

Group settings (Group 1)

Device Name	PMGD Los Sauces 2
Device Serial Number	0311723120016
Device Description	Los Sauces Contulmo

Group Name PMGD LOS SAUCES II

Description

Sectionaliser ☐

Overcurrent(OC/EF)

Phase overcurrent (OC)

Trip	1	2	3	4	DE
SST+	⊗	○	○	○	
OC1+	L	L	L	L	<input checked="" type="checkbox"/>
OC2+	L	L	L	L	<input checked="" type="checkbox"/>
OC3+	D	D	D	D	<input type="checkbox"/>
SST-	⊗	○	○	○	
OC1-	L	L	L	L	<input checked="" type="checkbox"/>
OC2-	L	L	L	L	<input checked="" type="checkbox"/>
OC3-	D	D	D	D	<input type="checkbox"/>

Directional element (DE)

Torque angle (At)

280

Direction Not Detected

Trip

Dir Change Response

Dynamic

OC Number of Trips

1

Yn

Trip	1	2	3	4
Yn	D	D	D	D

Yn Number of Trips

0

Negative Phase Sequence (NPS)

Trip	1	2	3	4	DE
SST+	⊗	○	○	○	
NPS1+	D	D	D	D	<input type="checkbox"/>
NPS2+	D	D	D	D	<input type="checkbox"/>
NPS3+	D	D	D	D	<input type="checkbox"/>
SST-	⊗	○	○	○	
NPS1-	D	D	D	D	<input type="checkbox"/>
NPS2-	D	D	D	D	<input type="checkbox"/>
NPS3-	D	D	D	D	<input type="checkbox"/>

Directional element (DE)

Torque angle (At)

0

Direction Not Detected

Block

Dir Change Response

Lock

I2/I1

I2/I1

D

Pickup Value, %

20

Minimum I2, A

15

Tripping Time, s

10.00

NPS Number of Trips

0

Earth fault overcurrent (EF)

Trip	1	2	3	4	DE
SST+	⊗	○	○	○	
EF1+	L	L	L	L	<input checked="" type="checkbox"/>
EF2+	L	L	L	L	<input checked="" type="checkbox"/>
EF3+	D	D	D	D	<input type="checkbox"/>
SST-	⊗	○	○	○	
EF1-	L	L	L	L	<input checked="" type="checkbox"/>
EF2-	L	L	L	L	<input checked="" type="checkbox"/>
EF3-	D	D	D	D	<input type="checkbox"/>

Directional element (DE)

Torque angle (At)

100

Direction Not Detected

Trip

Dir Change Response

Dynamic

Advance Polar Det

D

Min Polar NVD Thres

0.10

Max Forward Angle

90

Min Forward Angle

90

Max Reverse Angle

90

Min Reverse Angle

90

EF Number of Trips

1

Sensitive earth fault (SEF)

Trip	1	2	3	4	DE
SEF+	D	D	D	D	<input type="checkbox"/>
SEF-	D	D	D	D	<input type="checkbox"/>

Directional element (DE)

Torque angle (At)

0

Direction Not Detected

Block

Dir Change Response

Lock

Advance Polar Det

D

Min Polar NVD Thres

0.10

Max Forward Angle

90

Min Forward Angle

90

Max Reverse Angle

90

Min Reverse Angle

90

Polarisation

In

SEF Number of Trips

0

Inrush restraint (IR)

Multiplier (IRM)

5.0

Time (Tir), s

0.15

Temporary Time Addition

Mode

Transient

Transient Additional Time, s

0.00

Cold load pickup (CLP)

Multiplier (CLM)

1.0

Time (Tcl), min

15

Recognition time, min

15

ZSC

D

LSRM Mode

D

LSRM Time,s

15

Sequence Advance

0

OC/NPS/EF/SEF Reclose Times

1st Reclose Time(Tr1),s	10.00
2nd Reclose Time(Tr2), s	20.00
3rd Reclose Time(Tr3), s	20.00
Reset Time(Tres), s	30.00
VRC	Enable <input type="checkbox"/>
SST Control	Enable <input type="checkbox"/>
SST Time, s	30.0
Number of Trips(NT)	1

Frequency

	Pickup		Tripping time (Tt), s	Mode
Under Frequency (UF)	49.00	Hz	90.00	L
Under Frequency Stage 2 (UF2)	47.50	Hz	0.10	L
Under Frequency Stage 3 (UF3)	49.50	Hz	10.00	D
Over Frequency (OF)	51.00	Hz	90.00	L
Over Frequency Stage 2 (OF2)	51.50	Hz	0.10	L
Over Frequency Stage 3 (OF3)	50.50	Hz	10.00	D
ROCOF	0.4	Hz/s	1.00	D
Voltage Vector Shift Angle	18	Degree	0.1	L

VRC & LLB

Mode	ABC
Multiplier(UM)	0.80
LLB	Enable <input type="checkbox"/>
Multiplier(UM)	0.80

ABR

Enable	<input type="checkbox"/>
Restoration Time (Tr), s	100.00

Auto Open

Mode	Disable
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OCLL

OCLL1	D
OCLL2	D
OCLL3	E

EFLL

EFLL1	D
EFLL2	D
EFLL3	E

NPSLL

NPSLL1	D
NPSLL2	D
NPSLL3	D

SEFLL

SEFLL	D
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2nd Harmonic Inrush Blocking

