

Assessment list ALP 2-15 Protection relays

Issue 15 | September 2022

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Foreword

This document contains listings of Switchgear assessed by the Energy Networks Association for use on the UK distribution and transmission networks.

Inclusion in this list only indicates the existence of a Notice of Conformity indicating that the product has been assessed against the requirements of ENA Technical Specifications 41-36, 41-37 and 37-2 by the ENA Protection Assessment Panel. Non-compliances are not listed, and the individual notice of conformity should be consulted before any approval for use is given.

References

ENA TS 48-2	Fault passage indicators for 6.6kV and 11kV underground and overhead distribution systems
ENA TS 48-3	Instantaneous high-impedance differential protection
ENA TS 48-4	DC Relays associated with a tripping function in Protection Systems
ENA TS 48-5	Environmental Test Requirements for protection and control equipment and systems
ENA TS 48-6-1	ENA Protection Assessment - Functional Test Requirements - Distance Protection
ENA TS 48-6-2	ENA Protection Assessment - Functional Test Requirements - Feeder Unit Protection
ENA TS 48-6-3	ENA Protection Assessment Functional Test Requirements - Transformer Protection
ENA TS 48-6-4	ENA Protection Assessment Functional Test Requirements - Busbar Protection
ENA TS 48-6-5	ENA Protection Assessment - Functional Test Requirements - Voltage and Frequency Protection
ENA TS 48-6-6	Functional Test Requirements - Overcurrent and Earth Fault Protection
ENA TS 48-6-7	Communication Services for Teleprotection Systems
ENA TS 48-6-8	Loss of Mains Relays
ENA TS 48-6-9	Communications Bearers Used for the Provision of Teleprotection Channels

Definitions

APPROVAL NOTICE	An Electricity Association legacy document. These notices are retained for information only and are not maintained. Any information contained within these notices needs to be reviewed and verified that it is still current.
NOTICE OF CONFORMITY	An Energy Networks Association document which details the compliance of equipment for use on UK Transmission and Distribution Networks, with the relevant ENA specification. An NOC is intended to assist ENA member companies in meeting UK legislation on the selection of electrical plant and products, by ensuring that such equipment meets pre-determined functional and operational criteria.

Notice of Conformity

Assessment list - Protection
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Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	16	5	24/08/2012	In Use	RFL Electronics Inc	RFL 9745E VF	Teleprotection, voice frequency version	Version 7.2, Version C VF Logics	CPU 107335-1 High speed relay module 105955-1 available as optional I/O interface	Yes
NOC	20	5	30/06/2010	In Use	Siemens Protection Devices Ltd	Argus 1	Overcurrent and earth fault protection	2434H80023R13a	Argus 196 Platform	No
NOC	29	3	30/06/2010	In Use	Siemens Protection Devices Ltd	Argus 2	Directional Overcurrent & Earth Fault Protection	2434H80023R13a	Argus 196 Platform	No
NOC	30	2	30/10/2007	In Use	Siemens Protection Devices Ltd	Argus 3 & 4	Overcurrent & Earth Fault Protection & Autoreclose	2716H80005R5	Argus 196 Platform	No
NOC	43	3	01/12/2006	In Use	Alstom Grid	MVAJ 05	Tripping and Control Relay	N/A	MVAJ05XXXXXXXXA	No
NOC	43	3	01/12/2006	In Use	Alstom Grid	MVAJ 10	Tripping and Control Relay	N/A	MVAJ102XXXXXXXXB MVAJ103XXXXXXXXA MVAJ104XXXXXXXXA MVAJ105XXXXXXXXA	No
NOC	43	3	01/12/2006	In Use	Alstom Grid	MVAJ 20	Tripping and Control Relay	N/A	MVAJ20XXXXXXXXA	No
NOC	44	5	20/03/2007	In Use	Alstom Grid	KVFG 122	Two-pole Voltage & Frequency Relay	18KVFG102 E Issue J	KVFG 122 L A C	Yes
NOC	44	5	20/03/2007	In Use	Alstom Grid	KVFG 142	Four-pole Voltage & Frequency Relay	18KVFG102 E Issue J	KVFG 142 L A C	Yes
NOC	46	5	20/03/2007	In Use	Alstom Grid	KBCH120	Biased differential protection for transformers	Microprocessor:18KBCH100X XE M DSP: 18KBCH001XXE H	KBCH120 and KBCH120 Design Suffix 'L'	No
NOC	46	5	20/03/2007	In Use	Alstom Grid	KBCH130	Biased differential protection for transformers	Microprocessor:18KBCH100X XE M DSP: 18KBCH001XXE H	KBCH130 and KBCH130 Design Suffix 'L'	No
NOC	46	5	20/03/2007	In Use	Alstom Grid	KBCH140	Biased differential protection for transformers	Microprocessor:18KBCH100X XE M DSP: 18KBCH001XXE H	KBCH140 and KBCH140 Design Suffix 'L'	No
NOC	47	4	01/07/2004	In Use	Alstom Grid	KCEG 112	Directional earth fault	18KCEG102xxE issue V 18KCEG202xxE issue V	KCEG112xxLx0xxD	No

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	47	4	30/03/2007	In Use	Alstom Grid	KCEG 142	Directional 3-phase overcurrent and non-directional earth fault relay	18KCEG102xxE issue V 18KCEG202xxE issue V	KCEG122xxNxxxxE	No
NOC	47	4	30/03/2007	In Use	Alstom Grid	KCEG 242	Directional 3-phase overcurrent and directional earth fault – dual powered (auxiliary supply or from CTs)	18KCEG102xxE issue V 18KCEG202xxE issue V	KCEG152xxNxxxxD	No
NOC	47	4	30/03/2007	In Use	Alstom Grid	KCEG152	3-phase non-directional overcurrent and directional earth fault relay	18KCEG102xxE issue V 18KCEG202xxE issue V	KCEG242xxP9xxxD	No
NOC	47	4	30/03/2007	In Use	Alstom Grid	KCGG 122	Overcurrent Relay	18KCEG102xxE issue V 18KCEG202xxE issue V	KCGG122xxLx0xxD	No
NOC	47	4	30/03/2007	In Use	Alstom Grid	KCGG 142	Overcurrent Relay	18KCEG102xxE issue V 18KCEG202xxE issue V	KCGG142xxLx0xxC	No
NOC	48	2	24/04/2007	In Use	GE Multilin	SR 750/760	Feeder Management Relay	Version 7.00	SR750-P5-G5-S5-HI-A20-R-E	Yes
NOC	51	5	02/08/2019	In Use	Siemens Protection Devices Ltd	7SS52	Distributed Busbar/Circuit Breaker Failure Protection	Central Unit V4.77 Bay Units V3.37	SIPROTEC 4 Platform 7SS52	Yes
NOC	56	2	24/04/2007	In Use	GE Multilin	SR 745	Transformer Management Relay	Version 5.00	SR745-W3-P5-G5-HI-ALR-E	Yes
NOC	58	8	30/09/2015	In Use	Siemens Protection Devices Ltd	7SA522	Numerical Distance Protection	Version 4.74	7SA522*-****-****/GG 7XV5662-0AA00	Yes
NOC	59	5	24/12/2008	In Use	RFL Electronics Inc	RFL 9745E Digital	Teleprotection, digital version	System Software 7.2 Version C digital logics Version D digital Logics	CPU 107335-1	Yes
NOC	60	2	30/10/2007	In Use	Siemens Protection Devices Ltd	Argus 5 & 6	Bi-Directional Overcurrent & Earth Fault Protection with integral Autoreclose.	2716H80005R5	Argus 196 Platform	No

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	101	11	20/08/2021	In Use	GE UK Grid Solutions Ltd	P14x	Feeder Management Relay	P14*****460 P14*****460 P14*****500 P14*****500 P14*****510 P14*****510	P14*7*****J , P14*8*****J , P14*9*****J	No
NOC	102	8	11/05/2020	In Use	Siemens Protection Devices Ltd	7SD52/53	Line differential protection	Version 4.74	SIPROTEC 4 Platform 7SD52& 7SD53 SIPROTEC 4 Specific Communications converter 7XV56 GPS Clock and Synch Transceiver 7XV56	Yes
NOC	103	10	07/09/2020	In Use	Siemens Protection Devices Ltd	7SJ61	SIPROTEC 4 Time-Overcurrent, Overload, Motor Protection Relay and Bay Controller	Version 4.96	7SJ61**_*****_****	No
NOC	103	10	07/09/2020	In Use	Siemens Protection Devices Ltd	7SJ62	SIPROTEC 4 Multifunction Protection Relay and Bay Controller	Version 4.96	7SJ62**_*****_****	No
NOC	103	10	07/09/2020	In Use	Siemens Protection Devices Ltd	7SJ63	SIPROTEC 4 Multifunction Protection Relay and Bay Controller	Version 4.71	7SJ63**_*****_****	No
NOC	103	10	07/09/2020	In Use	Siemens Protection Devices Ltd	6MD63	SIPROTEC 4 Local controller	Version 4.70	6MD63**_*****_AA0	No

