tEnerg</i>
			OverVoltage	
			HiSetOverCurr	.Grp1/ITOC
			UnderVoltage	<i>Operation</i>
			Stub	<i>I></i>
			LossOfVoltage	<i>t</i>
			BreakerFailure	<i>IN></i>
			PoleDiscord	<i>tN</i>
			AutoRecloser	
			SyncroCheck	.Grp1/Trip
			TimeOverCurr	<i>Operation</i>
			Trip	

Save as Grp 1
Save as Grp 2
Save as Grp 3
Save as Grp 4

Command **with**
confirmation, see
"Local MMC",
1MRK 580 007-XEN

(*) For REB 551 only.

REx5xx	REx5xx/Set	.Set/ChgGrp	Activate Grp 1
Disturb. Report	Functions	Activate Grp 1	Activate Grp 2
Service Report	ChangeAct Grp	Activate Grp 2	Activate Grp 3
Settings	Disturb Report	Activate Grp 3	Activate Grp 4
Terminal Status	Internal Time	Activate Grp 4	
Configuration			Command with
Test			confirmation, see
Front Comm			"Local MMC",
			1MRK 580 007-XEN

REx5xx/Set	.Set/DistRep	.DistRep/Oper	.Binary/Sign1	SIGNAL LIST <i>All signals in signal list are grouped under function sub-menus.</i> FixedSignals Trip Logic Differential ImpZones ImpComm ImpPhSel ImpGFC ImpPSB ImpSOTF EarthFault Sensitive EF EarthFlt4Step FuseFailure CTSupervision OverLoad BrokenConduct OverVoltage HiSetOverCurr UnderVoltage Stub LossOfVoltage BreakerFailure PoleDiscord AutoRecloser SyncroCheck TimeOverCurr DisturbReport InternSignals Control LogicAND LogicOR LogicTM LogicTP I/O-moduleB I/O-module1 I/O-module2 I/O-module3 I/O-module4 I/O-module5
Functions	Operation	<i>Operation</i>	<i>Signal 1 (signal list)</i>	
ChangeAct Grp	RecordingTimes		<i>TrigOperation</i>	
Disturb Report	BinarySignals	.DistRep/RecTime	<i>TrigLevel</i>	
Internal Time	AnalogSignals	<i>tPre</i>	<i>IndicationMask</i>	
	Fault Locator	<i>tPost</i>		
		<i>tLim</i>	Binary/Sign 48	
	.Set/IntTime	.DistRep/Binary	<i>Signal 48 (signal list)</i>	
	<i>Date & Time</i>	Signal 1	<i>TrigOperation</i>	
		Signal 2	<i>TrigLevel</i>	
		-	<i>IndicationMask</i>	
		-	.Analog/UL1	
		Signal 47	<i>Operation</i>	
		Signal 48	<i>Name</i>	
			<i>Trig U></i>	
			<i>U></i>	
			<i>Trig U<</i>	
			<i>U<</i>	
		.DistRep/Analog	.Analog/IL1	
		UL1	<i>Operation</i>	
		UL2	<i>Name</i>	
		UL3	<i>Trig I></i>	
		U4	<i>I></i>	
		U5	<i>Trig I<</i>	
		IL1	<i>I<</i>	
		IL2		
		IL3		
		IN		
		I5		
		.DistRep/FltLoc		
		<i>tFilter</i>		
		<i>Distance Unit</i>		

1.2.4 Display for Terminal Status menu

REx5xx	REx5xx/TermSt	.TermSt/SelfSup	.IdentNo/Observe
Disturb. Report	Self Superv	<i>InternFail</i>	<i>OrderingNo</i>
Service Report	Identity No	<i>InternWarning</i>	<i>TermSerialNo</i>
Settings		<i>CPU-modFail</i>	<i>SW Version</i>
Terminal Status		<i>CPU-modWarning</i>	<i>CPU-module</i>
Configuration		<i>ADC-module</i>	<i>I/O-moduleB</i>
Test		<i>I/O-moduleB</i>	<i>I/O-module1</i>
Front Comm		<i>I/O-module1</i>	<i>I/O-module2</i>
		<i>I/O-module2</i>	<i>I/O-module3</i>
		<i>I/O-module3</i>	<i>I/O-module4</i>
		<i>I/O-module4</i>	<i>I/O-module5</i>
		<i>I/O-module5</i>	<i>I/O-diff</i>
		<i>I/O-diff</i>	
		<i>Real Time Clock</i>	.IdentNo/Note
		<i>Time Sync</i>	<i>Trafo-module</i>
		<i>Trip Circuit</i>	<i>ADC-module</i>
		<i>Diff Communic</i>	<i>MMI-module</i>
			<i>Frame</i>
		.TermSt/IdentNo	
		Observed	
		Noted	