Mode	Disabled
Harmonic Percentage, %	20
Time, s	1.00

5th Harmonic Inrush Blocking

Mode	Disabled
Harmonic Percentage, %	20
Time, s	1.00

Directional Power

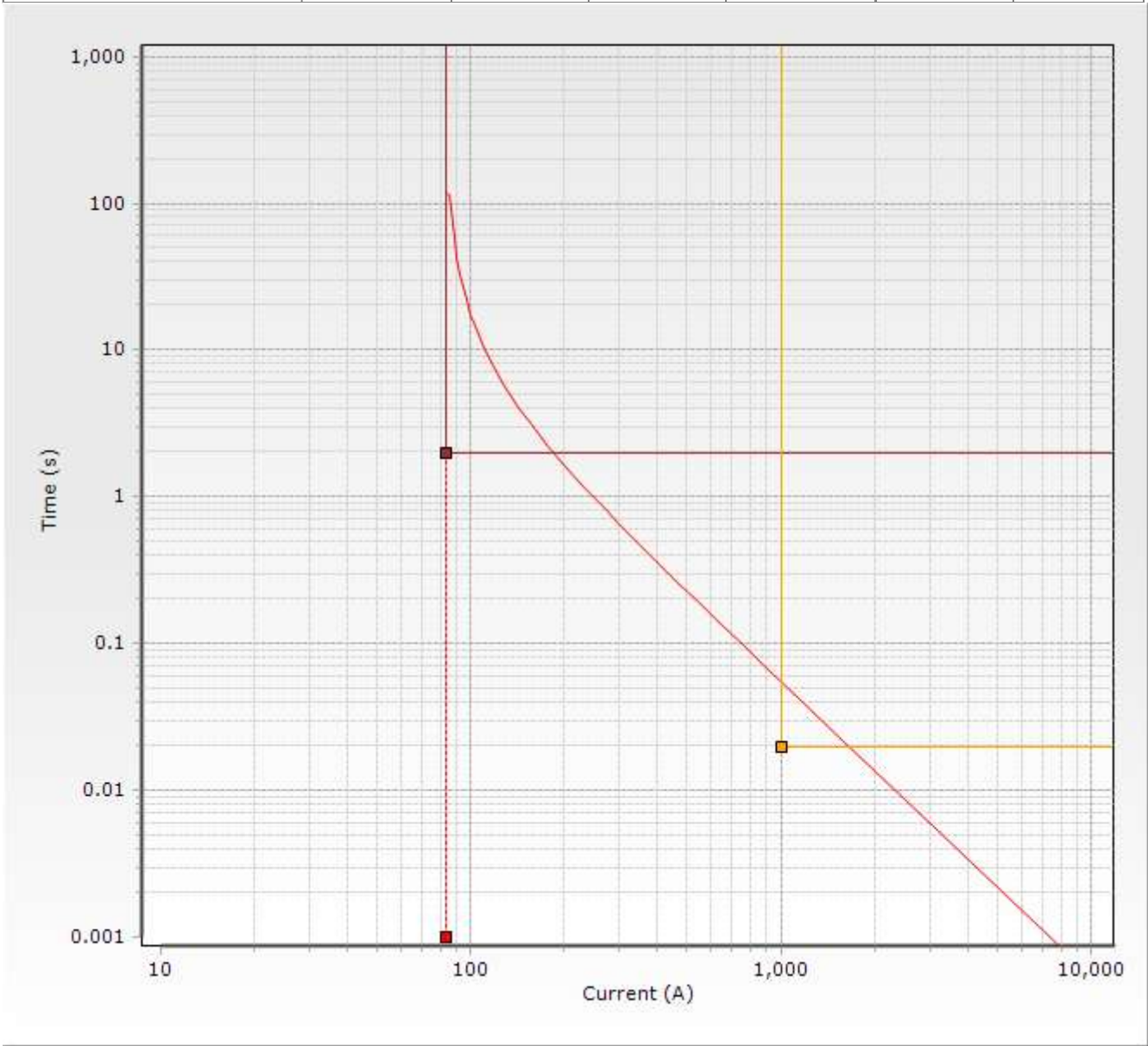
	Pickup, kVA	Pickup, °	Tripping time (Tt), s	Disable time (Dt), s	Mode
PDOP	3,000	31.7	2.00		D
PDUP	2	0.0	10.00	0.00	D

Voltage

Under Voltage (UV)				
	Multiplier (UM)	Tripping time (Tt), s	AR UV map	
UV1	0.90	2.00	D	
UV12	0.60	1.00	D	
UV13	0.85	10.00	D	
UV2	0.90	2.00	L	
UV22	0.60	1.00	L	
UV23	0.80	10.00	D	
UV3				
UV3		0.00	L	
Operation in SST only			<input type="checkbox"/>	
Auto Close Mode		120	D	
Voltage Sag (UV4)				
		Min	Mid	Max
Multiplier (IRM)		0.10	0.50	0.90
Operation Time , s			10.00	D
Lockout Time , mins			10	
Monitored Voltage		ABC_RST		
Voltage Type		Phase/Ground		
Over Voltage (OV)				
	Multiplier (UM)	Tripping time (Tt), s	AR UV map	
OV1	1.10	1.00	D	
OV12	1.20	0.16	D	
OV13	1.15	10.00	D	
OV2	1.10	1.00	L	
OV22	1.20	0.16	L	
OV23	1.15	10.00	D	
OV3 (N.D.)	0.06	0.10	L	
OV3 (M.A.)		0.1	E	
OV4	0.05	10.00	D	
Reclose time, s		10.00		
No. of Trips to lockout		4		