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	104	5	20/08/2021	In Use	GE UK Grid Solutions Ltd	P34x	Interconnection relay	P34*****300J for P341 to P343 P34*****310J for P341 to P344 P34*****320J for P341 to P344 P345*****320K for P345 P34*****330J for P341 to P344 P345*****330K for P345 P34*****350J for P341 to P344 P345*****350K for P345 P341*****700J for P341	P341 and P342 P34*7*****J P34*8*****J P34*9*****J P343 to 345 P34*7*****K P34*8*****K P34*9*****K	No
NOC	105	2	13/07/2005	In Use	GE UK Grid Solutions Ltd	P941	Frequency relay	P94*****A0100C	P94*****A0100A	Yes
NOC	105	2	13/07/2005	In Use	GE UK Grid Solutions Ltd	P942	Frequency relay	P94*****A0100C	P94*****A0100A	Yes
NOC	105	2	13/07/2005	In Use	GE UK Grid Solutions Ltd	P943	Frequency relay	P94*****A0100C	P94*****A0100A	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P120 v5F	Universal Overcurrent Relay	P120 V11.F	P120*00***2***	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P121 v5F	Universal Overcurrent Relay	P121-3 V12.F	P121*00*****	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P122 v5F	Universal Overcurrent Relay	P121-3 V12.F	P122*00*****	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P123 v5F	Universal Overcurrent Relay	P121-3 V12.F	P123*00*****	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P125 v4G	Universal Overcurrent Relay	P125-7 V15.C	P125**0*****	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P126 v4G	Universal Overcurrent Relay	P125-7 V15.C	P126**0*****	Yes
NOC	106	10	23/05/2013	In Use	Schneider Electric	P127 v4G	Universal Overcurrent Relay	P125-7 V15.C	P127*****	Yes
NOC	107	2	19/04/2007	In Use	GE Multilin	D60	Line Distance Relay	Version 5.2	D(60 or D30)-H00-HCH-F8F-H6G-M6E-P6C-U6S-W77	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	108	5	20/01/2010	In Use	Siemens Protection Devices Ltd	SOLKOR N, SO1-116 / 136 & 117 / 137	Numeric Current Differential Protection	Slave 2646H80006R6. Master 2646H80006R6	ARGUS 196 PLATFORM with optional RS485 added for Modbus	No
NOC	109	2	19/04/2007	In Use	GE Multilin	L90	Universal Relay - Line Current Differential	Version 5.2	L90-H00-HCH-F8F-H6S-L6E-N6C-S6U-U6A-W77	Yes
NOC	110	3	03/11/2011	In Use	Siemens Protection Devices Ltd	Argus AG8-101 to 112	Under / over voltage, negative sequence overvoltage and neutral voltage displacement functions.	2422H80004R6	Argus 196 Platform	No
NOC	110	3	03/11/2011	In Use	Siemens Protection Devices Ltd	Argus AG8-204 to 212	The 200 series has additional under / over frequency functions	2422H80004R6	Argus 196 Platform	No
NOC	110	3	03/11/2011	In Use	Siemens Protection Devices Ltd	Argus AG8-301 to 312	The 300 series is suitable for LFDD	2422H80004R6	Argus 196 Platform	No
NOC	111	6	05/05/2016	In Use	Toshiba Corporation	GRL100-212W	Series Line differential protection	GS1LM1-14-X GS1LC1-08-G	3D2S4282. 3D2S4198. 3D2S4209	Yes
NOC	112	5	30/06/2010	In Use	Schneider Electric	P631	Transformer differential protection	v620	P63* ***** 308.*	Yes
NOC	112	5	30/06/2010	In Use	Schneider Electric	P632	Transformer differential protection	v620	P63* ***** 308.*	Yes
NOC	112	5	30/06/2010	In Use	Schneider Electric	P633	Transformer differential protection	v620	P63* ***** 308.*	Yes
NOC	112	5	30/06/2010	In Use	Schneider Electric	P634	Transformer differential protection	v620	P63* ***** 308.*	Yes
NOC	112	5	25/01/2011	In Use	Schneider Electric	P638	Transformer differential protection	v610	P638 ***** 302.*	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	113	3	15/09/2010	In Use	Siemens Protection Devices Ltd	7UT612	Transformer differential protection	Version 4.63	SIPROTEC 4 – 7UT612/CC	Yes
NOC	114	8	07/09/2020	In Use	Siemens Protection Devices Ltd	7SJ64	SIPROTEC 4 Numerical Overcurrent Protection with Programmable Logic	Version 4.93	SIPROTEC 4 - 7SJ64	Yes
NOC	115	1	26/08/2003	In Use	Siemens Protection Devices Ltd	7SJ602	SIPROTEC 4 Numerical Overcurrent protection	Version 3.2	7SJ602*.**B**-1***	Yes
NOC	116	8	20/08/2021	In Use	GE UK Grid Solutions Ltd	P54x	Feeder Current Differential Protection	P54* 0610 G P54* 0710 G P54* 0630 A P54* 0830 A All other versions already covered in previous assessments remain valid.	P54*7*****M P54*8*****M P54*9*****M	Yes
NOC	117	2	30/10/2007	In Use	Siemens Protection Devices Ltd	Ohmega 402 & 406	Distance Protection	Ohmega 406-50 R33	Modular II Ohmega 402 V12	No
NOC	118	1	29/04/2004	In Use	Schneider Electric	P437	MICOM P437 Distance Protection	v605.707	P437-8 90 -403-9 -801	Yes
NOC	119	8	05/05/2016	In Use	Toshiba Corporation	GRZ100-204B, -206B	Series Distance Protection	Main: GS1ZM1-29-M Communication: GS1LC1-07-A	3D2S41 G00	Yes
NOC	119	8	05/05/2016	In Use	Toshiba Corporation	GRZ100-214B, -216B	Series Distance Protection	Main: GS1ZM1-29-M Communication: GS1LC1-07-A	3D2S41 G00	Yes
NOC	119	8	05/05/2016	In Use	Toshiba Corporation	GRZ100-224B, -226B	Series Distance Protection	Main: GS1ZM1-29-M Communication: GS1LC1-07-A	3D2S41 G00	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	120	1	05/04/2004	In Use	Schweitzer Engineering Laboratories	SEL 311	Distance Relay with Back-up Overcurrent and Earthfault	SEL-311A-R103-V0-Z002002-D20011205 SEL-311B-R105-V0-Z003002-D20020703 SEL-311C-R108-V0-Z004003-D20030725	SEL0311A Model option table SEL0311B Model option table SEL0311C Model option table	Yes
NOC	121	1	07/04/2004	In Use	Schweitzer Engineering Laboratories	SEL 351	Directional Overcurrent and Earthfault	SEL-351—5-R313-V0-Z005005-D20030908 SEL-351—6-R313-V0-Z005005-D20030908 SEL-351—7-R313-V0-Z005005-D20030908 SEL-351—A-R109-V0-Z005005-D20030908 SEL-351S—5-R113-V0-Z005005-D20030908 SEL-351S—6-R113-V0-Z005005-D20030908 SEL-351S—7-R113-V0-Z005005-D20030908	SEL0351 Model option table SEL0351A Model option table SEL0351S Model option table	Yes
NOC	122	2	09/11/2006	In Use	Schweitzer Engineering Laboratories	SEL 387	Transformer Differential Protection	SEL-387-5-R607-V0-Z004003-D20050614 SEL-387-6-R607-V0-Z004003-D20050614 SEL-387A- R607-V0-Z004003-D20050614 SEL-387E-R603-V0-Z003003-D20050614	SEL0387A SEL0387E SEL0387-0,-5,-6	Yes
NOC	123	2	09/11/2006	In Use	Schweitzer Engineering Laboratories	SEL 551	Overcurrent & Earth Fault Protection Relay	SEL-551-R510-Vf-Z002002-D20050523	SEL0551 Model option table	Yes
NOC	124	3	21/04/2010	In Use	Siemens Protection Devices Ltd	DUOBIAS M200 SERIES	Transformer Differential Protection	2661H80024R12 (for M200) 2661H80015R12 (for M300)	Modular II CT analogue module 2513H10068 7SG142* - 0***0 - **B0 7SG143* - 0***0 - **B0	Yes
NOC	125	2	01/12/2006	In Use	GE Multilin	F650	Bay Controller	2661H80015R12 (for M300)	F650 MZD FZG1 HIR	No