1.2.5 Display for Configuration menu

REx5xx	REx5xx/Config	.Config/FuncInp	.FuncInp/TripLog	SIGNAL LIST
Disturb. Report	FunctionInputs	Trip Logic	TRIP-BLOCK	<i>All signals in signal list are grouped under function sub-menus</i>
Service Report	Binary Outputs	Differential	TRIP-TRTP	FixedSignals
Settings	Binary Inputs	Impedance	TRIP-TRSP	Trip Logic
Terminal Status	Identifiers	EarthFault	TRIP-EXTL1	Differential
Configuration	Frequency	Sensitive EF	TRIP-EXTL2	ImpZones
Test	Transformers	EarthFlt4Step	TRIP-EXTL3	ImpComm
Front Comm	I/O-modules	FuseFailure	TRIP-EXTTRIP	ImpPhSel
	TimeSyncSource	HiSetOverCurr	TRIP-PTPTRIP	ImpGFC
	BuiltInMMI	Under Voltage	TRIP-PSL1	ImpPSB
	SPAComm	Stub	TRIP-PSL2	ImpSOTF
	Differential	LossOfVoltage	TRIP-PSL3	EarthFault
		BreakerFailure		Sensitive EF
		PoleDiscord	.FuncInp/Diff	EarthFlt4Step
		AutoRecloser	DIFF-BLOCK	FuseFailure
		SyncroCheck	DIFF-TRTRIN	CTSupervision
		TimeOverCurr		OverLoad
		TripSuperv	.FuncInp/Imp	BrokenConduct
		ActiveGroup	IMP--EXTPSB	OverVoltage
		BuiltInMMI	IMP--BLTZ1	HiSetOverCurr
		Test	IMP--BLTZ2	UnderVoltage
		DisturbReport	IMP--BLTZ3	Stub
		TimeSyncInput	IMP--BLTZ4	LossOfVoltage
		LogicAND	IMP--BLTZ5	BreakerFailure
		LogicOR	IMP--BC	PoleDiscord
		LogicTM	IMP--BLOCK	AutoRecloser
		LogicTP	IMP--EXACC	SyncroCheck
			IMP--LLACC	TimeOverCurr
			IMP--CACC	DisturbReport
			IMP--CSUR	InternSignals
			IMP--CSOR	Control
			IMP--CSBL	LogicAND
			IMP--CSNBL	LogicOR
			IMP--CR	LogicTM
			IMP--CRG	LogicTP
			IMP--IREV	I/O-moduleB
			IMP--IREVBL	I/O-module1
			IMP--WEIBL	I/O-module2
			IMP--VTSZ	I/O-module3
			IMP--ARREADY	I/O-module4
				I/O-module5