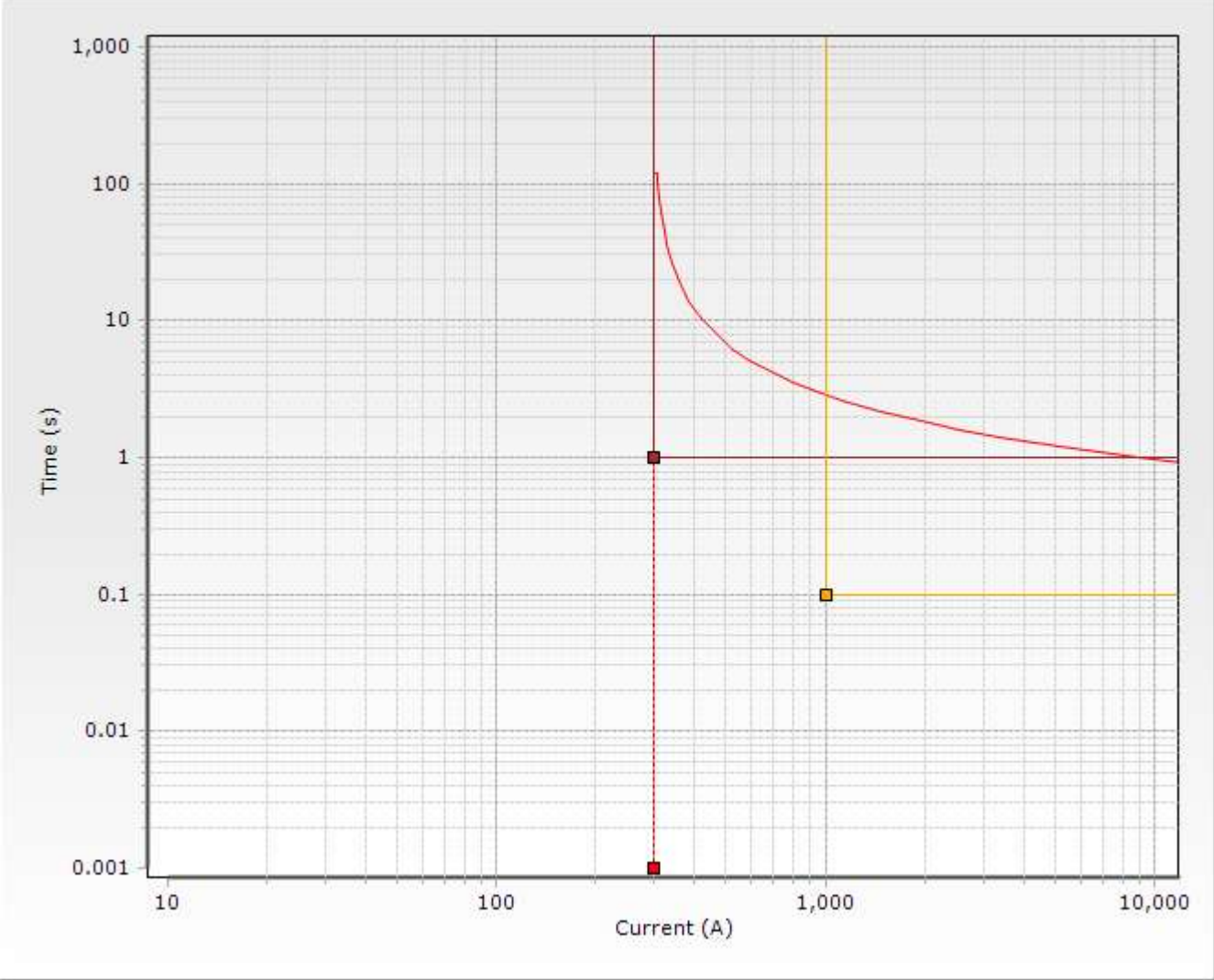
Protection curve: Overcurrent (OC)

	1+	2+	3+	1-	2-	3-
TCC Type	IEC EI	TD	N/A	IEC I	TD	N/A
Pickup Current, A	83	83	1,000	83	83	1,000
Time Multiplier	0.10	0.50	N/A	0.18	0.50	N/A
Min Current Multiplier	1.00	1.00	N/A	1.00	1.00	N/A
Max Current Multiplier	N/A	N/A	N/A	N/A	N/A	N/A
Definite Min Time, s	0.00	0.00	N/A	0.00	0.00	N/A
Tripping Time, s	5.00	2.00	0.02	0.00	2.00	0.10
Max Tripping Time, s	120.00	120.00	N/A	120.00	120.00	N/A
Additional Time, s	0.00	0.00	N/A	0.00	0.00	N/A
Fault Reset Time, s	0.05	0.05	0.05	0.05	0.05	0.05
Voltage-dependent OC	N/A	Disabled	N/A	N/A	Disabled	N/A
Voltage Multiplier	N/A	0.75	N/A	N/A	0.75	N/A



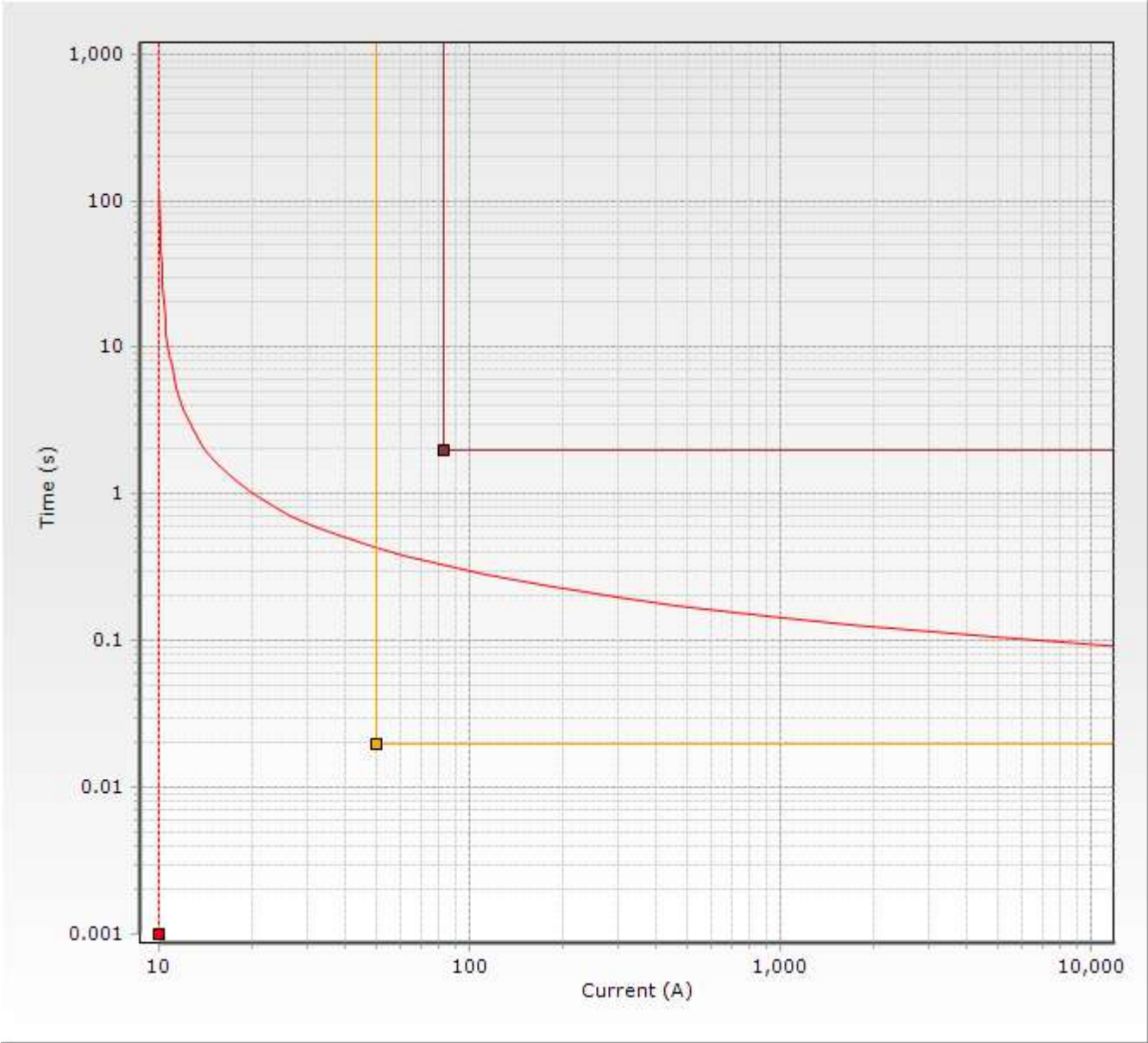
Protection curve: Negative Phase Sequence (NPS)