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NOC	126	2	12/12/2006	In Use	Siemens Protection Devices Ltd	DELTA FM1-series Relays	Modular with Numeric Feeder Protection	Boot Block No: 2513H80015 FM1-111Default:2471H80001 FM1-211Default: 2471H80002 FM1-213Default: 2471H80035 FM1-214Default: 2471H80053R5 FM1-225 & FM1-226: 2471H80054R3, 2471H80055R3, 2471H80056R3, 2471H80057R3, 2471H80058R2, 2471H80059R4	Modular II platform	No
NOC	127	2	14/07/2014	In Use	GE UK Grid Solutions Ltd	P441	Distance Relay	P4417*****B, P4418*****B, P4419*****B	P440 07	No
NOC	127	2	14/07/2014	In Use	GE UK Grid Solutions Ltd	P442	Distance Relay	P4427*****B, P4428*****B, P4429*****B	P440 07	No
NOC	127	2	14/07/2014	In Use	GE UK Grid Solutions Ltd	P444	Distance Relay	P4447*****B, P4448*****B, P4449*****B	P440 07	No
NOC	128	8	20/08/2021	In Use	GE UK Grid Solutions Ltd	P443	MICOMHo P443 Distance Protection	P443*****710 D	P4437*****M, P4438*****M, P4439*****M	No
NOC	129	3	29/09/2014	In Use	Schneider Electric	P921	Voltage/Frequency Protection	Phase 1: P920*****V6 Phase 2: P92*****V12.D	Phase 1: P92*0*ST***; P92*0SU*** Phase 2:P92*0*SV****; P92*0*SW****; P92*0*SZ****	Yes
NOC	129	3	29/09/2014	In Use	Schneider Electric	P922	Voltage/Frequency Protection	Phase 1: P920*****V6 Phase 2: P92*****V12.D	Phase 1: P92*0*ST***; P92*0SU*** Phase 2: P92*0*SF****; P92x*0ST****	Yes
NOC	129	3	29/09/2014	In Use	Schneider Electric	P923	Voltage/Frequency Protection	Phase 1: P920*****V6 Phase 2: P92*****V12.D	Phase 1: P92*0*ST***; P92*0SU*** Phase 2: P92*0*SF****; P92x*0ST****	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	130	6	23/05/2013	In Use	Schneider Electric	P521	current differential relay with Back-up Overcurrent and Earthfault protection	P521 Version 13.A	P521*0*****	Yes
NOC	131	4	14/06/2011	In Use	ABB Switzerland, Utility automation systems	NSD 570	Teleprotection equipment	Analogue V1.13 Digital V1.40 HMI570 PC V1.14	Rack G7BI Analogue IF G3LA + cable Digital IF G3LD + cable Common IF G3LC + cable Relay IF G3LR + cable Optical IF (piggyback) G1LOa Power supply G3LH 24-250VDC LAN interface G3LL + cable	Yes
NOC	132	9	20/08/2021	In Use	GE UK Grid Solutions Ltd	P74x	Numerical Bus Bar protection	51E, 51I, 51J	P7417xxAxMxxxxK, P7427x1A1M0xxxJ, P7437xxAxM0xxxK P7418xxAxMxxxxK, P7428x1A1M0xxxJ, P7438xxAxM0xxxK P7419xxAxMxxxxK P7429x1A1M0xxxJ, P7439xxAxM0xxxK	Yes
NOC	133	1	03/05/2006	In Use	Schneider Electric	Sepam 80 Series	Multifunction relay	Series 80 Base: V3.0 Application: V3.02	S84-320A T87-320-A B80-320-A	Yes
NOC	134	5	05/05/2016	In Use	Toshiba Corporation	GRT 100-203C 1A	Series transformer protection	GS1TM1-06-F	GRT100-203C (1A) : 3D2S4152 G001	Yes
NOC	134	5	05/05/2016	In Use	Toshiba Corporation	GRT 100-203C 5A	Series transformer protection	GS1TM1-06-F	GRT100-203C (5A) : 3D2S4152 G002	Yes
NOC	134	5	05/05/2016	In Use	Toshiba Corporation	GRT 100-204C 1A	Series transformer protection	GS1TM1-06-F	GRT100-204C (1A) : 3D2S4152 G003	Yes
NOC	134	5	05/05/2016	In Use	Toshiba Corporation	GRT 100-204C 5A	Series transformer protection	GS1TM1-06-F	GRT100-204C (5A) : 3D2S4152 G004	Yes
NOC	135	2	30/08/2005	In Use	GE UK Grid Solutions Ltd	CDG	Over current Protection relay	N/A	CDG11, 16, 21, 26, 31, 36, 51, 56, 61,66 CDG12, 22, 32, 52, 62 CDG13, 23, 33, 53, 63 CDG14, 24, 34, 54, 64	No

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NOC	136	1	31/08/2006	In Use	ABB Distribution Automation	REL511 & REL531	Line Distance Protection Terminals	REL 511 & REL 531 V2.5r02	REx 5xx V2.5r02	Yes
NOC	137	2	24/05/1984	In Use	GE UK Grid Solutions Ltd	MFAC34	Modular high impedance differential protection.	N/A	MFAC34	No
NOC	137	2	01/12/2006	In Use	GE UK Grid Solutions Ltd	MiDOS MVAA, MVAG, MVAJ, MVAX, MVAW, MCAA, MCAG, MFAC	Electro-mechanical Relay	N/A	MCAA11, MCAA13, MCAG14, MCAG34, MFAC14, MVAA11, MVAA12, MVAA13, MVAA14, MVAA15, MVAA16, MVAG11, MVAG12, MVAG13, MVAG14, MVAJ11, MVAJ13, MVAJ14, MVAJ15, MVAJ17, MVAJ21, MVAJ23, MVAJ24, MVAJ25, MVAJ26, MVAJ27, MVAJ28, MVAJ29, MVAJ34, MVAW02, MVAW11, MVAW21, MVAX12, MVAX21, MVAX31	No
NOC	138	2	30/10/2007	In Use	Siemens Protection Devices Ltd	DAD-N	High impedance protection Relay	2414H80005R15	Modular II platform	No
NOC	139	2	19/03/2009	In Use	Schneider Electric	MiCOM P821	Breaker Failure Protection	V1.D	P821 00 1	Yes
NOC	140	5	20/08/2021	In Use	GE UK Grid Solutions Ltd	P547	Phase comparison protection	P547 0040 A	P5474*****B, P5475*****B, P5476*****B	Yes
NOC	141	2	22/04/2008	In Use	ABB Distribution Automation	REF 541/543/545	Feeder terminal equipment	Revision K (release 3.5)	115, 118, 127, 129, 133	No

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NOC	142	7	20/08/2021	In Use	GE UK Grid Solutions Ltd	P445	Micom P455 Distance Protection	P445****0350 *	P4457*****J P4458*****J P4459*****J	Yes
NOC	143	2	20/12/2019	In Use	GE Multilin	B90	Low impedance bus zone protection	Firmware Version 7.61	B90-***-H**-F**-H**-L**-N**-S**-U**-W/X**	Yes
NOC	144	1.1	29/09/2015	In Use	GE Multilin	T60 - 35	Transformer management relay	Firmware Version 4.6	T60-*00-HCH-F**-H**-M**-P**-U**-W** T35-*00-HCH-F**-H**-M**-P**-U**-W**	Yes
NOC	145	9	02/09/2015	In Use	Toshiba Corporation	GRL150	Line differential protection	GS1PM1-01-N	GRL150	Yes
NOC	146	1	21/04/2008	In Use	ABB Distribution Automation	REX521	Feeder Protection Relay	Revision G, H02, H04, H50	REX 521	Yes
NOC	147	1	28/05/2008	In Use	Schneider Electric	P124S	Universal Overcurrent Relay (Self Powered)	V6.D	P124*1*S0*11	Yes
NOC	148	1	05/06/2008	In Use	ABB Distribution Automation	ETL600	Teleprotection	v3.0.0	v3.0.0	Yes
NOC	149	6	17/01/2013	In Use	RFL Electronics Inc	RFL 9745GD	GARD Distance Relay / Line Protection Terminal.	Version 8.3	500207-17-3U Touchscreen display 500105-17-6U Touchscreen display	Yes
NOC	150	6	16/01/2021	In Use	Siemens Protection Devices Ltd	7SR242	Transformer Protection	2662H85001R8e-7e	Duobias 7SR242*-2*A**-0*A0 /DD	Yes
NOC	151	9	17/10/2019	In Use	Siemens Protection Devices Ltd	7SR21, 7SR22 & 7SR224	Non Directional & Directional Overcurrent Protection Relay	2435H85008 R8e-8a (7SR21) 2435H85009 R8e-8a (7SR22) 2435H85010 R8e-7h (7SR224)	ARGUS-M Platform.	No
NOC	152	2	26/07/2017	In Use	GE UK Grid Solutions Ltd	DIP5000	Teleprotection	v2.4B	DIP 5 - - -	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	153	5	20/08/2021	In Use	GE UK Grid Solutions Ltd	P642, 643 & 645	Transformer Differential Protection	P642*****040 L, P642*****060 C P643*****040 L, P643*****060 C P645*****040 L, P645*****060 C	P642*****P, P643*****M, P645*****M	No
NOC	154	1	13/05/2008	In Use	ABB Distribution Automation	REF610	Feeder Protection Relay	RE 610 Rev C	REF610	No
NOC	155	3	13/10/2015	In Use	GE UK Grid Solutions Ltd	P591, P592, P593, P594 & P595	Communication Interface Units	1.03E (P594)	P591 01A0M0000B P592601A0M0000B P593601A0M0000B P594 5 E P59515x0B	-
NOC	155	1	17/06/2009	In Use	GE UK Grid Solutions Ltd	P594	GPS Synchronising Module	0.02F (P594)	P594 5 D	No
NOC	156	9	13/01/2020	In Use	Siemens Protection Devices Ltd	7SR11 & 12 (Argus C)	Non Directional & Directional Overcurrent Protection Relay	2436H80003R4k-3d (7SR11), 2436H80004R4k-3d (7SR12)	Argus C Platform (/FF)	No
NOC	157	1	01/03/2010	In Use	Siemens Protection Devices Ltd	7UM61	Numerical Motor and generator protection	v4.11	7UM61** - **B** - ***0	Yes
NOC	158	1	10/08/2010	In Use	RFL Communications PLC	SMX3-40	Sub rate multiplexer	smx-0-5.mcs	1Ux 19" Chassis	Yes
NOC	159	1	25/05/2011	In Use	Woodward	W1B1	CT Powered Overcurrent & Earth current relay	Handoff 8723	Revision A	Yes
NOC	160	4	01/03/2017	In Use	ABB Distribution Automation	REF615	Feeder Protection Relay	RE 615 Rev 4.0	RE 615 Rev 4.0	Yes
NOC	161	1	22/11/2011	In Use	ABB Distribution Automation	REL670	Line Distance protection	v1.1	v1.1	-
NOC	162	2	29/11/2019	In Use	ABB Distribution Automation	RED670	Line Differential Distance protection	2.2.3.13	2.2.2	Yes

