

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

SEMICONDUCTOR PROTECTION FUSES

SQUARE BODY HIGH-SPEED FUSE-LINKS AC PROTECTION



The 690/700V Protistor® fuse-links provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment. These aR ultra-fast acting square body fuse-links are available in different body sizes, each size having multiple worldwide acceptable mounting styles.

They have been engineered to provide state-of-the-art protection for semiconductors: diodes, thyristors and IGBT devices. They are assembled with die-cut elements embedded in solidified sand, which helps control arcing characteristics for a lower I^2t and high interrupting rating level. All contact surfaces are silver plated and all hardware is non-magnetic.

Each fuse-link can be equipped with a low voltage trip-indicator which can operate a field mountable microswitch.

TECHNICAL DATA OVERVIEW

Voltage AC	690 VAC
Ampere Range (A)	160 ... 800 A
Speed/Characteristic	aR
I.R. AC (IEC)	170 kA
Product Size	31

FEATURES & BENEFITS

- Multiple body sizes and terminals or blades combination
- aR Class according to IEC 60269-4 and VDE 636-23
- Very low I^2t for improved semiconductor protection
- Ultra fast acting
- Current limiting
- Superior cycling capability

APPLICATIONS

- Protection of inverters, motor drives, UPS systems and similar 690V or less equipments.

STANDARDS

- IEC 60269.4 Compliance
- UL/CSA Recognized E76491: see « UL certified » status given in Product Range table
- CCC GB 13539.4 for Asian market only



Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE



PC31UD69V800TF

Size 31 type TTF M8 threaded terminals

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
PC31UD69V160TF	M300299	690 V	700 V	160 A	1300 A ² s	7700 A ² s	200 kA	35 W	✓	3	0.38 kg
PC31UD69V200TF	N300001	690 V	700 V	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.38 kg
PC31UD69V250TF	P300002	690 V	700 V	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.38 kg
PC31UD69V315TF	Q300003	690 V	700 V	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.38 kg
PC31UD69V350TF	M300046	690 V	700 V	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.38 kg
PC31UD69V400TF	R300004	690 V	700 V	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.38 kg
PC31UD69V450TF	S300005	690 V	700 V	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.38 kg
PC31UD69V500TF	T300006	690 V	700 V	500 A	37000 A ² s	215000 A ² s	200 kA	70 W	✓	3	0.38 kg
PC31UD69V550TF	V300007	690 V	700 V	550 A	52000 A ² s	310000 A ² s	200 kA	70 W	✓	3	0.38 kg
PC31UD69V630TF	W300008	690 V	700 V	630 A	75000 A ² s	430000 A ² s	200 kA	75 W	✓	3	0.38 kg
PC31UD69V700TF	X300009	690 V	700 V	700 A	95000 A ² s	540000 A ² s	200 kA	85 W	✓	3	0.38 kg
PC31UD69V800TF	Y300401	690 V	700 V	800 A	140000 A ² s	880000 A ² s	200 kA	105 W	✓	3	0.38 kg



A070UD31TT1800

Size 31 type TTI 5/16in - 18 unified coarse threaded terminals

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
A070UD31TTI200	A300472	690 V	700	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.39 kg
A070UD31TTI250	B300473	690 V	700	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.39 kg
A070UD31TTI315	C300474	690 V	700	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.39 kg
A070UD31TTI350	D300475	690 V	700	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.39 kg
A070UD31TTI400	E300476	690 V	700	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.39 kg
A070UD31TTI450	F300477	690 V	700	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.39 kg
A070UD31TTI500	G300478	690 V	700	500 A	37000 A ² s	215000 A ² s	200 kA	70 W	✓	3	0.39 kg
A070UD31TTI550	H300479	690 V	700	550 A	52000 A ² s	310000 A ² s	200 kA	70 W	✓	3	0.39 kg
A070UD31TTI630	J300480	690 V	700	630 A	75000 A ² s	430000 A ² s	200 kA	75 W	✓	3	0.39 kg
A070UD31TTI700	K300481	690 V	700	700 A	95000 A ² s	540000 A ² s	200 kA	85 W	✓	3	0.39 kg
A070UD31TTI800	L300482	690 V	700	800 A	140000 A ² s	880000 A ² s	200 kA	105 W	✓	3	0.39 kg