	1+	2+	3+	1-	2-	3-
TCC Type	IEC I	TD	N/A	IEC I	TD	N/A
Pickup Current, A	300	300	1,000	300	300	1,000
Time Multiplier	0.50	0.50	N/A	0.50	0.50	N/A
Min Current Multiplier	1.00	1.00	N/A	1.00	1.00	N/A
Max Current Multiplier	N/A	N/A	N/A	N/A	N/A	N/A
Definite Min Time, s	0.00	0.00	N/A	0.00	0.00	N/A
Tripping Time, s	5.00	1.00	0.10	0.00	1.00	0.10
Max Tripping Time, s	120.00	120.00	N/A	120.00	120.00	N/A
Additional Time, s	0.00	0.00	N/A	0.00	0.00	N/A
Fault Reset Time, s	0.05	0.05	0.05	0.05	0.05	0.05



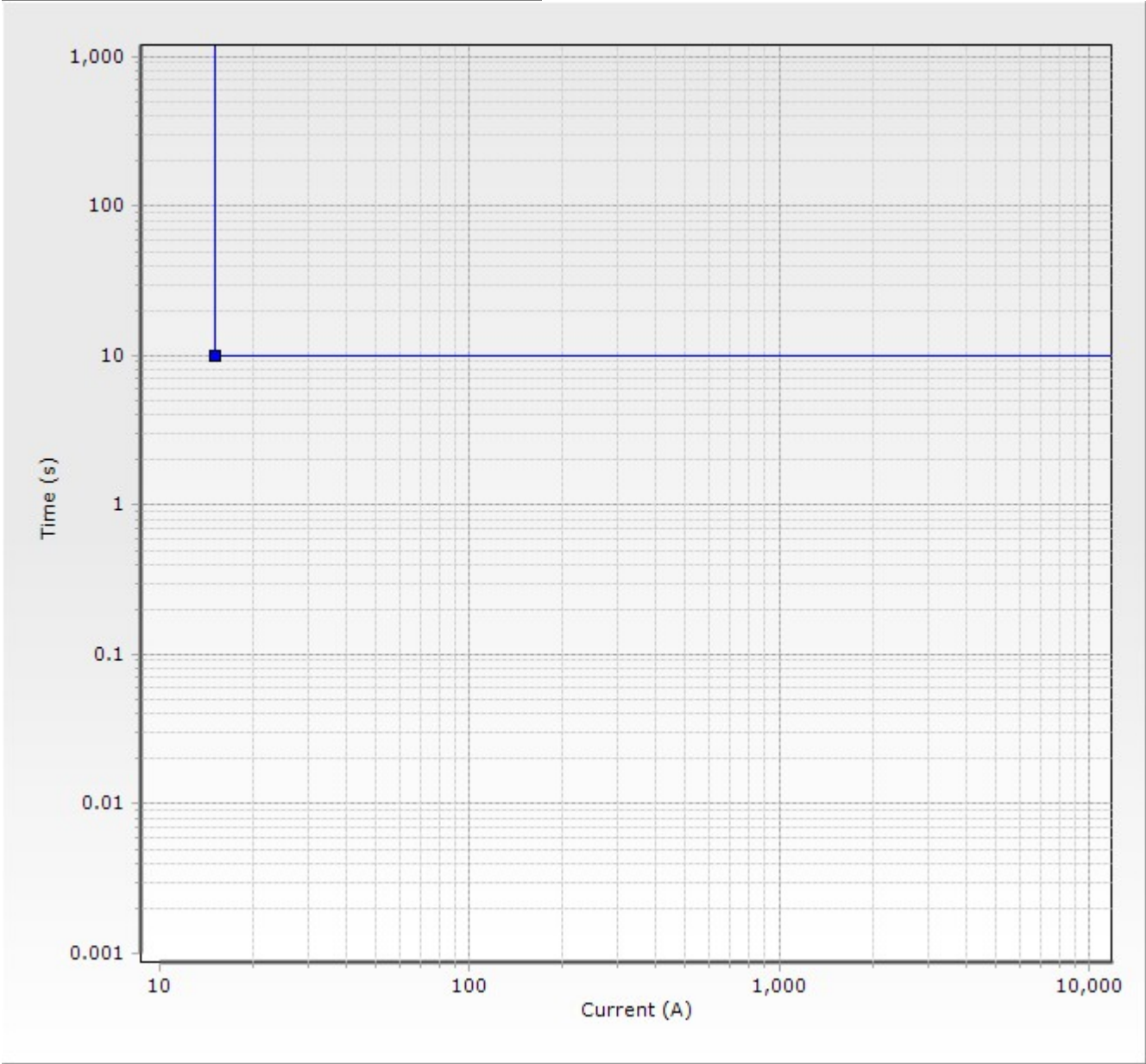
Protection curve: Earth Fault (EF)