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Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	163	3	07/02/2020	In Use	Mitsubishi	MDT-HA	Distance protection	702PSA, 721PSA & 724PSA	HA Series	-
NOC	164	3	07/02/2020	In Use	Mitsubishi	MCD-HA	Current differential protection	303PNA, 308PNA, 323PNA & 341PNA	HA Series	-
NOC	165	3	07/02/2020	In Use	Mitsubishi	MRD-HA	Transformer differential/ REF protection/ Mesh corner protection/ HV connections protection	703PSA & 717PSA	HA Series	-
NOC	166	3	07/02/2020	In Use	Mitsubishi	MFR-H1SA	Overcurrent/ Earth fault and circuit breaker failure protection	632PSA & 640PSA	HSA Series	-
NOC	167	-	-	Allocated	Mitsubishi	MFP-H1SA	Directional Overcurrent/ Earth fault protection	-	-	-
NOC	168	3	31/03/2014	In Use	Schneider Electric	P141, P142, P143 & P145	Feeder Management Relay	Version 46.V	P14*****46*J	-
NOC	169	3	18/07/2014	In Use	Schneider Electric	P341, P342, P343, P344 & P345	Interconnection relay	P341 – 36X and 71X P342 to P345 – 36X	P341*****M***J P342*****M***J P343*****M***J P344*****M***J P345*****M***K	-
NOC	170	3	29/05/2014	In Use	Schneider Electric	P441, P442 & P444	Distance Relay	P441 Version C7 B P442/4 Version D6 B	P441*1**M***J P442*****M***J P444*****M***J	-
NOC	171	3	24/03/2014	In Use	Schneider Electric	P443	Distance Protection	Version D0	P443*1*****M***J	-
NOC	172	3	27/02/2014	In Use	Schneider Electric	P445	Distance Protection	P445 0F00 B	P445*1***M***J	-
NOC	173	3	12/05/2014	In Use	Schneider Electric	P541, P542, P543, P544, P545 & P546	Feeder Current Differential Protection	P541/P542 = P54* *S 3*0 J P543 to P546 = C0 and D0	P541*1***M***J P542*1***M***J P543*****M***J P544*1***M***J P545*1*****M***J P546*1*****M***J	-

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	174	2	13/03/2013	In Use	Schneider Electric	P547	Phase comparison protection	31A and 52D	P547*** ** *	-
NOC	175	1	30/07/2012	In Use	Schneider Electric	P591, P592, P593 & P594	Communication Interface Units	0.02F (P594)	P591 01A0M0008A P592601A0M0008A P593601A0M0008A P594 5 D P59515x0A	-
NOC	176	3	05/05/2014	In Use	Schneider Electric	P642, 643 & 645	Transformer Differential Protection	P642*****040 X P643*****040 X P645*****040 X	P642****M***J P643****M***K P645*****K	-
NOC	177	3	18/03/2014	In Use	Schneider Electric	P740	Numerical Bus Bar protection	V51/E2.4S	P741***A*M***K P742*111*1M***J P743*1***M***K	-
NOC	178	1	30/07/2012	In Use	Schneider Electric	P941, P942 P943	Frequency relay	P94*****A0100A	P94*****A010*C	-
NOC	179	1	30/04/2016	In Use	Schneider Electric	VIP 40/45	Self Powered Protection Relays. VIP 40: Phase fault protection relay / VIP 45: Phase and Earth fault protection relay	V1.2.0	100A & 200A	-
NOC	180	1	30/04/2016	In Use	Schneider Electric	VIP 400	Self Powered Phase fault protection relay	V1.2.2	200A & 630A	-
NOC	181	3	20/08/2021	In Use	GE UK Grid Solutions Ltd	P746, P747	Busbar protection	P746 0020 D P746 0030 C P747 0030 D	P7467*****K, P7468*****K, P7469*****K, P7477*****K, P7478*****K,P7479* *****K	-
NOC	182	1	18/03/2014	In Use	Schneider Electric	P746	Busbar protection	P746*1*****K	Version A0A	-
NOC	183	1	15/07/2013	In Use	Schneider Electric	P116	Dual powered Overcurrent Relay	1.C	P116*1N*N****111*	-
NOC	184	3	13/04/2021	In Use	Siemens Protection Devices Ltd	7SR230 DAD	High Impedance Protection Relay	2435H85014R8e-1c	DAD 7SR230*-1*A**-0*A0 /CC	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	185	4	07/04/2021	In Use	GE UK Grid Solutions Ltd	P14N	Non Directional Feeder Management	62 (Available on 20TE, 30TE & 40TE case sizes)	P14N*****A	-
NOC	186	4	07/04/2021	In Use	GE UK Grid Solutions Ltd	P14D	Directional Feeder Management	62 (Available on 20TE, 30TE & 40TE case sizes)	P14D*****A	-
NOC	187	4	07/04/2021	In Use	GE UK Grid Solutions Ltd	P94V	Voltage, Frequency & Synchronising Protection	62	P94V*****A	-
NOC	188	1	11/09/2013	In Use	ZIV Grid Automation	IRV	Overcurrent Multifunction Protection relay	ZivercomPlus® version 1.66	V Family	-
NOC	189	1	07/11/2013	In Use	ZIV Grid Automation	IRX	Overcurrent & Earth Fault Multifunction Protection relay	ZivercomPlus® version 1.66	IRX	-
NOC	190	1	07/11/2013	In Use	ZIV Grid Automation	ZLV	Distance protection relay	ZivercomPlus® version 1.66	ZLV	-
NOC	191	2	07/11/2013	In Use	ZIV Grid Automation	DBN	Bus Differential relay	ZivercomPlus® version 1.66	DBC & DBP	-
NOC	192	2	07/11/2013	In Use	ZIV Grid Automation	IDV	Transformer differential multifunction protection relay	ZivercomPlus® version 1.66	IDV	-
NOC	193	-	-	Allocated	Schneider Electric	ADVC3 control cubicle	ADVC ULTRA with flexVUE Operator Interface	-	-	-
NOC	194	1	04/03/2014	In Use	Noja Power	RC10 Control Unit	For use with Noja Power OSM 15/27 Reclosers	1.8.0.0 2.2	Series 200	Yes
NOC	195	1	09/06/2015	In Use	Ingeteam	Ingepac EF MD	Multifunction Protection Relay and Bay Control Unit	VER.CPU 5.8.4.8 VER.CPU2 6.0.1.15 VER.BOARDS 1.15.1.1	-	Yes
NOC	196	2	07/04/2021	In Use	Siemens Protection Devices Ltd	7SR158	Voltage/Frequency Protection	2436H80011R4e-2a	/CC	Yes
NOC	197	1	17/03/2015	In Use	GE UK Grid Solutions Ltd	D90 plus	Subcycle distance relay with integral intertrip	v1.9x	v4.00	Yes
NOC	198	-	-	Allocated	GE UK Grid Solutions Ltd	C30	Protection Intertrip Relay / Logic Controller	-	-	-

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	199	-	-	Allocated	GE UK Grid Solutions Ltd	N60	Protection Intertrip Relay / Logic Controller/ PMU	-	-	-
NOC	200	1	21/11/2020	In Use	Siemens Protection Devices Ltd	Siprotec 5 - 7SS85	Busbar Differential Protection Relay	V7.50	SIPROTEC 5 Platform Basic 7SS85	Yes
NOC	201	1	09/03/2016	In Use	Fanox	SIA - C	Overcurrent and Earth Fault Protection Relay, Dual & Self Powered	Version 3.08/1.03	R2.30	Yes
NOC	202	1	03/09/2020	In Use	Siemens Protection Devices Ltd	7SR45	Self-powered overcurrent protection	2438H80001R1d-1a	/BB	Yes
NOC	203	-	-	Allocated	Siemens Protection Devices Ltd	7SL85	-	-	-	-
NOC	204	1	09/11/2016	In Use	ABB Distribution Automation	REF 630 & RET630	Feeder (REF) and Transformer (RET) protection & control	630 series Rev 1.3	630 series Rev 1.3	Yes
NOC	205	1	09/11/2016	In Use	ABB Distribution Automation	REF 620 & RET620	Feeder (REF) and Transformer (RET) protection & control	620 series Rev 2.0	620 series Rev 2.0	Yes
NOC	206	1	09/11/2016	In Use	ABB Distribution Automation	RED615	Line Differential Distance protection	615 series Rev 5.0	615 series Rev 5.0	Yes
NOC	207	1	13/03/2019	In Use	ABB Distribution Automation	REJ603	Self Powered earth fault and overcurrent relay	REJ603 Rev 3.0	Analog Input (1A or 5A) Binary Outputs (1 Impulse Trip & 2 Bi-stable signalling)	Yes
NOC	209	1	16/05/2017	In Use	Artech	TDF-2, TDF-4, TDF-22, TDJ-8, TDJ-44	Time Delay Relays	N/A	TDF-2, TDF-4, TDF-22, TDJ-8, TDJ-44	Yes
NOC	208	1	22/05/2020	In Use	Siemens Protection Devices Ltd	7SR18	Line Differential Relay	2436H80016R4d-1b	7SR1 Platform	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	210	1	16/05/2017	In Use	Arteche	RD-2, RF-4, RJ-8, RD-2R, RF-4R, RJ-8R (including HB versions), RD-2XR, RF-4XR, RJ-8XR (including HB versions)	Self Reset Relays	N/A	RD-2, RF-4, RJ-8, RD-2R, RF-4R, RJ-8R (including HB versions), RD-2XR, RF-4XR, RJ-8XR (including HB versions)	Yes
NOC	211	1	16/05/2017	In Use	Arteche	BF-3, BF-4, BJ-8 (including BB versions)BF-3R, BF-4R, BF-4RP, BJ-8, BJ-8R, BJ-8RP (including HB versions)	Latching Relays.	N/A	BF-3, BF-4, BJ-8 (including BB versions)BF-3R, BF-4R, BF-4RP, BJ-8, BJ-8R, BJ-8RP (including HB versions)	Yes
NOC	212	1	29/06/2018	In Use	ENSTO	ITI2012	LBS Control Cubicle for use with ENSTO Auguste LBSD.	PR162 V4.0	HMI NX2007093 Charger Board NX2004993 Detector Board NX2006207 Backplane NX2005828	Yes
NOC	213	1	01/08/2019	In Use	ZIV Grid Automation	IRS	Self-Powered Relay for Industry and Utility Secondary Substations	E Net Tool protection setting and Configuration Software	Line Current: 3xCT Inputs (IA-1, IB-1, IC-1); Ground Current or Sensitive Ground Current: 1xCT Input (IN)	-
NOC	214	-	-	Allocated	ZIV Grid Automation	IRL	Multifunction Protection for MV Power Systems & Industry	-	-	-
NOC	215	-	-	Allocated	ABB Distribution Automation	REB611	Busbar and Multipurpose Differential Protection and Control Relay	-	-	-
NOC	217	1	30/05/2019	In Use	Toshiba Corporation	GRD200 Series	Multi-Function Protection IED	GS2RDIM1-30-15 (UG-30-00)	GRD200-x1-xxx-00-xx-30-1x0	Yes

Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	218	1	21/11/2020	In Use	Toshiba Corporation	GRL200 Series	Line Differential Protection IED	GS2RLIM1-30-46	GRL200-x1-xxx-xx-xx-30-1x0	Yes
NOC	219	1	21/11/2020	In Use	Toshiba Corporation	GRZ200 Series	Line Distance Protection IED	GS2RLIM1-30-46	GRZ200-x1-xxx-00-xx-30-1x0	Yes
NOC	220	-	-	Allocated	Toshiba Corporation	GRT200 Series	Transformer Protection IED	-	-	-
NOC	221	-	-	Allocated	Siemens Protection Devices Ltd	Siprotec 5 - 7SJ82 85 7UT82 85 86 87	Siprotec 5 7SJ – Overcurrent and Earth Fault P. Siprotec 5 7UT – Transformer Protection	-	-	-
NOC	223	-	-	Allocated	Siemens Protection Devices Ltd	7SD82 Siprotec 5	Differential Protection	-	-	-
NOC	224	-	-	Allocated	Siemens Protection Devices Ltd	6MU85	Merging Unit	-	-	-
NOC	225	-	-	Allocated	Siemens Protection Devices Ltd	7SL82 & 7SA82 Siprotec 5	Differential/Distance Protection	-	-	-
NOC	226	-	-	Allocated	ABB Limited	SSC600	Smart Substation Control and Protection for electrical systems	-	-	-
NOC	227	-	-	Allocated	Schweitzer Engineering Laboratories	SEL751	Feeder Protection Relay	-	-	-
NOC	228	-	-	Allocated	Schweitzer Engineering Laboratories	SEL787	Transformer Protection Relay	-	-	-
NOC	229	-	-	Allocated	Schweitzer Engineering Laboratories	SEL387L	Line Differential Relay	-	-	-

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Assessment Type	Number	Issue	Issue date	Status	Manufacturer	Equipment Type Reference	Functional description	Software Version	Hardware Version	Limitations Yes/No
NOC	230	-	-	Allocated	Schweitzer Engineering Laboratories	SEL311L	Line Current Differential Relay with Backup Distance Protection	-	-	-
NOC	231	-	-	Allocated	Schweitzer Engineering Laboratories	SEL311C	Distance Protection Relay	-	-	-
NOC	232	-	-	Allocated	Noja Power	RC15	Relay 15 Module	-	-	-
NOC	233	-	-	Allocated	Hitachi ABB PG	RET670	Transformer Protection v2.2	-	-	-
NOC	234	-	-	Allocated	GE UK Grid Solutions Ltd	P54A, B, C, E	Multi Ended Line Differential Protection Relay	-	-	-
NOC	235	1	22/08/2022	In Use	Toshiba Corporation	GRW200 Series	PW/FO Line Differential Protection IED	GS2RWIM1-30-01	GRW200-xx-1Mxxx-51-AA0	Yes
NOC	236	-	-	Allocated	Toshiba Corporation	GRE200 Series	-	-	-	-
NOC	237	-	-	Allocated	Schneider Electric	P5U20	-	-	-	-
NOC	238	-	-	Allocated	Schneider Electric	P5V20	-	-	-	-
NOC	239	-	-	Allocated	Schneider Electric	P5F30	-	-	-	-
NOC	240	-	-	Allocated	Schneider Electric	P5T30	-	-	-	-
NOC	241	-	-	Allocated	Schneider Electric	P5L30	-	-	-	-

Approval notices

Please note: these notices are no longer maintained, and users should review any information contained within them to ensure it is still valid.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEG 110/210	Directional earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEG 130/230	Directional three phase overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEG 140/240	Directional three phase and earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEG 150/250	Directional earth fault and non-directional overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEG 160	Directional earth fault relay with dual polarisation
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEU 110	Directional sensitive earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEU 140/240	Directional three phase and sensitive earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEU 150/250	Directional sensitive earth fault and non-directional overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCEU 160	Directional sensitive earth fault relay with dual polarisation
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCGG 110/210	Earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCGG 120	Two phase overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCGG 130/230	Three phase overcurrent relay

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCGG 140/240	Three phase and earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCGU 110	Sensitive earth fault overcurrent relay
AN	1	2	06/04/1995	-	AREVA T&D UK LTD	KCGU 140/240	Three phase and sensitive earth fault overcurrent relay
AN	3	1	30/01/1995	-	AREVA T&D UK LTD	MITZ 03	Optical to electrical [X21] interface
AN	4	2	17/12/1996	-	Alstom Grid	PRIMA PRH N	Compact, voltage operated attracted armature auxiliary relay with instantaneous auxiliary functions
AN	4	2	17/12/1996	-	Alstom Grid	PRIMA PRS D	Compact, voltage operated attracted armature auxiliary relay with instantaneous and time delayed (on drop-off) auxiliary functions
AN	4	2	17/12/1996	-	Alstom Grid	PRIMA PRS N	Compact, voltage operated attracted armature auxiliary relay with instantaneous auxiliary functions
AN	4	2	17/12/1996	-	Alstom Grid	PRIMA PRS P	Compact, voltage operated attracted armature auxiliary relay with instantaneous and time delayed (on pick-up) auxiliary functions
AN	5	1	02/01/1997	-	Siemens Protection Devices Ltd	DAD3	Three pole high impedance circulating current protection relay
AN	6	1	02/02/1997	-	AREVA T&D UK LTD	LGPG 111	Generator protection relay
AN	7	1	20/08/1986	-	AREVA T&D UK LTD	SHPM 101 (QUADRAMHO)	Static Distance Protection relay.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 111 (OPTIMHO)	Static Distance protection for overhead line feeders. Full scheme 18 element. Quadrilateral/Mho characteristic.
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 112 (OPTIMHO)	Static Distance protection for overhead line feeders. Full scheme 18 element. Mho characteristic.
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 113 (OPTIMHO)	Static Distance protection for cable feeders. Full scheme 18 element. Mho characteristic.
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 114 (OPTIMHO)	Static Distance protection for transformer feeders. Z1 and Z2 elements only. Mho characteristic.
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 121 (OPTIMHO)	Static Distance Protection
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 122 (OPTIMHO)	Static Distance Protection.
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 123 (OPTIMHO)	Static Distance Protection.
AN	8	1	03/03/1993	-	AREVA T&D UK LTD	LFZP 151 (OPTIMHO)	Static Distance Protection.
AN	9	1	22/07/1985	-	AREVA T&D UK LTD	MRTP (TRANSLAY 'S')	High speed differential feeder protection using pilots comprising Translay 'S' relay, supervision, overcurrent start and unstabilising.
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG 22	Single phase/earth fault inverse and definite time o/c relay.
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG 42	Two phase inverse and definite time o/c relay.
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG 52	Two phase and earth fault inverse and definite time o/c relay.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG 53	Two phase and earth fault inverse and definite time o/c relay.
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG 62	Three phase inverse and definite time o/c relay.
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG 63	Three phase inverse and definite time o/c relay.
AN	10	1	21/02/1989	-	AREVA T&D UK LTD	MCGG82	Three phase & earth fault inverse and definite time o/c relay.
AN	11	1	05/11/1997	-	ABB Power Oy, Vaasa, Finland	SPA 010/011	High impedance protection relay
AN	12	1	05/11/1997	-	ABB Power Oy, Vaasa, Finland	SPAD 346C	Stabilised transformer differential protection
AN	13	1	05/11/1997	-	ABB Power Oy, Vaasa, Finland	SPAA 341C	Feeder protection relay
AN	14	1	31/07/1997	-	Schneider Electric	Sepam 1000 NO1	Three-phase overcurrent and earth fault protection and measurement unit
AN	15	1	02/10/1997	-	UKGS	SHNB 105 (MICROMHO)	Static Distance Protection.
AN	17	1	19/01/1988	-	UKGS	MBCH12	Biased differential transformer protection (two winding transformer).
AN	17	1	19/01/1988	-	UKGS	MBCH13	Biased differential transformer protection (three winding transformer).
AN	17	1	19/01/1988	-	Schneider Electric	MBCH16	Biased differential transformer protection.
AN	18	1	14/11/1983	-	UKGS	MSTZ02	DC to DC converter with monitor relay.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	19	1	22/10/1990	-	UKGS	HSDI-3	Voice frequency digital intertripping equipment.
AN	21	1	25/06/1998	-	Schneider Electric	Sepam 2000 NO1	Digital Protection and Control Unit
AN	22	1	29/06/1998	-	Schneider Electric	REB 500	Numerical Busbar and Breaker Failure Protection
AN	23	3	09/07/2002	-	UKGS	LFZR 111	Numerical distance protection
AN	23	3	09/07/2002	-	UKGS	LFZR 112	Numerical distance protection
AN	23	3	09/07/2002	-	UKGS	LFZR 113	Numerical distance protection
AN	24	1	01/07/1993	-	Schneider Electric	SOLKOR M	Voice frequency current differential protection
AN	25	1	22/07/1985	-	UKGS	MCRI MVTW (TRANSLAY 'S')	High speed differential feeder protection using pilots comprising Translay 'S' relay, supervision, overcurrent start and unlablising.
AN	26	1	03/10/1985	-	UKGS	MVT111	Modular instantaneous a. c. undervoltage relay.
AN	26	1	03/10/1985	-	UKGS	MVT112	Modular instantaneous a. c. overvoltage relay.
AN	27	1	30/11/1998	-	Schneider Electric	NSD70C	Teleprotection
AN	28	1	26/03/1999	-	Schneider Electric	7SA513	Numerical Distance Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 22xA Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 61xB Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 61xC Argus 2	Directional Overcurrent & Earth Fault Protection