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE



PC31UD69V800A

Size 31 type DIN80 blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
PC31UD69V160A	M300322	690 V	700 V	160 A	1300 A ² s	7700 A ² s	200 kA	35 W	✓	3	0.39 kg
PC31UD69V200A	Y300010	690 V	700 V	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.39 kg
PC31UD69V250A	Z300011	690 V	700 V	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.39 kg
PC31UD69V315A	A300012	690 V	700 V	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.39 kg
PC31UD69V350A	Q300049	690 V	700 V	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.39 kg
PC31UD69V400A	B300013	690 V	700 V	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.39 kg
PC31UD69V450A	C300014	690 V	700 V	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.39 kg
PC31UD69V500A	D300015	690 V	700 V	500 A	37000 A ² s	215000 A ² s	200 kA	72 W	✓	3	0.39 kg
PC31UD69V550A	E300016	690 V	700 V	550 A	52000 A ² s	310000 A ² s	200 kA	75 W	✓	3	0.39 kg
PC31UD69V630A	F300017	690 V	700 V	630 A	75000 A ² s	430000 A ² s	200 kA	85 W	✓	3	0.39 kg
PC31UD69V700A	G300018	690 V	700 V	700 A	95000 A ² s	540000 A ² s	200 kA	95 W	✓	3	0.39 kg
PC31UD69V800A	D300406	690 V	700 V	800 A	140000 A ² s	880000 A ² s	200 kA	120 W	✓	3	0.39 kg



PC31UD69V800D1A

Size 31 type DIN110 blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
PC31UD69V200D1A	H300019	690 V	700 V	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.41 kg
PC31UD69V250D1A	J300020	690 V	700 V	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.41 kg
PC31UD69V315D1A	K300021	690 V	700 V	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.41 kg
PC31UD69V350D1A	P300048	690 V	700 V	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.41 kg
PC31UD69V400D1A	L300022	690 V	700 V	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.41 kg
PC31UD69V450D1A	M300023	690 V	700 V	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.41 kg
PC31UD69V500D1A	N300024	690 V	700 V	500 A	37000 A ² s	215000 A ² s	200 kA	72 W	✓	3	0.41 kg
PC31UD69V550D1A	P300025	690 V	700 V	550 A	52000 A ² s	310000 A ² s	200 kA	75 W	✓	3	0.41 kg
PC31UD69V630D1A	Q300026	690 V	700 V	630 A	75000 A ² s	430000 A ² s	200 kA	85 W	✓	3	0.41 kg
PC31UD69V700D1A	R300027	690 V	700 V	700 A	95000 A ² s	540000 A ² s	200 kA	95 W	✓	3	0.41 kg
PC31UD69V800D1A	H300709	690 V	700 V	800 A	140000 A ² s	880000 A ² s	200 kA	120 W	✓	3	0.41 kg

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE



A070UD31KI250

Size 31 type KI short slotted blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
A070UD31KI160	F300385	690 V	700 V	160 A	1300 A ² s	7700 A ² s	200 kA	35 W	✓	3	0.40 kg
A070UD31KI200	S300028	690 V	700 V	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.40 kg
A070UD31KI250	T300029	690 V	700 V	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.40 kg
A070UD31KI315	V300030	690 V	700 V	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.40 kg
A070UD31KI350	R300050	690 V	700 V	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.40 kg
A070UD31KI400	W300031	690 V	700 V	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.40 kg
A070UD31KI450	X300032	690 V	700 V	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.40 kg
A070UD31KI500	Y300033	690 V	700 V	500 A	37000 A ² s	215000 A ² s	200 kA	72 W	✓	3	0.40 kg
A070UD31KI550	Z300034	690 V	700 V	550 A	52000 A ² s	310000 A ² s	200 kA	75 W	✓	3	0.40 kg
A070UD31KI630	A300035	690 V	700 V	630 A	75000 A ² s	430000 A ² s	200 kA	85 W	✓	3	0.40 kg
A070UD31KI700	B300036	690 V	700 V	700 A	95000 A ² s	540000 A ² s	200 kA	95 W	✓	3	0.40 kg
A070UD31KI800	A301070	690 V	700 V	800 A	140000 A ² s	880000 A ² s	200 kA	120 W	✓	3	0.40 kg



A070UD31LI800

Size 31 type LI long slotted blades

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
A070UD31LI200	V300697	690 V	700 V	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.42 kg
A070UD31LI250	W300698	690 V	700 V	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.42 kg
A070UD31LI315	X300699	690 V	700 V	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.42 kg
A070UD31LI350	Y300700	690 V	700 V	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.42 kg
A070UD31LI400	Z300701	690 V	700 V	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.42 kg
A070UD31LI450	A300702	690 V	700 V	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.42 kg
A070UD31LI500	B300703	690 V	700 V	500 A	37000 A ² s	215000 A ² s	200 kA	72 W	✓	3	0.42 kg
A070UD31LI550	C300704	690 V	700 V	550 A	52000 A ² s	310000 A ² s	200 kA	75 W	✓	3	0.42 kg
A070UD31LI630	D300705	690 V	700 V	630 A	75000 A ² s	430000 A ² s	200 kA	85 W	✓	3	0.42 kg
A070UD31LI700	E300706	690 V	700 V	700 A	95000 A ² s	540000 A ² s	200 kA	95 W	✓	3	0.42 kg
A070UD31LI800	F300707	690 V	700 V	800 A	140000 A ² s	880000 A ² s	200 kA	120 W	✓	3	0.42 kg