	1+	2+	3+	1-	2-	3-
TCC Type	IEC I	TD	N/A	IEC I	TD	N/A
Pickup Current, A	10	83	50	10	83	1,000
Time Multiplier	0.10	0.50	N/A	0.10	0.50	N/A
Min Current Multiplier	1.00	1.00	N/A	1.00	1.00	N/A
Max Current Multiplier	N/A	N/A	N/A	N/A	N/A	N/A
Definite Min Time, s	0.00	0.00	N/A	0.00	0.00	N/A
Tripping Time, s	0.00	2.00	0.02	0.00	2.00	0.10
Max Tripping Time, s	120.00	120.00	N/A	120.00	120.00	N/A
Additional Time, s	0.00	0.00	N/A	0.00	0.00	N/A
Fault Reset Time, s	0.05	0.05	0.05	0.05	0.05	0.05



Sensitive earth fault (SEF)

	SEF+	SEF-
Pickup Current, A	15.0	15.0
Tripping Time, s	10.00	10.00
Fault Reset Time, s	0.05	0.05



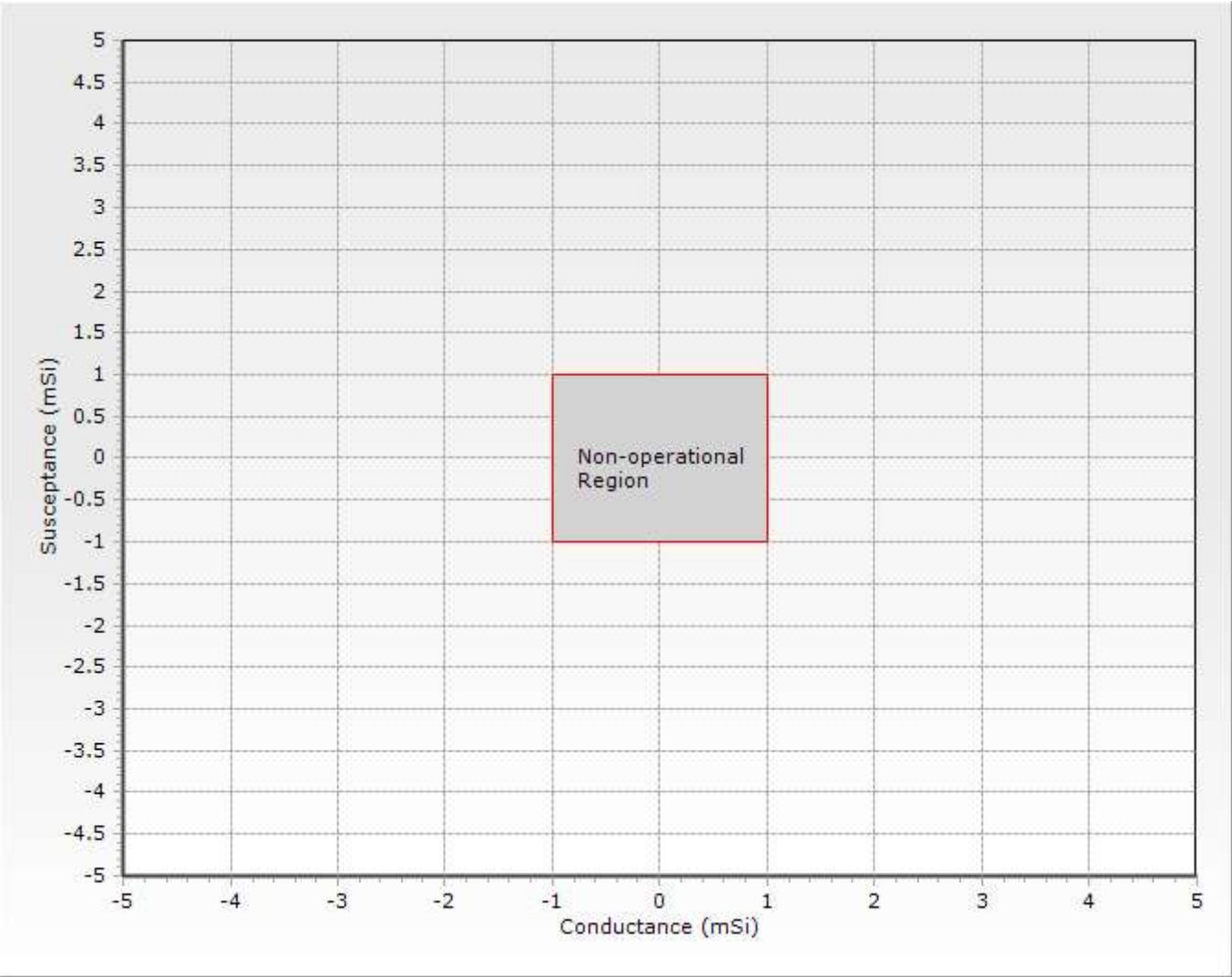
Admittance Protection (Yn)