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	29	1	24/05/1999	-	Schneider Electric	DCD 62xB Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 62xC Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 63xB Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 63xC Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 64xB Argus 2	Directional Overcurrent & Earth Fault Protection
AN	29	1	24/05/1999	-	Schneider Electric	DCD 64xC Argus 2	Directional Overcurrent & Earth Fault Protection
AN	31	1	24/05/1999	-	Schneider Electric	XR309	Ferro-resonance Detection Relay
AN	32	1	04/01/1991	-	UKGS	LFCB102	Digital Current Differential feeder protection relay suitable for double ended feeders.
AN	32	1	04/01/1991	-	UKGS	LFCB103	Digital Current Differential feeder protection relay suitable for teed feeders.
AN	32	1	04/01/1991	-	UKGS	LFCB112	Digital Current Differential feeder protection relay suitable for double ended feeders with stub bus protection
AN	32	2	04/01/1991	-	UKGS	LFCB113	Digital Current Differential feeder protection relay suitable for teed feeders with stub bus protection
AN	33	1	04/01/1989	-	UKGS	MCTH MFAC (TRANSLAY 'S')	Transformer feeder protection comprising Translay S Relays/ Transformer in-rush detectors/ High impedance relays.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	34	1	03/10/1985	-	UKGS	MVTD11	Modular inverse time delayed a. c. undervoltage relay.
AN	34	1	03/10/1985	-	UKGS	MVTD12	Modular inverse time delayed a. c. overvoltage relay.
AN	34	1	03/10/1985	-	UKGS	MVTD13	Modular inverse time delayed a. c. neutral displacement relay.
AN	35	1	10/01/1983	-	UKGS	MVT14 (DC)	Modular solid state time delay relay. Delay on pick-up.
AN	35	1	10/01/1983	-	UKGS	MVT15 (DC)	Modular solid state time delay relay. Delay on drop-off.
AN	36	2	03/10/1985	-	UKGS	MVTU11	Modular definite time delayed a. c. undervoltage relay.
AN	36	2	03/10/1985	-	UKGS	MVTU12	Modular definite time delayed a. c. overvoltage.
AN	36	2	03/10/1985	-	UKGS	MVTU13	Modular definite time delayed a. c. and neutral displacement
AN	37	1	26/07/1976	-	UKGS	K10 (TKBB)	HF power line carrier signalling equipment.
AN	38	1	30/05/1975	-	UKGS	P10 (CONTRAPHASE)	Power line carrier Phase comparison protection.
AN	39	1	22/07/1985	-	UKGS	MBCI (TRANSLAY 'S')	High speed differential feeder protection using pilots comprising Translay 'S' relay, supervision, overcurrent start and unstabilising.
AN	39	1	04/01/1989	-	UKGS	MBCI MFAC (TRANSLAY 'S')	Transformer feeder protection comprising Translay S Relays/ Transformer in-rush detectors/ High impedance relays.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	40	1	28/11/1984	-	UKGS	MCSU01	Modular sensitive earth fault protection.
AN	41	1	14/11/1983	-	UKGS	METI11	Modular directional relays.
AN	41	1	14/11/1983	-	UKGS	METI12	Modular directional relays.
AN	41	1	14/11/1983	-	UKGS	METI31	Modular directional relays.
AN	42	1	13/08/1984	-	UKGS	MVTP11	Modular relay for continuous supervision of current transformer buswires in high impedance type busbar protection schemes.
AN	42	1	13/08/1984	-	UKGS	MVTP31	Modular relay for continuous supervision of current transformer buswires in high impedance type busbar protection schemes.
AN	45	1	29/06/93, re-assessment 1/2/2000	-	Schneider Electric	MICROPHASE-FM	Voice Frequency current differential feeder protection.
AN	47	2	28/02/2000	-	UKGS	KCGG 122	Overcurrent Relay
AN	50	1	15/03/2000	-	Schneider Electric	VIP 300	Self-powered three-phase overcurrent and earth fault protection unit.
AN	51	1	18/12/2000	-	Schneider Electric	7SS52	Distributed Busbar/Circuit Breaker Failure Protection
AN	52	1	17/04/2001	-	Schneider Electric	MICOM SERIES CASE	Housing system for the MiCOM range of protection and control equipment
AN	53	1	03/04/2001	-	Schneider Electric	NSD70D	Digital Teleprotection
AN	54	1	17/04/2001	-	Schneider Electric	GCM05	DC Intertrip Relay
AN	55	2	24/10/2001	-	Schneider Electric	DFF Series 1000	Digital Frequency Relay

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	57	1	01/06/2002	-	Schneider Electric	SEL 321-2	Phase and Ground Distance Protection Relay
AN	n/a	n/a	24/10/1984	-	UKGS	MCAA11	Modular general purpose current operated auxiliary relay.
AN	n/a	n/a	24/10/1984	-	UKGS	MCAA13	Modular general purpose current operated auxiliary relay.
AN	n/a	n/a	20/03/1985	-	UKGS	MCAG11	Modular instantaneous overcurrent relay.
AN	n/a	n/a	20/03/1985	-	UKGS	MCAG12	Modular instantaneous overcurrent relay.
AN	n/a	n/a	26/06/1984	-	UKGS	MCAG14	Modular high impedance differential protection.
AN	n/a	n/a	11/07/1984	-	UKGS	MCAG19	Modular instantaneous overcurrent relay with negligible transient overreach.
AN	n/a	n/a	20/03/1985	-	UKGS	MCAG31	Modular instantaneous overcurrent relay.
AN	n/a	n/a	20/03/1985	-	UKGS	MCAG32	Modular instantaneous overcurrent relay.
AN	n/a	n/a	26/06/1984	-	UKGS	MCAG34	Modular high impedance differential protection.
AN	n/a	n/a	11/07/1984	-	UKGS	MCAG39	Modular instantaneous relay with negligible transient overreach.
AN	n/a	n/a	04/08/1955	-	Schneider Electric	1D and 4&1/2D size cases	Drawout case.
AN	n/a	n/a	04/08/1955	-	UKGS	CDG11	Induction disc overcurrent relay (1 pole).
AN	n/a	n/a	13/04/1956	-	UKGS	CDG12	Induction disc standby earth fault relay.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	30/07/1965	-	UKGS	CDG13	Very inverse induction disc overcurrent or earth fault relay (1 pole).
AN	n/a	n/a	30/07/1965	-	UKGS	CDG14	Extremely inverse induction disc overcurrent or earth fault relay (1 pole).
AN	n/a	n/a	14/03/1968	-	UKGS	CDG16	Induction disc overcurrent or earth fault relay (1 pole).
AN	n/a	n/a	13/05/1953	-	UKGS	CDG31	3 pole version of CDG11.
AN	n/a	n/a	30/07/1965	-	UKGS	CDG33	3 pole version of CDG13.
AN	n/a	n/a	30/07/1965	-	UKGS	CDG34	3 pole version of CDG14.
AN	n/a	n/a	14/03/1968	-	UKGS	CDG36	3 pole version of CDG16.
AN	n/a	n/a	23/09/1968	-	UKGS	CG4	Blocking circuits(s) unit.
AN	n/a	n/a	25/03/1971	-	UKGS	DBA4	Permanent magnet moving coil relay.
AN	n/a	n/a	25/07/1983	-	UKGS	DBAE4	Rotor earth fault relay.
AN	n/a	n/a	18/08/1971	-	UKGS	DBB4	Permanent magnet moving coil relay.
AN	n/a	n/a	26/06/1970	-	UKGS	HO4	Biased differential feeder protection using private pilots.
AN	n/a	n/a	04/01/1991	-	UKGS	L SERIES CASE	Electronic equipment case for 'L' series relays.
AN	n/a	n/a	21/01/1971	-	UKGS	M3	Modular case for electronic assemblies.
AN	n/a	n/a	24/05/1984	-	UKGS	MFAC14	Modular high impedance differential protection.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	15/06/1982	-	UKGS	MIDOS SERIES CASE	Discrete modular housing for protection equipment.
AN	n/a	n/a	04/01/1991	-	UKGS	MITZ 01	Communication interface unit. Fibre optic to G703.
AN	n/a	n/a	13/08/1984	-	UKGS	MMLB01, MMLB02	Multi finger test Plug and single finger test plug respectively.
AN	n/a	n/a	13/08/1984	-	UKGS	MMLG	Test Socket.
AN	n/a	n/a	24/10/1984	-	UKGS	MVAA11	Modular general purpose voltage operated auxiliary relay.
AN	n/a	n/a	24/10/1984	-	UKGS	MVAA12	Modular general purpose voltage operated auxiliary relay.
AN	n/a	n/a	24/10/1984	-	UKGS	MVAA13	Modular general purpose voltage operated auxiliary relay.
AN	n/a	n/a	24/10/1984	-	UKGS	MVAA14	Modular general purpose voltage operated auxiliary relay.
AN	n/a	n/a	24/10/1984	-	UKGS	MVAA15	Modular general purpose voltage operated auxiliary relay.
AN	n/a	n/a	04/09/1985	-	UKGS	MVAA16	Modular auxiliary relay suitable for carrier send and carrier receive interface applications for distance protection.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG11	Instantaneous undervoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG12	Instantaneous undervoltage relay.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG13	Instantaneous undervoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG14	Instantaneous undervoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG15	Instantaneous overvoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG16	Instantaneous overvoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG17	Instantaneous overvoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG18	Instantaneous overvoltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG31	Instantaneous under voltage relay.
AN	n/a	n/a	26/02/1988	-	UKGS	MVAG35	Instantaneous overvoltage relay.
AN	n/a	n/a	12/08/1985	-	UKGS	MVAJ11	Modular tripping relay. Self reset, low burden, economy cut-off.
AN	n/a	n/a	12/08/1985	-	UKGS	MVAJ13	Modular tripping relay. Hand reset, low burden, instantaneous cut-off.
AN	n/a	n/a	12/08/1985	-	UKGS	MVAJ14	Modular tripping relay. Electrically reset, low burden, instantaneous cut-off.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ15</u>	<u>Modular tripping relay. Electrically/hand reset, low burden instantaneous cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>15/12/1987</u>	-	<u>UKGS</u>	<u>MVAJ17</u>	<u>Modular tripping relay. Self reset, very low burden, economy cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ21</u>	<u>Modular tripping relay. Self reset, high burden, economy cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ23</u>	<u>Modular tripping relay. Hand reset, high burden, instantaneous cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ24</u>	<u>Modular tripping relay. Electrically reset, high burden instantaneous cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ25</u>	<u>Modular tripping relay. Electrically/hand reset, high burden instantaneous cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>15/12/1987</u>	-	<u>UKGS</u>	<u>MVAJ26</u>	<u>Modular tripping relay. Self reset after 2 seconds, high burden, economy cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ27</u>	<u>Modular tripping relay. Hand reset, high burden, time delay cut-off.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/08/1985</u>	-	<u>UKGS</u>	<u>MVAJ28</u>	<u>Modular tripping relay. Electrically reset, high burden, time delay cut-off.</u>