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

PRODUCT RANGE

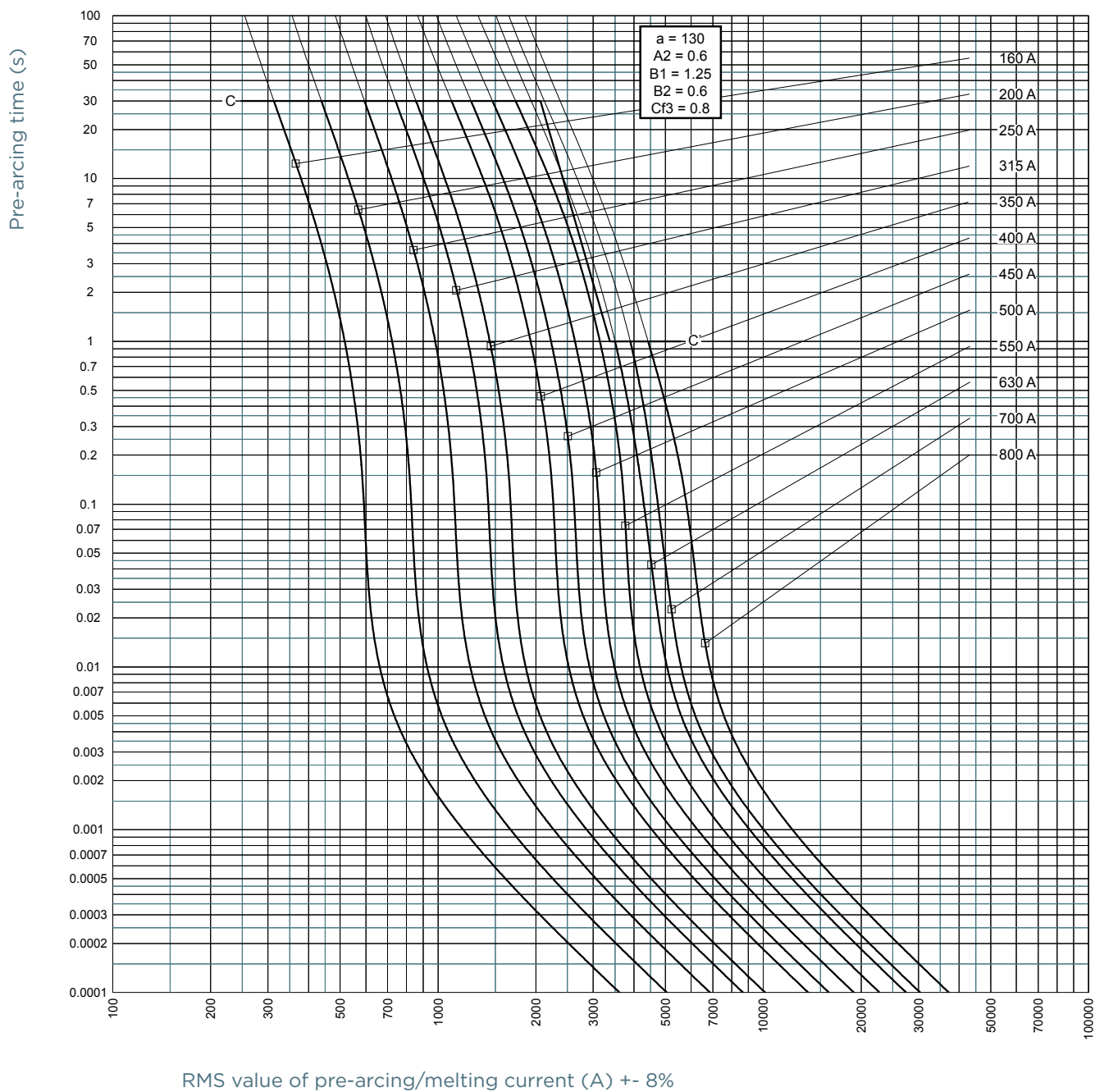


PC31UD69V700EF

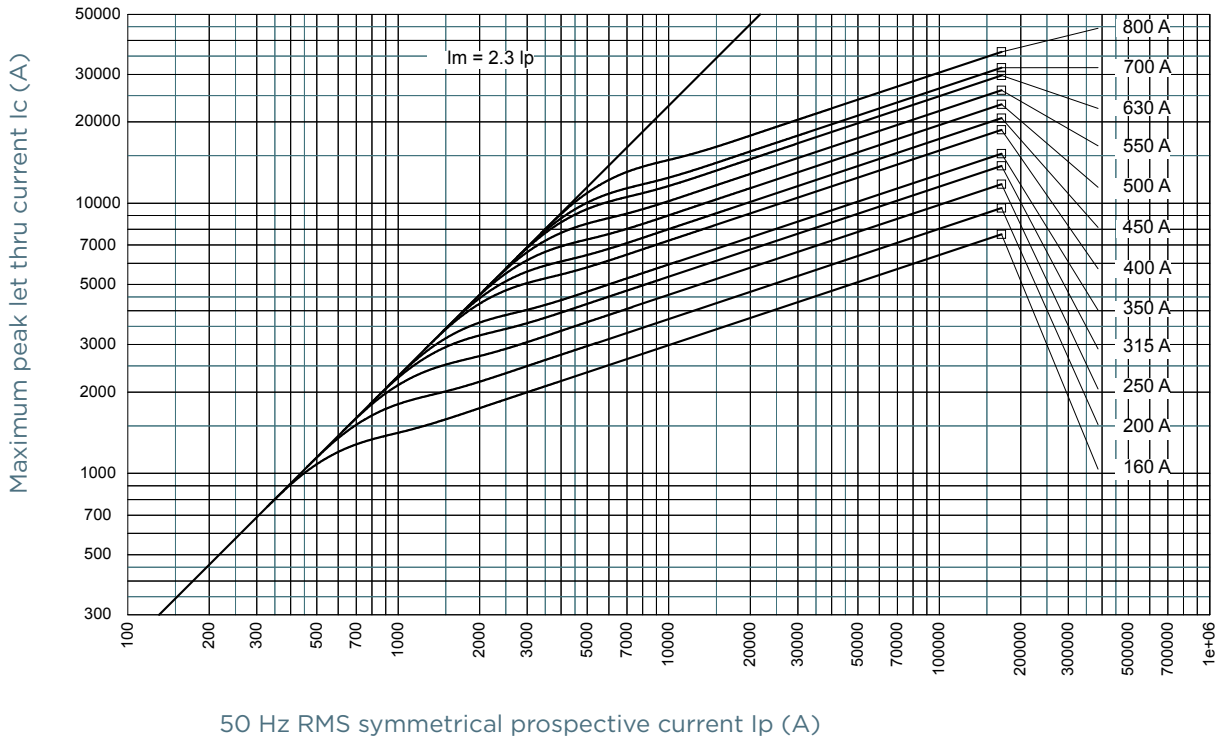
Size 31 for type EF blade bolted connections

Catalog number	Item number	Rated voltage AC (IEC)	Rated voltage AC (UL)	Rated current I _n	Pre-arcing I ² t	Clearing I ² t at Rated Voltage	Rated breaking capacity AC	Power dissipation at I _n	UL certified	Package	Weight
PC31UD69V160EF	B301922	690 V	700 V	160 A	1300 A ² s	7700 A ² s	200 kA	35 W	✓	3	0.40 kg
PC31UD69V200EF	C300037	690 V	700 V	200 A	2600 A ² s	15000 A ² s	200 kA	45 W	✓	3	0.40 kg
PC31UD69V250EF	D300038	690 V	700 V	250 A	4700 A ² s	28000 A ² s	200 kA	52 W	✓	3	0.40 kg