Yn Operation Settings

Operational Mode	Gn & Bn
Directional Mode	Bidirectional

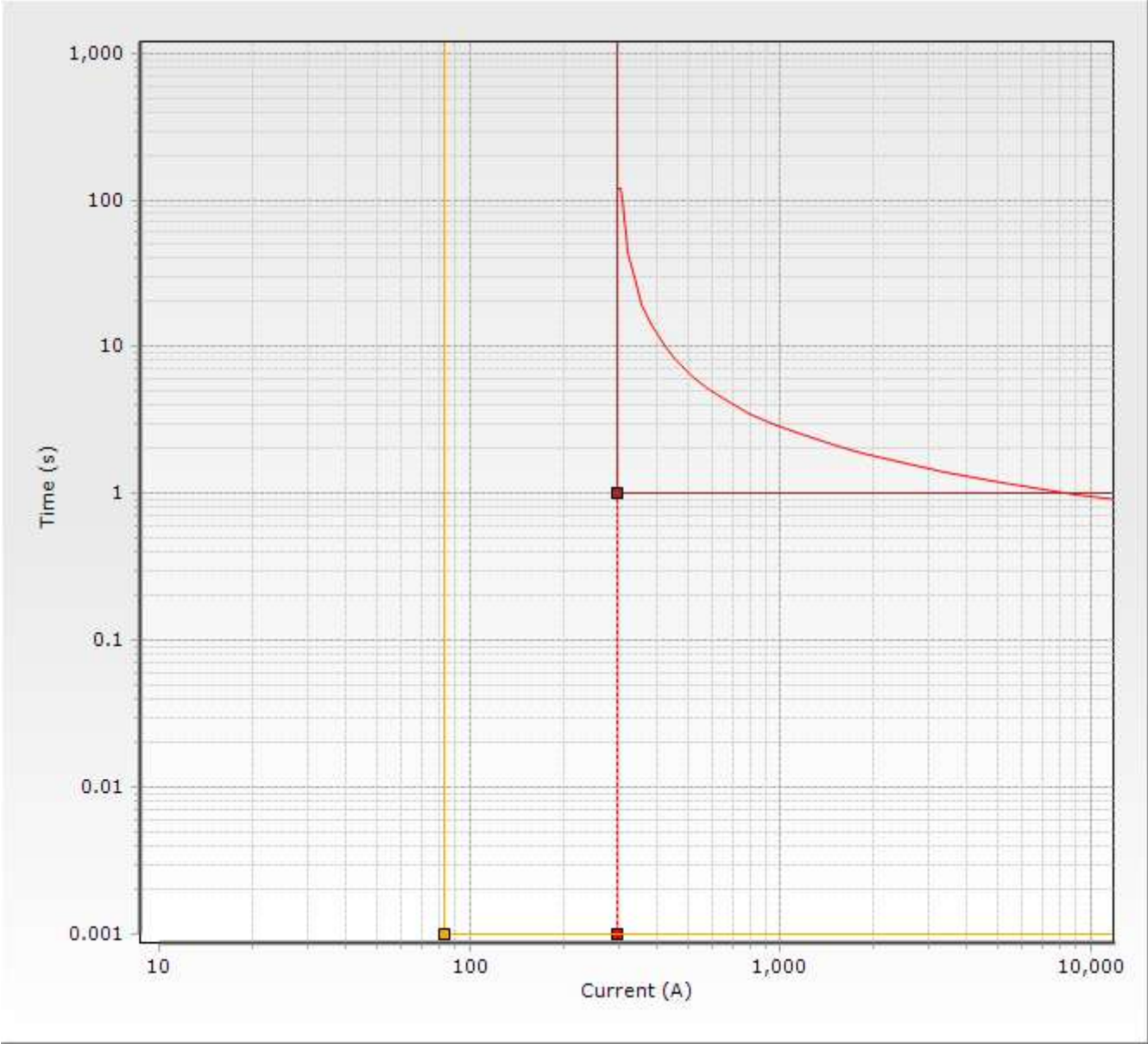
Yn Settings

Minimum Un Multiplier, x	0.10
Minimum In, A	10.0
Fault Reset Time, s	0.05
Tripping Time, s	1.00
Forward Conductance (Gn), mSi	1.00
Reverse Conductance (Gn), mSi	-1.00
Forward Susceptance (Bn), mSi	1.00
Reverse Susceptance (Bn), mSi	-1.00



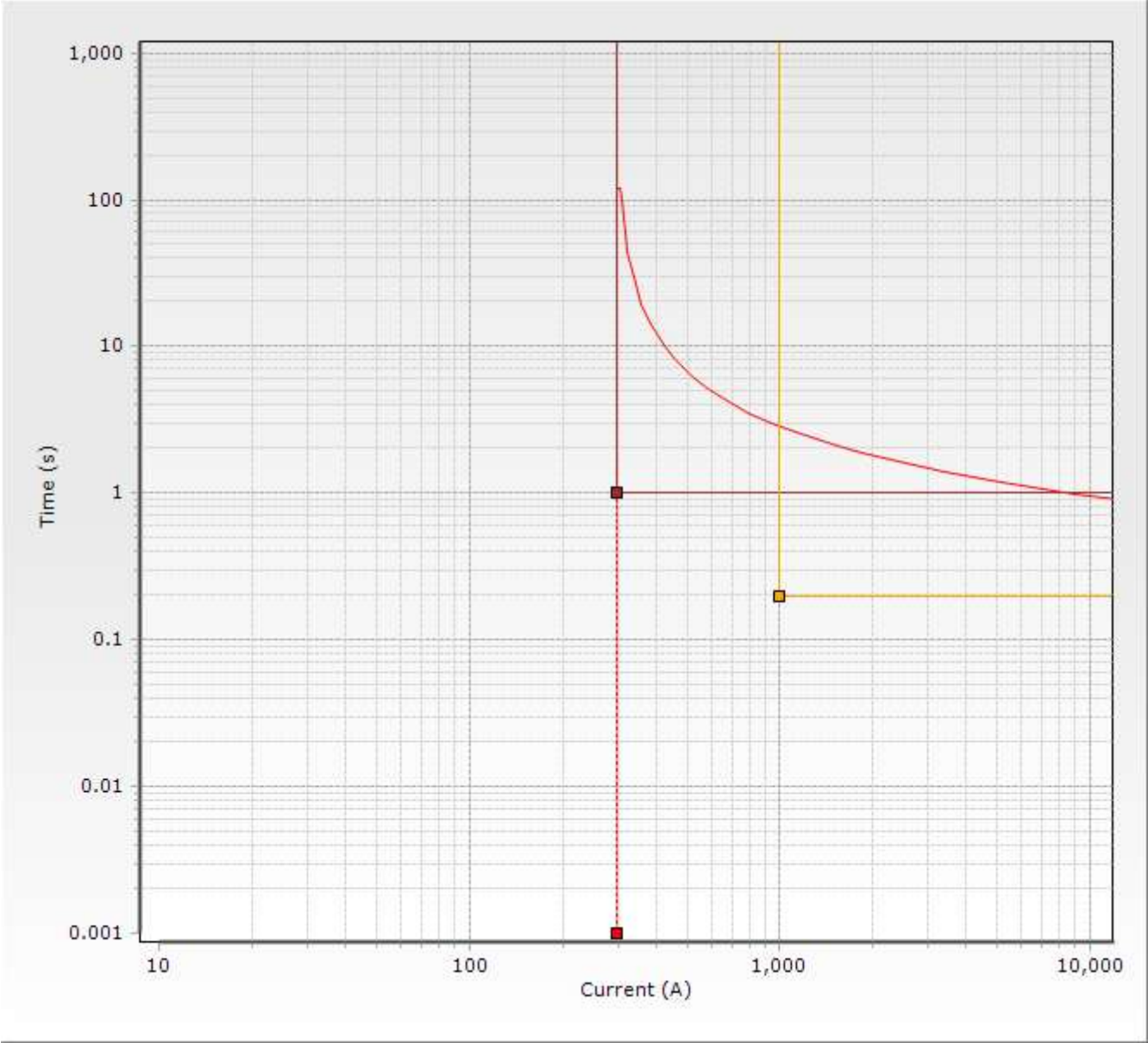
Protection curve: Overcurrent Live Line (OCLL)