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AN	n/a	n/a	12/08/1985	-	UKGS	MVAJ29	Modular tripping relay. Electrically/hand reset, high burden, time delay cut-off.
AN	n/a	n/a	12/08/1985	-	UKGS	MVAJ34	Modular control relay. Electrically reset, instantaneous cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ41	Modular tripping relay. Self reset, low burden, economy cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ43	Modular tripping relay. Hand reset, low burden, instantaneous cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ44	Modular tripping relay. Electrically reset, low burden instantaneous cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ45	Modular tripping relay. Electrically/hand reset, low burden, instantaneous cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ51	Modular tripping relay. Self reset, high burden, economy cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ53	Modular tripping relay. Hand reset, high burden, instantaneous cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ54	Modular tripping relay. Electrically reset, high burden, instantaneous cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ55	Modular tripping relay. Electrically/hand reset, high burden instantaneous cut-off.
AN	n/a	n/a	12/10/1990	-	UKGS	MVAJ56	Self reset tripping relay. Self after 2 seconds, high burden, economy cut-off.

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AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ57	Modular tripping relay. Hand reset, high burden, time delay cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ58	Modular tripping relay. Electrically reset, high burden, time delay cut-off.
AN	n/a	n/a	04/05/1989	-	UKGS	MVAJ59	Modular tripping relay. electrically/hand reset, high burden, time delay cut-off.
AN	n/a	n/a	22/03/1990	-	UKGS	MVAW02	Intertrip Receive Trip Relay (low burden).
AN	n/a	n/a	07/12/1984	-	UKGS	MVAW11	Modular interposing relay for use on 50V pilot circuits.
AN	n/a	n/a	07/12/1984	-	UKGS	MVAW21	Modular interposing relay for use on 50V pilot circuits.
AN	n/a	n/a	06/05/1983	-	UKGS	MVAX12	Modular trip supply supervision relay.
AN	n/a	n/a	06/05/1983	-	UKGS	MVAX21	Modular trip circuit supervision relay.
AN	n/a	n/a	06/05/1983	-	UKGS	MVAX31	Modular trip circuit supervision relay
AN	n/a	n/a	28/05/1986	-	UKGS	MVT14 (AC)	Modular solid state time delay relay. Delay on pick-up.
AN	n/a	n/a	28/05/1986	-	UKGS	MVT15 (AC)	Modular solid state time delay relay. Delay on drop-off.
AN	n/a	n/a	06/12/1985	-	UKGS	MWTU01	Modular power relay.

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AN	n/a	n/a	07/11/1972	-	UKGS	PCHN101	Circuit breaker fail protection current check relay.
AN	n/a	n/a	07/11/1972	-	Schneider Electric	Precision relay 69/017	Miniature plug-in relay.
AN	n/a	n/a	11/01/1966	-	UKGS	SJA	Transistorised pilot supervision relays.
AN	n/a	n/a	24/03/1976	-	UKGS	SS25	Voice frequency intertripping equipment.
AN	n/a	n/a	08/05/1962	-	UKGS	VAC	Counting relay.
AN	n/a	n/a	24/08/1954	-	UKGS	VAF11	Attracted armature flag relay.
AN	n/a	n/a	22/11/1972	-	UKGS	VAJZ14	High speed tripping relay.
AN	n/a	n/a	05/06/1962	-	UKGS	VAWJ16	Attracted armature intertrip receive relay.
AN	n/a	n/a	07/12/1979	-	Schneider Electric	B7 SUPERSLUG	Time delay relay.
AN	n/a	n/a	29/12/1993	-	Schneider Electric	MICROTRIP 2	Protection and Control Relay for use with pole mounted recloser PMR3.
AN	n/a	n/a	08/05/1990	-	Schneider Electric	PBSJ 120	Multi characteristic o/c & E/F protection.
AN	n/a	n/a	21/09/1993	-	Schneider Electric	VIP 200	Protection Relay for Ringmaster.
AN	n/a	n/a	02/12/1991	-	Siemens Protection Devices Ltd	2TJM20	Electro mechanical IDMTL relay - very inverse characteristic.
AN	n/a	n/a	02/12/1991	-	Siemens Protection Devices Ltd	2TJM30	Electro mechanical IDMTL relay - Extremely inverse characteristic.

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<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>02/12/1991</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>2TJM60</u>	<u>Electro mechanical IDMTL relay - Long time earth fault characteristic.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>02/12/1991</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>2TJM70</u>	<u>Electro mechanical IDMTL relay - 1-3 Seconds at 10 times plug setting inverse characteristic.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>06/11/1992</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>2DAB</u>	<u>Circuit breaker fail protection current available with integral Timer option.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/07/1988</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>2DCC</u>	<u>Microprocessor based overcurrent and earth fault relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>02/12/1991</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>2TJM10</u>	<u>Electro mechanical IDMTL relay - normal inverse characteristic.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>17/04/1972</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>4B3</u>	<u>Attracted armature. high impedance. circulating current relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>07/08/1970</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>4C21 Duobias Mk IV</u>	<u>Overall biased transformer protection.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR101</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR101T</u>	<u>DV voltage operated relay with delay on pick-up and drop-off. Self reset contacts.</u>

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR103</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR111</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>15/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR111T</u>	<u>DC Voltage operated relay delayed on pick-up and drop-off. Self reset contacts. Hand reset flag.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR112</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>15/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR112SB</u>	<u>DC voltage operated relay with series break contact to reduce relay operation. Hand reset contacts and flag.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR113</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR114</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR121</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR121T</u>	<u>DV voltage operated relay delayed on pick-up and drop-off. Self reset contacts. Hand reset flag.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR124</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR131</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR133-SB</u>	<u>AC or DC voltage operated relay. Electrical reset contacts. Self reset flag.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>27/07/1989</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR141</u>	<u>General purpose voltage energised instantaneously operating auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR141T</u>	<u>DC voltage operated relay delayed on pick-up and drop-off. Self reset contacts and flag. Flag shows on de-energisation.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>AR212SB</u>	<u>Two elements, DC voltage operated relay with series break contact to reduce relay burden to zero after operation. Hand reset contacts and flag.</u>