Version 1.2
October 1996

REx5xx	REx5xx/Config	.Config/FuncInp	.FuncInp/EarthFI	SIGNAL LIST
Disturb. Report	FunctionInputs	Trip Logic	<i>EF---BLOCK</i>	<i>All signals in signal list are grouped under function sub-menus</i>
Service Report	Binary Outputs	Differential	<i>EF---BLKTEF</i>	FixedSignals
Settings	Binary Inputs	Impedance	<i>EF---BC</i>	Trip Logic
Terminal Status	Identifiers	EarthFault	<i>EF---CR</i>	Differential
Configuration	Frequency	Sensitive EF	.FuncInp/SenseEF	ImpZones
Test	Transformers	EarthFlt4Step	<i>SEFZ-BLOCK</i>	ImpComm
Front Comm	I/O-modules	FuseFailure	<i>SEFZ-RXPIN</i>	ImpPhSel
	TimeSyncSource	HiSetOverCurr	.FuncInp/EF4Step	ImpGFC
	BuiltInMMI	UnderVoltage	<i>EF4--BC</i>	ImpPSB
	SPAComm	Stub	<i>EF4--BLKTEF</i>	ImpSOTF
	Differential	LossOfVoltage	<i>EF4--BLOCK</i>	EarthFault
		BreakerFailure	<i>EF4--CR</i>	Sensitive EF
		PoleDiscord	<i>EF4--CSACC</i>	EarthFlt4Step
		AutoRecloser	<i>EF4--TRACC</i>	FuseFailure
		SyncroCheck	.FuncInp/FuseF	CTSupervision
		TimeOverCurr	<i>FUSE-MCB</i>	OverLoad
		TripSuperv	<i>FUSE-DISC</i>	BrokenConduct
		ActiveGroup	.FuncInp/HiSetOC	OverVoltage
		BuiltInMMI	<i>HII--BLKTR</i>	HiSetOverCurr
		Test	.FuncInp/UnVolt	UnderVoltage
		DisturbReport	<i>UUVT-VTSU</i>	Stub
		TimeSyncInput	<i>UUVT-BLOCK</i>	LossOfVoltage
		LogicAND	.FuncInp/Stub	BreakerFailure
		LogicOR	<i>STUB-DISC</i>	PoleDiscord
		LogicTM	.FuncInp/LOVolt	AutoRecloser
		LocigTP	<i>SSUP-BC</i>	SyncroCheck
			<i>SSUP-VTSU</i>	TimeOverCurr
			.FuncInp/BrkFail	DisturbReport
			<i>BFP--STL1</i>	InternSignals
			<i>BFP--STL2</i>	Control
			<i>BFP--STL3</i>	LogicAND
			<i>BFP--ST3PH</i>	LogicOR
			.FuncInp/PolDisc	LogicTM
			<i>PDP--POLDISC</i>	LogicTP
			<i>PDP--BC</i>	I/O-moduleB
			<i>PDP--BLOCK</i>	I/O-module1
			<i>PDP--GTRIP</i>	I/O-module2
				I/O-module3
				I/O-module4
				I/O-module5

REx5xx	REx5xx/Config	.Config/FuncInp	.FuncInp/AutoRec	SIGNAL LIST
Disturb. Report	FunctionInputs	Trip Logic	AR---START	<i>All signals in signal list are grouped under function sub-menus</i>
Service Report	Binary Outputs	Differential	AR---ON	FixedSignals
Settings	Binary Inputs	Impedance	AR---OFF	Trip Logic
Terminal Status	Identifiers	EarthFault	AR---CBREADY	Differential
Configuration	Frequency	Sensitive EF	AR---CBCLOSED	ImpZones
Test	Transformers	EarthFlt4Step	AR---INHIBIT	ImpComm
Front Comm	I/O-modules	FuseFailure	AR---PLCLOST	ImpPhSel
	TimeSyncSource	HiSetOverCurr	AR---WAIT	ImpGFC
	BuiltInMMI	UnderVoltage	AR---SYNC	ImpPSB
	SPAComm	Stub	AR---TRSOTF	ImpSOTF
	Differential	LossOfVoltage	AR---TPTRIP	EarthFault
		BreakerFailure		Sensitive EF
		PoleDiscord	.FuncInp/SyncCh	EarthFlt4Step
		Autorecloser	SYNC-BLOCK	FuseFailure
		SyncroCheck	SYNC-U5FF	CTSupervision
		TimeOverCurr	SYNC-U5OK	OverLoad
		TripSuperv	SYNC-U4FF	BrokenConduct
		ActiveGroup	SYNC-U4OK	OverVoltage
		BuiltInMMI	SYNC-FDOPEN	HiSetOverCurr
		Test	SYNC-FDCLOSED	UnderVoltage
		DisturbReport	SYNC-B1OPEN	Stub
		TimeSyncInput	SYNC-B1CLOSED	LossOfVoltage
		LogicAND	SYNC-B2OPEN	BreakerFailure
		LogicOR	SYNC-B2CLOSED	PoleDiscord
		LogicTM	SYNC-VTSU	AutoRecloser
		LocigTP		SyncroCheck
			.FuncInp/ITOC	TimeOverCurr
			ITOC-BLKTR	DisturbReport
			ITOC-VTSZ	InternSignals
				Control
			.FuncInp/TripSup	LogicAND
			TCS--TRIPSUPV	LogicOR
				LogicTM
			.FuncImp/Group	LogicTP
			GRP--ACTGROUP1	I/O-moduleB
			GRP--ACTGROUP2	I/O-module1
			GRP--ACTGROUP3	I/O-module2
			GRP--ACTGROUP4	I/O-module3
				I/O-module4
				I/O-module5