PC31UD69V315EF	E300039	690 V	700 V	315 A	7500 A ² s	44000 A ² s	200 kA	65 W	✓	3	0.40 kg
PC31UD69V350EF	N300047	690 V	700 V	350 A	10300 A ² s	61000 A ² s	200 kA	67 W	✓	3	0.40 kg
PC31UD69V400EF	F300040	690 V	700 V	400 A	19000 A ² s	110000 A ² s	200 kA	68 W	✓	3	0.40 kg
PC31UD69V450EF	G300041	690 V	700 V	450 A	26500 A ² s	155000 A ² s	200 kA	70 W	✓	3	0.40 kg
PC31UD69V500EF	H300042	690 V	700 V	500 A	37000 A ² s	215000 A ² s	200 kA	72 W	✓	3	0.40 kg
PC31UD69V550EF	J300043	690 V	700 V	550 A	52000 A ² s	310000 A ² s	200 kA	75 W	✓	3	0.40 kg
PC31UD69V630EF	K300044	690 V	700 V	630 A	75000 A ² s	430000 A ² s	200 kA	85 W	✓	3	0.40 kg
PC31UD69V700EF	L300045	690 V	700 V	700 A	95000 A ² s	540000 A ² s	200 kA	95 W	✓	3	0.40 kg