	1	2	3
TCC Type	IEC I	TD	N/A
Pickup Current, A	300	300	83
Time Multiplier	0.50	0.50	N/A
Min Current Multiplier	1.00	1.00	N/A
Max Current Multiplier	N/A	N/A	N/A
Definite Min Time, s	0.00	0.00	N/A
Tripping Time, s	5.00	1.00	0.00
Max Tripping Time, s	120.00	120.00	N/A
Additional Time, s	0.00	0.00	N/A
Fault Reset Time, s	0.05	0.05	0.05



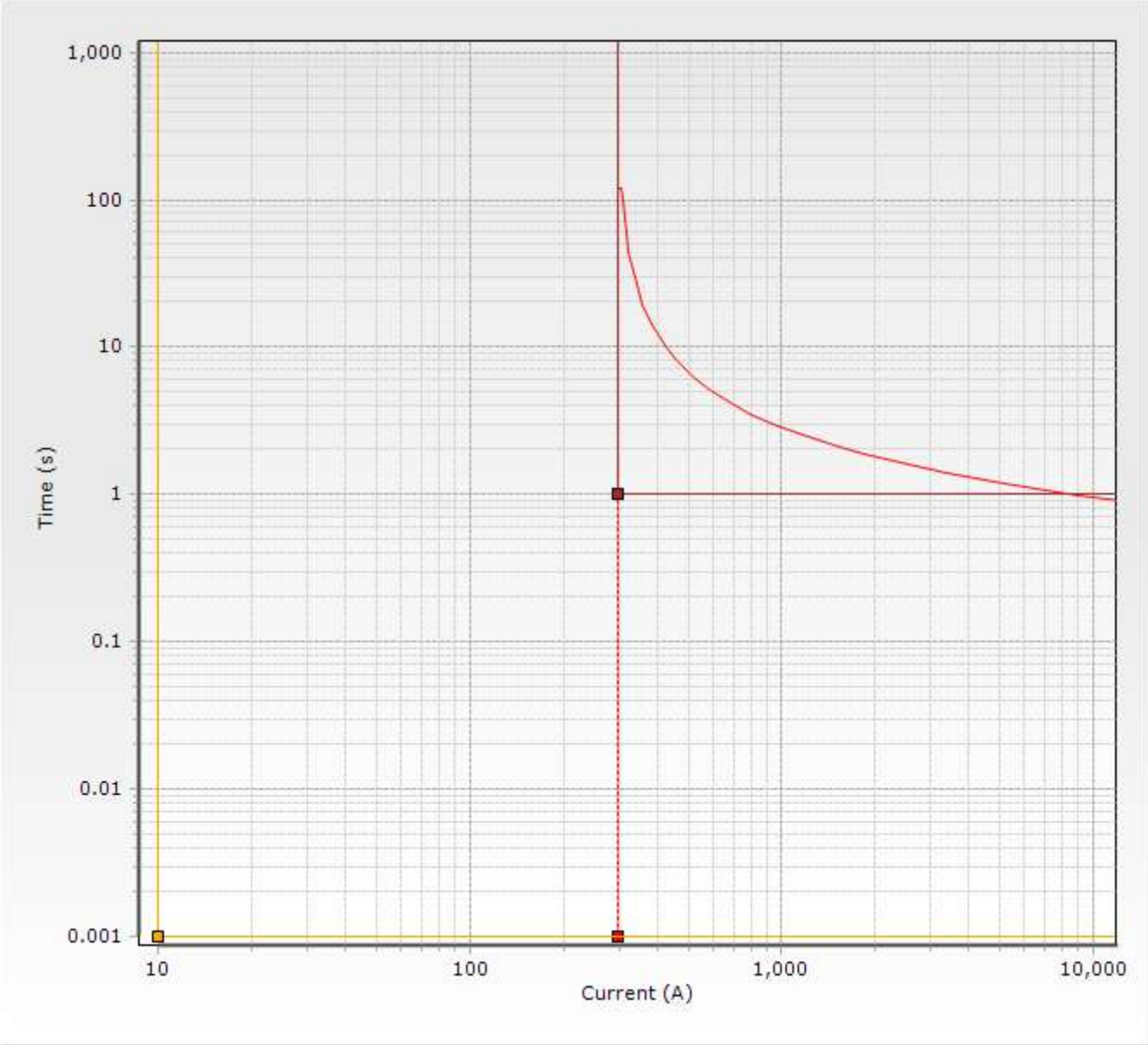
Protection curve: Negative Phase Sequence Live Line (NPSLL)