Version 1.2
October 1996

REx5xx	REx5xx/Config	.Config/FuncInp	.FuncInp/MMI	SIGNAL LIST <i>All signals in signal list are grouped under function sub-menus</i>
Disturb. Report	FunctionInputs	Trip Logic	MMI--BLOCKSET	
Service Report	Binary Outputs	Differential		
Settings	Binary Inputs	Impedance	.FuncInp/Test	
Terminal Status	Identifiers	EarthFault	TEST-INPUT	
Configuration	Frequency	Sensitive EF	TEST-BLOCKON	FixedSignals
Test	Transformers	EarthFlt4Step	TEST-BLOCKOFF	Trip Logic
Front Comm	I/O-modules	FuseFailure		Differential
	TimeSyncSource	HiSetOverCurr	.FuncInp/DistRep	ImpZones
	BuiltInMMI	Under Voltage	DREP-CLRLEDS	ImpComm
	SPAComm	Stub		ImpPhSel
	Differential	LossOfVoltage	.FuncInp/SyncInp	ImpGFC
		BreakerFailure	SINP-MINSYNC	ImpPSB
		PoleDiscord		ImpSOTF
		AutoRecloser	.FuncInp/LogAND	EarthFault
		SyncroCheck	AN1--INPUT1	Sensitive EF
		TimeOverCurr	AN1--INPUT2	EarthFlt4Step
		TripSuperv	AN1--INPUT3	FuseFailure
		ActiveGroup	AN1--INPUT4N	CTSupervision
		BuiltInMMI	AN2--INPUT1	OverLoad
		Test	AN2--INPUT2	BrokenConduct
		DisturbReport	AN2--INPUT3	OverVoltage
		TimeSyncInput	AN2--INPUT4N	HiSetOverCurr
		LogicAND	-	UnderVoltage
		LogicOR	-	Stub
		LogicTM	AN10-INPUT1	LossOfVoltage
		LogicTP	AN10-INPUT2	BreakerFailure
			AN10-INPUT3	PoleDiscord
			AN10-INPUT4N	AutoRecloser
				SyncroCheck
				TimeOverCurr
				DisturbReport
				InternSignals
				Control
				LogicAND
				LogicOR
				LogicTM
				LogicTP
				I/O-moduleB
				I/O-module1
				I/O-module2
				I/O-module3
				I/O-module4
				I/O-module5

REx5xx	REx5xx/Config	.Config/FuncInp	.FuncInp/LogOR	SIGNAL LIST
Disturb. Report	FunctionInputs	Trip Logic	OR1--INPUT1	All signals in signal list are grouped under function sub-menus
Service Report	Binary Outputs	Differential	OR1--INPUT2	
Settings	Binary Inputs	Impedance	OR1--INPUT3	
Terminal Status	Identifiers	EarthFault	OR1--INPUT4	
Configuration	Frequency	Sensitive EF	OR1--INPUT5	FixedSignals
Test	Transformers	EarthFlt4Step	OR1--INPUT6	Trip Logic
Front Comm	I/O-modules	FuseFailure	OR2--INPUT1	Differential
	TimeSyncSource	HiSetOverCurr	OR2--INPUT2	ImpZones
	BuiltInMMI	UnderVoltage	OR2--INPUT3	ImpComm
	SPAComm	Stub	OR2--INPUT4	ImpPhSel
	Differential	LossOfVoltage	OR2--INPUT5	ImpGFC
		BreakerFailure	OR2--INPUT6	ImpPSB
		PoleDiscord	-	ImpSOTF
		AutoRecloser	-	EarthFault
		SyncroCheck	OR20-INPUT1	Sensitive EF
		TimeOverCurr	OR20-INPUT2	EarthFlt4Step
		TripSuperv	OR20-INPUT3	FuseFailure
		ActiveGroup	OR20-INPUT4	CTSupervision
		BuiltInMMI	OR20-INPUT5	OverLoad
		Test	OR20-INPUT6	BrokenConduct
		DisturbReport		OverVoltage
		TimeSyncInput	.FuncInp/LogTM	HiSetOverCurr
		LogicAND	TM1--INPUT	UnderVoltage
		LogicOR	t1	Stub
		LogicTM	TM2--INPUT	LossOfVoltage
		LogicTP	t2	BreakerFailure
			-	PoleDiscord
			-	AutoRecloser
			TM10-INPUT	SyncroCheck
			t10	TimeOverCurr
				DisturbReport
			.FuncImp/Log TP	InternSignals
			TP1--INPUT	Control
			t1	LogicAND
			TP2--INPUT	LogicOR
			t2	LogicTM
			-	LogicTP
			-	I/O-moduleB
			TP50-INPUT	I/O-module1
			t50	I/O-module2
				I/O-module3
				I/O-module4
				I/O-module5