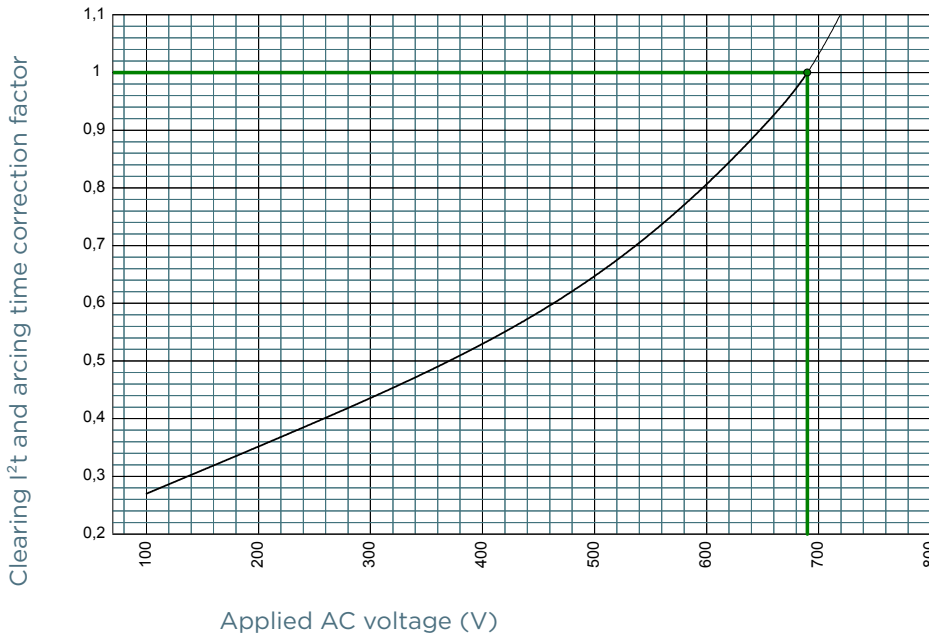
TIME CURRENT CHARACTERISTIC CURVES



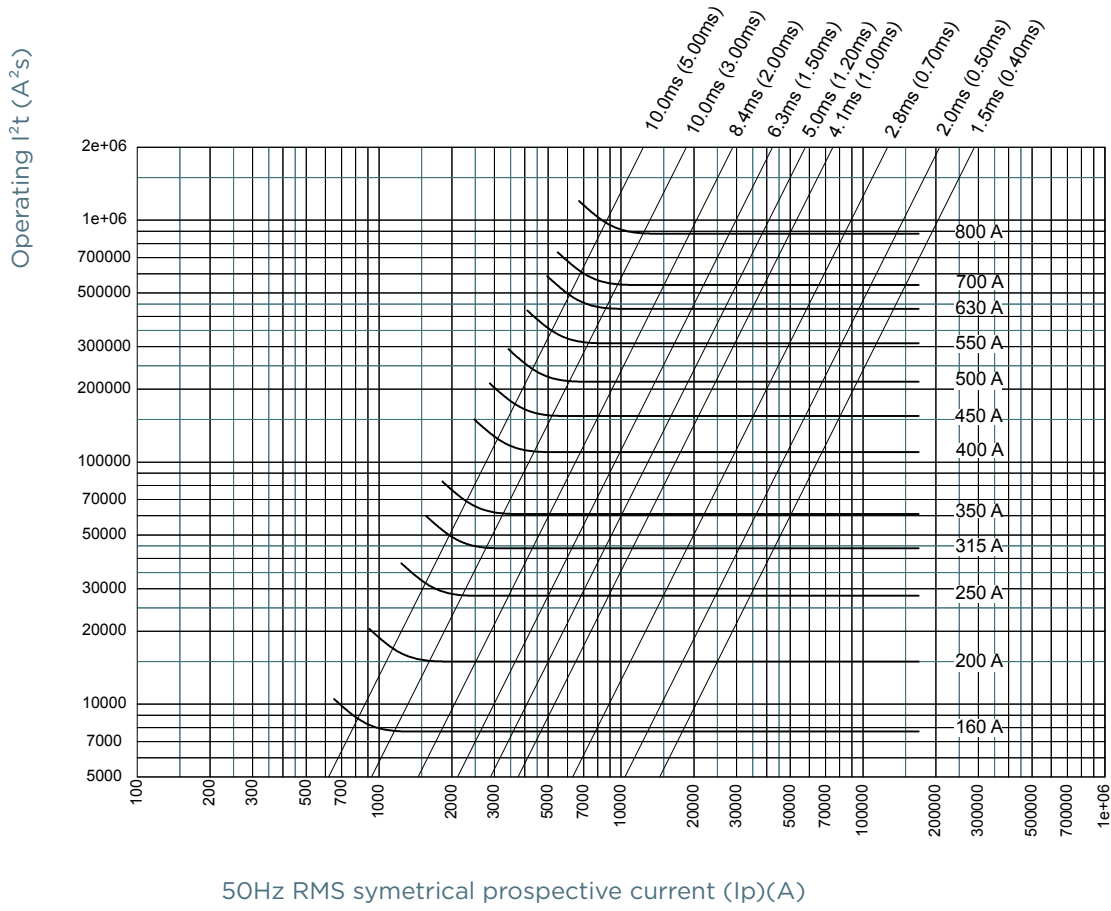
CUT-OFF CURRENT CHARACTERISTIC