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	-	-	<u>Siemens Protection Devices Ltd</u>	<u>B RELAYS IN REYMOS CASES</u>	<u>B1, 3, 4, 6, 11, 12, 16, 22, 24, 26, 28, 29, 30, 33, 34, 37, 38, 50, 51, 52, 53, 55, 61, 62, 63, 64, 65, 66, 67, 68, 70, 73, 74, 81, 82, 83, 84, 'B' control, 'B' alarm relays, 'B' auxiliary relays.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>17/06/1952</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B1</u>	<u>Instantaneous overcurrent and earth fault attracted armature auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/12/1953</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B11</u>	<u>Attracted armature auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/12/1953</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B12</u>	<u>Attracted armature auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/12/1966</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B22</u>	<u>Attracted armature auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/12/1953</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B24</u>	<u>Attracted armature auxiliary relay (latching type).</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>12/12/1966</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B26</u>	<u>Attracted armature auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/12/1953</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B28</u>	<u>Attracted armature high speed auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/12/1953</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B29</u>	<u>Attracted armature high speed auxiliary relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/12/1953</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>B3</u>	<u>Attracted armature (rectifier fed) high impedance relay.</u>

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	18/10/1966	-	Siemens Protection Devices Ltd	B30	Attracted armature auxiliary relay (latching type).
AN	n/a	n/a	18/10/1966	-	Siemens Protection Devices Ltd	B33	Attracted armature auxiliary relay (latching type).
AN	n/a	n/a	18/10/1966	-	Siemens Protection Devices Ltd	B37	Attracted armature relay (rectifier fed).
AN	n/a	n/a	18/12/1953	-	Siemens Protection Devices Ltd	B4	Attracted armature overcurrent or earth fault relay.
AN	n/a	n/a	12/12/1966	-	Siemens Protection Devices Ltd	B50	Attracted armature measuring relay.
AN	n/a	n/a	23/03/1967	-	Siemens Protection Devices Ltd	B54	Attracted armature auxiliary relay.
AN	n/a	n/a	09/06/1965	-	Siemens Protection Devices Ltd	B55	Attracted armature high speed relay.
AN	n/a	n/a	12/12/1966	-	Siemens Protection Devices Ltd	B6	A.C. under voltage changeover relay.
AN	n/a	n/a	09/06/1965	-	Siemens Protection Devices Ltd	B61	Attracted armature high speed relay with hand reset flag.
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	B62	Attracted armature auxiliary relay (latching type with 2 self-reset contacts).
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	B65	Attracted armature auxiliary relay with time delay.
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	BD	Surge-proof intertrip receive relay.
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	CC2	Solenoid operated d.c. time lag relay.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	CF1	Attracted armature earth fault relay (rectifier fed).
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	CJ1	Interlocked overcurrent protection relay.
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	CJ2	Interlocked overcurrent protection relay.
AN	n/a	n/a	-	-	Siemens Protection Devices Ltd	CJ3	Interlocked overcurrent protection relay.
AN	n/a	n/a	20/05/1992	-	Siemens Protection Devices Ltd	DDB1	Static time Delay Relay.
AN	n/a	n/a	20/05/1992	-	Siemens Protection Devices Ltd	DDB3	Static time Delay Relay.
AN	n/a	n/a	20/05/1992	-	Siemens Protection Devices Ltd	DDB5	Static time Delay Relay.
AN	n/a	n/a	16/03/1992	-	Siemens Protection Devices Ltd	DUOBIAS M	Numerical Biased Differential Transformer Protection with Restricted Earth Fault.
AN	n/a	n/a	23/08/1956	-	Siemens Protection Devices Ltd	E	Permanent magnet moving coil relay.
AN	n/a	n/a	20/02/1970	-	Siemens Protection Devices Ltd	EH	No volt memory relay.
AN	n/a	n/a	01/06/1960	-	Siemens Protection Devices Ltd	ES	Induction disc auxiliary directional relay.
AN	n/a	n/a	21/03/1957	-	Siemens Protection Devices Ltd	F14E	High speed 14 contact.
AN	n/a	n/a	10/11/1975	-	Siemens Protection Devices Ltd	F14H	High speed 14 contact tripping relay.

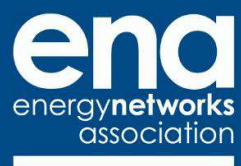
<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	21/03/1957	-	Siemens Protection Devices Ltd	F14H in older cases	High speed 14 contact tripping relay.
AN	n/a	n/a	21/03/1957	-	Siemens Protection Devices Ltd	F8E	High speed 8 contact tripping relay (electrically reset).
AN	n/a	n/a	21/03/1957	-	Siemens Protection Devices Ltd	F8H in older cases	High speed 8 contact tripping relay (hand reset).
AN	n/a	n/a	10/11/1975	-	Siemens Protection Devices Ltd	F8H in Vedette case	High speed 8 contact tripping relay (hand reset).
AN	n/a	n/a	24/04/1969	-	Siemens Protection Devices Ltd	F8S	High speed 8 contact tripping relay (self-reset)
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	FR111	Current operated auxiliary relay.
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	FR111T	Current operated auxiliary relay with time lag.
AN	n/a	n/a	12/07/1988	-	Siemens Protection Devices Ltd	GAD	Microprocessor based protection and auto-reclose relay.
AN	n/a	n/a	26/04/1973	-	Siemens Protection Devices Ltd	HE	Protection and auto-reclose in/out switching relay.
AN	n/a	n/a	11/11/1988	-	Siemens Protection Devices Ltd	MCAA	High set overcurrent relay in Reymos Case.
AN	n/a	n/a	04/01/1978	-	Siemens Protection Devices Ltd	MHJ	High set overcurrent relay.
AN	n/a	n/a	13/06/1989	-	Siemens Protection Devices Ltd	MHR4	Switched Distance Protection.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>RD26-1</u>	<u>AC or DC operated control relay with 4 or 6 contacts in any combination of NO or NC. Self reset contacts. Heavy duty contacts available.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>RD26-3</u>	<u>Latching, DC operated control relay with 4 contacts in any combination of NO or NC. Self reset contacts. Heavy duty contacts available.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>10/11/1988</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>REYMOS SERIES CASE</u>	<u>Discrete Modular Housing for Protection Equipment.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>21/12/1959</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>SOLKOR R (15kV)</u>	<u>Pilot wire feeder protection using private pilots.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>21/12/1959</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>SOLKOR R (5kV)</u>	<u>Pilot wire feeder protection using private pilots.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>02/07/1969</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>TCD6</u>	<u>Transistorised definite time delay relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>24/09/1968</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>TEC</u>	<u>Intertrip send relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>10/01/1973</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>TGH</u>	<u>Impulse overcurrent and earth fault relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>29/03/1979</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>THR</u>	<u>Transistorised distance protection.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>19/03/1991</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>THR Memory Comparator</u>	<u>THR distance protection fast Zone 1 operation for close up 3 phase faults.</u>

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
AN	n/a	n/a	16/05/1986	-	Siemens Protection Devices Ltd	THR Monitor Module	THR distance protection monitor.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR112	Instantaneous tripping relay. Self reset, low burden, economy.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR121	Instantaneous tripping relay. Hand reset, low burden.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR131	Instantaneous tripping relay. Electrically reset, low burden.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR141	Instantaneous tripping relay. Hand and electrically reset, low burden.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR212	Instantaneous tripping relay. Self reset, high burden, economy.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR221	Instantaneous tripping relay. Hand reset, high burden.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR231	Instantaneous tripping relay. Electrically reset, high burden.
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	TR233	Electrical reset high burden tripping relay with 40/60mS delayed cut-off of the operating coil.
AN	n/a	n/a	27/07/1989	-	Siemens Protection Devices Ltd	TR241	Instantaneous tripping relay. Hand and electrically reset, high burden.

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AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	TR243	Hand and electrical reset high burden tripping relay with 40mS delayed cutoff of the operating coil.
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	TR312	Very low burden self reset economy trip relay.
AN	n/a	n/a	04/06/1990	-	Siemens Protection Devices Ltd	TR431 & 431-7	IN/OUT Switching Control Relay.
AN	n/a	n/a	04/06/1990	-	Siemens Protection Devices Ltd	TR512	Protection Unstabilizing Relay.
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	TR901	Position repeat relay.
AN	n/a	n/a	10/11/1975	-	Siemens Protection Devices Ltd	VEDETTE	Draw-out relay case.
AN	n/a	n/a	13/08/1991	-	Siemens Protection Devices Ltd	XR101	Attracted Armature Relay for Intertrip Send.
AN	n/a	n/a	13/08/1991	-	Siemens Protection Devices Ltd	XR102	Attracted Armature relay for Intertrip receive.
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	XR105	Auxilliary Interposing Relay.
AN	n/a	n/a	18/05/1994	-	Siemens Protection Devices Ltd	XR152	Trip supply supervision relay. Single element delayed on de-energisation. Self reset flag showing on de-energisation.

<u>Assessment Type</u>	<u>Number</u>	<u>Issue</u>	<u>Issue date</u>	<u>Status</u>	<u>Manufacturer</u>	<u>Equipment Type Reference</u>	<u>Functional description</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>XR153</u>	<u>Trip supply supervision relay. Single element delayed on de-energisation. Self reset flag showing on de-energisation.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>XR250</u>	<u>Two element trip circuit supervision relay. Self reset flag.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>XR251</u>	<u>Two element trip circuit supervision relay. Hand reset flag.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>XR350</u>	<u>Trip circuit supervision relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>18/05/1994</u>	-	<u>Siemens Protection Devices Ltd</u>	<u>XR351</u>	<u>Trip circuit supervision relay.</u>
<u>AN</u>	<u>n/a</u>	<u>n/a</u>	<u>13/11/1989</u>	-	<u>W H Allen, Allen Power Engineering, Bedford, UK</u>	<u>ROCOF Mk II</u>	<u>To detect loss of grid supply during parallel operation of generating plant.</u>



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