Version 1.2
October 1996

REx 5xx	REx5xx/Config	.Config/BinOut	.BinOut/IomodB	SIGNAL LIST
Disturb. Report	FunctionInputs	I/O-module B	Config BO1	All signals in signal list
Service Rep	Binary Outputs	I/O-module 1	Name1	are grouped under
Setting	Binary Inputs	I/O-module 2	Config BO2	function sub-menus.
Terminal Status	Identifiers	I/O-module 3	Name2	FixedSignals
Configuration	Frequency	I/O-module 4	-	Trip Logic
Test	Transformers	I/O-module 5	-	Differential
Front Comm	I/O-modules		Config BO23	ImpZones
	TimeSyncSource		Name23	ImpComm
	BuiltInMMI		Config BO24	ImpPhSel
	SPAComm		Name24	ImpGFC
	Differential			ImpPSB
			.BinOut/Iomod5	ImpSOTF
			Config BO1	EarthFault
			Name1	Sensitive EF
			Config BO2	EarthFlt4Step
			Name2	FuseFailure
			-	CTSupervision
			-	OverLoad
			Config BO23	BrokenConduct
			Name23	OverVoltage
			Config BO24	HiSetOverCurr
			Name24	UnderVoltage
				Stub
				LossOfVoltage
				BreakerFailure
				PoleDiscord
				AutoRecloser
				SyncroCheck
				TimeOverCurr
				DisturbReport
				InternSignals
				Control
				LogicAND
				LogicOR
				LogicTM
				LogicTP
				I/O-moduleB
				I/O-module1
				I/O-module2
				I/O-module3
				I/O-module4
				I/O-module5

REx5xx	REx5xx/Config	.Config/BinInp	.BinInp/IOmodB
Disturb. Report	FunctionInputs	I/O-module B	Name1
Service Report	Binary Outputs	I/O-module 1	Name2
Settings	Binary Inputs	I/O-module 2	-
Terminal Status	Identifiers	I/O-module 3	-
Configuration	Frequency	I/O-module 4	Name23
Test	Transformers	I/O-module 5	Name24
Front Comm	I/O-modules		
	TimeSyncSource	.Config/Ident	.BinInp/IOmod5
	BuiltInMMI	Station Name	Name1
	SPAComm	Station No	Name2
	Differential	Object Name	-
		Object No	-
		Unit Name	Name23
		Unit No	Name24
		.Config/Freq	.IOmod/Oper
		Frequency	I/O-moduleB
			I/O-module1
		.Config/Transf	I/O-module2
		Ur	I/O-module3
		Ir	I/O-module4
		VTPrim UPhases	I/O-module5
		VTPrim U4	
		VTPrim U5	
		CTPrim IPhases	
		CTPrim IN	
		CTPrim I5	
		CTEarth	
		.Config/IOmod	
		Operation	
		Reconfigure	
			Reconfigure
			Command with
			confirmation, see
			"Local MMC",
			1MRK 580 007-XEN

REx5xx	REx5xx/Config	.Config/TSync	.SPAComm/ChA
Disturb. Report	FunctionInputs	TimeSyncSource	SlaveNo
Service Report	Binary Outputs		BaudRate
Settings	Binary Inputs	.Config/MMI	ActGrpRestrict
Terminal Status	Identifiers	SettingRestrict	SettingRestrict
Configuration	Frequency		
Test	Transformers	.Config/SPAComm	.SPAComm/ChB
Front Comm	I/O-modules	Channel A	SlaveNo
	TimeSyncSource	Channel B	BaudRate
	BuiltInMMI	Front	ActGrpRestrict
	SPAComm		SettingRestrict
	Differential	.Config/Diff	
		System	.SPAComm/Front
		Communication	Slave No
			BaudRate
			.Diff/System
			DiffSync
			TerminalNo
			RemoteTermNo
			.Diff/Comm
			BitRate
			OptoPower
			CommSync