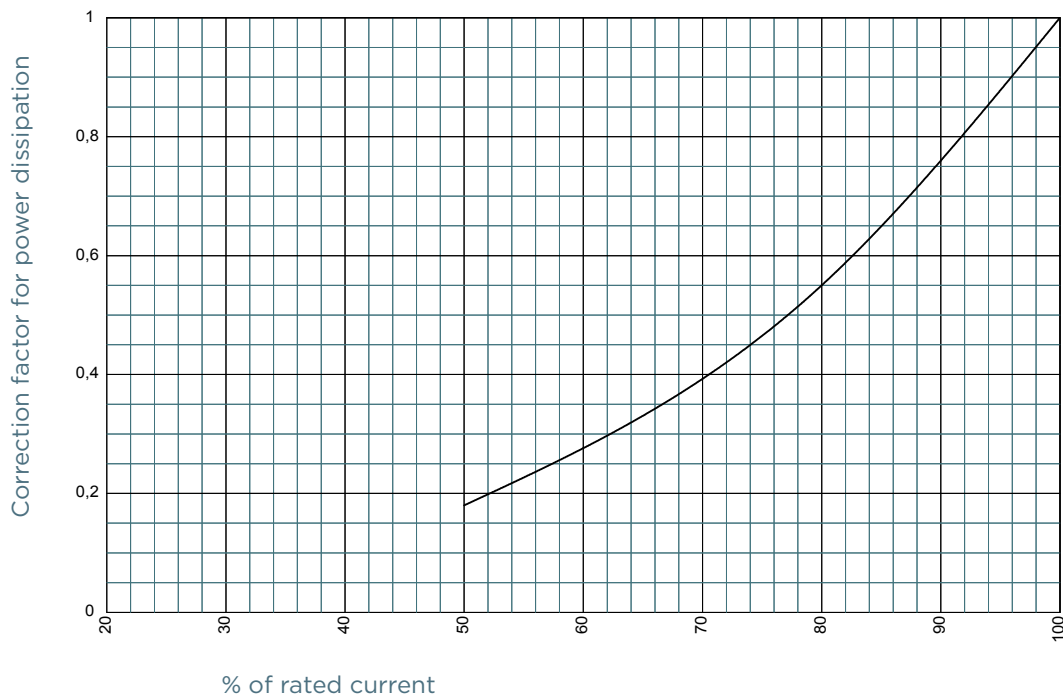
I²T MULTIPLIER COEFFICIENT



CHARACTERISTICS TOTAL I²T CURVE



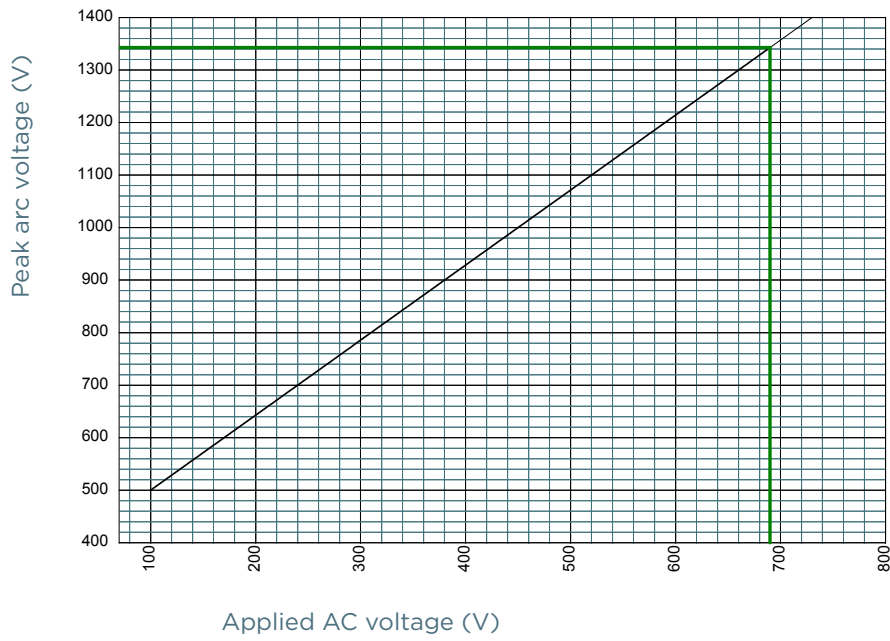
POWER DISSIPATION



Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

PEAK ARC VOLTAGE

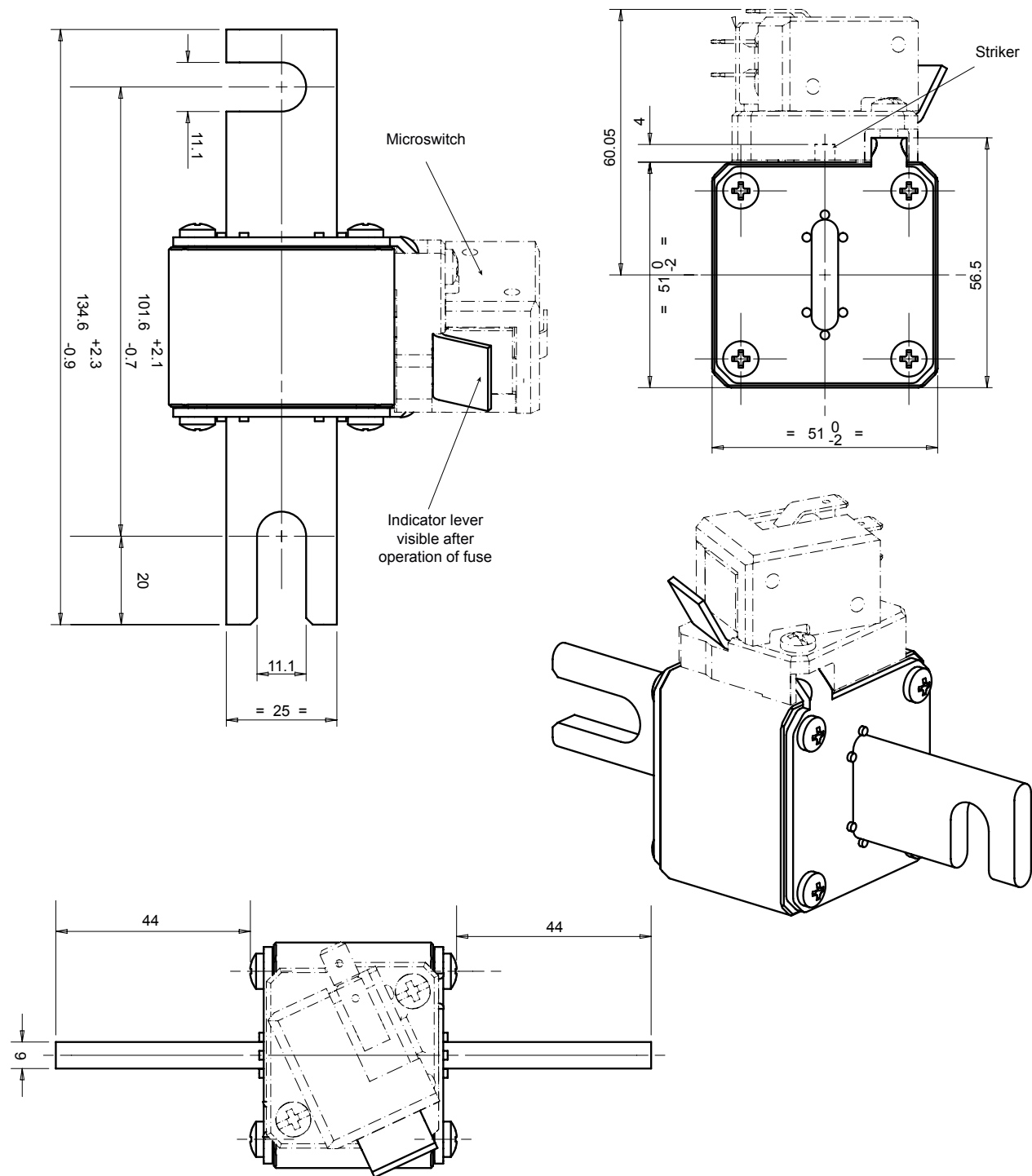


Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

DIMENSIONS