	1	2	3
TCC Type	IEC I	TD	N/A
Pickup Current, A	300	300	1,000
Time Multiplier	0.50	0.50	N/A
Min Current Multiplier	1.00	1.00	N/A
Max Current Multiplier	N/A	N/A	N/A
Definite Min Time, s	0.00	0.00	N/A
Tripping Time, s	5.00	1.00	0.20
Max Tripping Time, s	120.00	120.00	N/A
Additional Time, s	0.00	0.00	N/A
Fault Reset Time, s	0.05	0.05	0.05



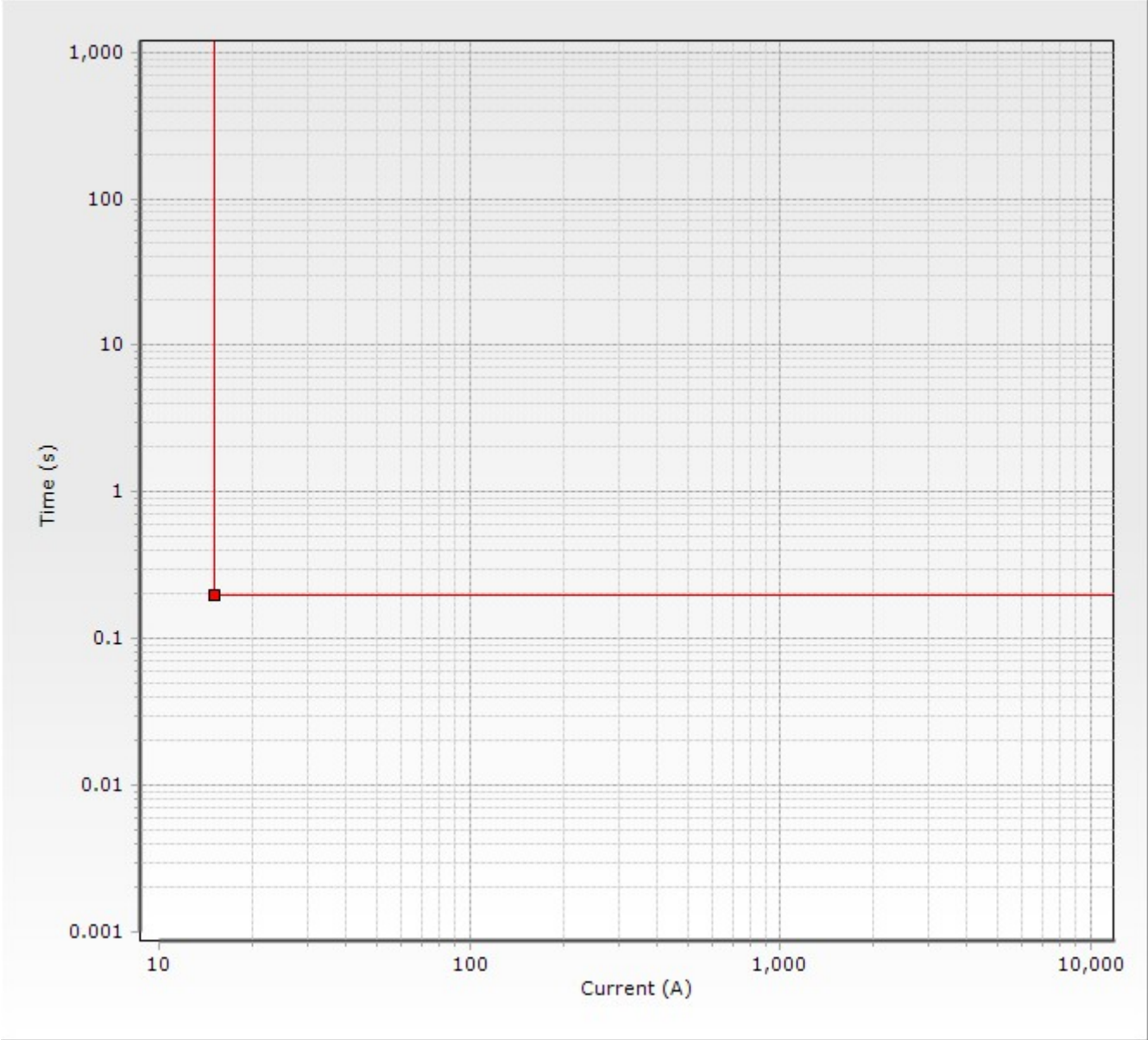
Protection curve: Earth Fault Live Line (EFL)

	1	2	3
TCC Type	IEC I	TD	N/A
Pickup Current, A	300	300	10.00
Time Multiplier	0.50	0.50	N/A
Min Current Multiplier	1.00	1.00	N/A
Max Current Multiplier	N/A	N/A	N/A
Definite Min Time, s	0.00	0.00	N/A
Tripping Time, s	0.00	1.00	0.00
Max Tripping Time, s	120.00	120.00	N/A
Additional Time, s	0.00	0.00	N/A
Fault Reset Time, s	0.05	0.05	0.05



Protection curve: Sensitive Earth Fault Live Line (SEFLL)

	SEFLL
Pickup Current, A	15
Tripping Time, s	0.20
Fault Reset Time, s	0.05



THD/TDD

Voltage THD Mode	D
Voltage THD Level (%)	5.0
Voltage THD Tripping Time (s)	1.0
Current TDD Mode	D
Current TDD Level (%)	5.0
Current TDD Tripping Time (s)	1.0

Individual Harmonics

Individual Harmonics Mode	D	Harmonic C	Disable
Individual Tripping Time (s)	1.0	Level C (%)	5.0
Harmonic A	Disable	Harmonic D	Disable
Level A (%)	5.0	Level D (%)	5.0
Harmonic B	Disable	Harmonic E	Disable
Level B (%)	5.0	Level E (%)	5.0

Max No Of Trips

Max No. of trips	Disabled
Number of Prot Trips	6.0
Prot Trip Window, hours	3.00