1.2.6 Display for Test menu

REx5xx	Rex5xx/Test	.Test/BlockT	.Mode/Oper
Disturb. Report	Block Terminal	<i>BlockTerminal</i>	<i>Operation</i>
Service Report	Test Mode		
Settings		.Test/Mode	.Mode/DistRep
Terminal Status		Operation	<i>Operation</i>
Configuration		DisturbReport	<i>DisturbSummary</i>
Test		Differential	
Front Comm		SimulationLog	.Mode/Diff
			<i>DiffTestMode</i>

<div><div>.Test/Mode</div><div>Operation</div><div>DisturbReport</div><div>Differential</div><div>SimulationLog</div></div>	<div><div>.Mode/SimLog</div><div>Operation</div><div>Signal Test</div><div>Event Test</div></div>	<div><div>.SimLog/Oper</div><div>Operation</div></div> <div><div>.SimLog/Signal T</div><div>Signal1</div><div>Signal2</div><div>Signal3</div><div>Signal4</div><div>Signal5</div><div>Signal6</div></div> <div><div>.SimLog/Event T</div><div>Event1</div><div>Event2</div><div>Event3</div><div>Event4</div><div>Event5</div><div>Event6</div><div>LongEvent7</div></div>	<div><div>.SignalT/Signal1</div><div>SIG1-INPUT</div><div>SIG1-SIGNAL</div></div> <div><div>.SignalT/Signal6</div><div>SIG6-INPUT</div><div>SIG6-SIGNAL</div></div> <div><div>.EventT/Event1</div><div>EV1--INPUT</div><div>EV1--SIGNAL</div><div>t1</div><div>tPulse1</div></div> <div><div>.EventT/Event6</div><div>EV6--INPUT</div><div>EV6--SIGNAL</div><div>t6</div><div>tPulse6</div></div> <div><div>.EventT/LongEV7</div><div>EV7--INPUT</div><div>EV7--SIGNAL</div><div>t7</div><div>tPulse7</div></div>	<div><div>SIGNAL LIST</div><div>When connecting</div><div>SIG(1-6)-INPUT and</div><div>EV(1-7)--INPUT</div></div> <div><div>Fixed Signals</div><div>I/O-moduleB</div><div>I/O-module1</div><div>I/O-module2</div><div>I/O-module3</div><div>I/O-module4</div><div>I/O-module5</div></div>	<div><div>SIGNAL LIST</div><div>When connecting</div><div>SIG(1-6)-SIGNAL and</div><div>EV(1-7)--SIGNAL</div></div> <div><div>SimulationLog</div><div>TripLogic</div><div>Differential</div><div>ImpZones</div><div>ImpComm</div><div>ImpPhsel</div><div>ImpGFC</div><div>ImpPSB</div><div>ImpSOTF</div><div>EarthFault</div><div>SensitiveEF</div><div>EarthFlt4Step</div><div>FuseFailure</div><div>CTSupervision</div><div>OverLoad</div><div>BrokenConduct</div><div>OverVoltage</div><div>HiSetOverCurr</div><div>UnderVoltage</div><div>Stub</div><div>LossOfVoltage</div><div>BreakerFailure</div><div>PoleDiscord</div><div>AutoRecloser</div><div>SynchroCheck</div><div>TimeOverCurr</div><div>DisturbReport</div><div>InternSignals</div><div>Control</div><div>LogicAND</div><div>LogicOR</div><div>LogicTM</div><div>LogicTP</div><div>I/O-moduleB</div><div>I/O-module1</div><div>I/O-module2</div><div>I/O-module3</div><div>I/O-module4</div><div>I/O-module5</div></div>
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1.2.7 Display for Front Communication menu

REx5xx	Rex 5xx/Front	Deactivate/Activate
Disturb. Report	Deactivate	
Service Report	Activate	Commands with confirmation, see "Local MMC", 1MRK 580 007-XEN
Settings		
Terminal Status		
Configuration		
Test		
Front Comm		