Size 31 type DIN 110



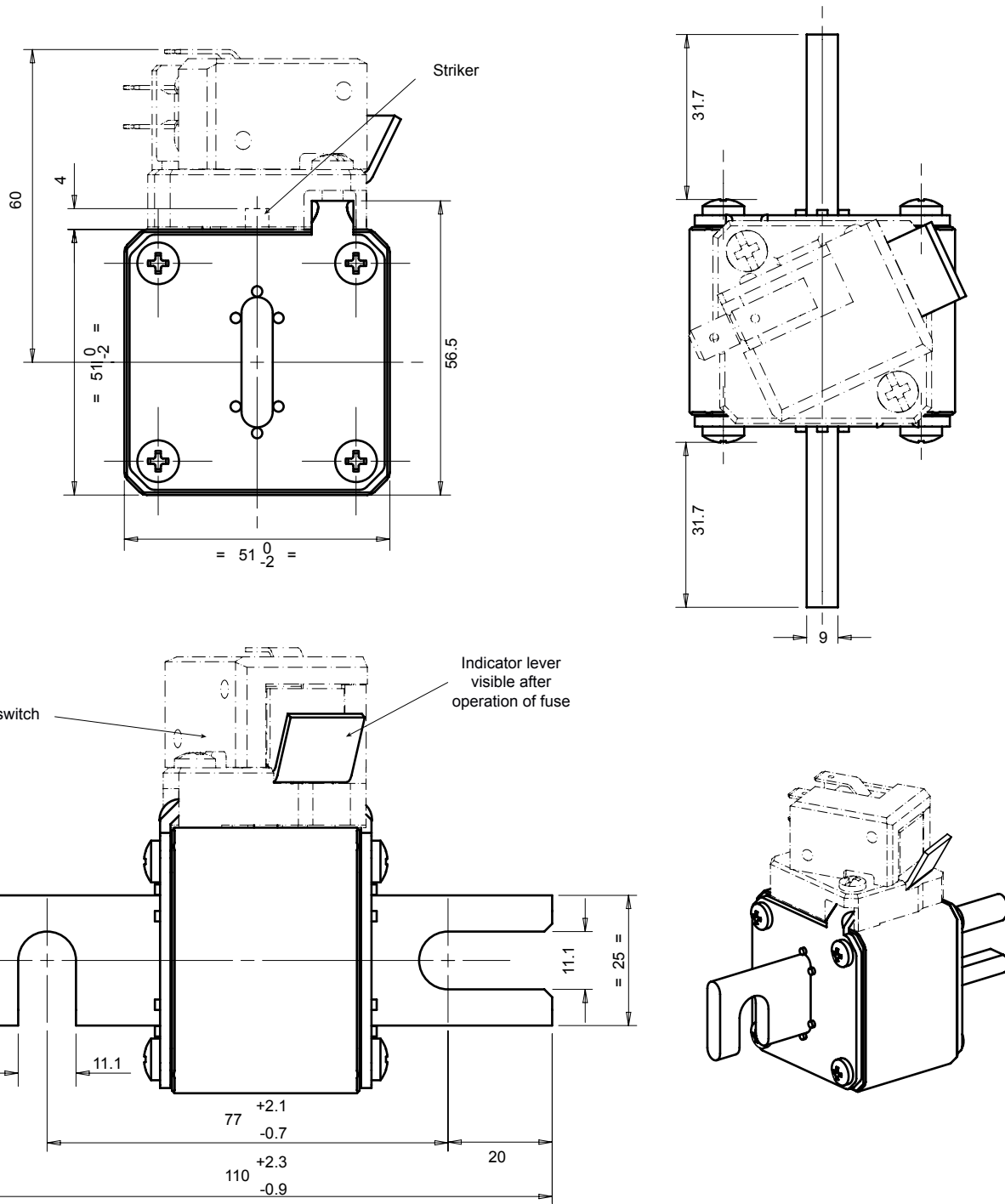
Dimensions in mm

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

DIMENSIONS

Size 31 type DIN 80



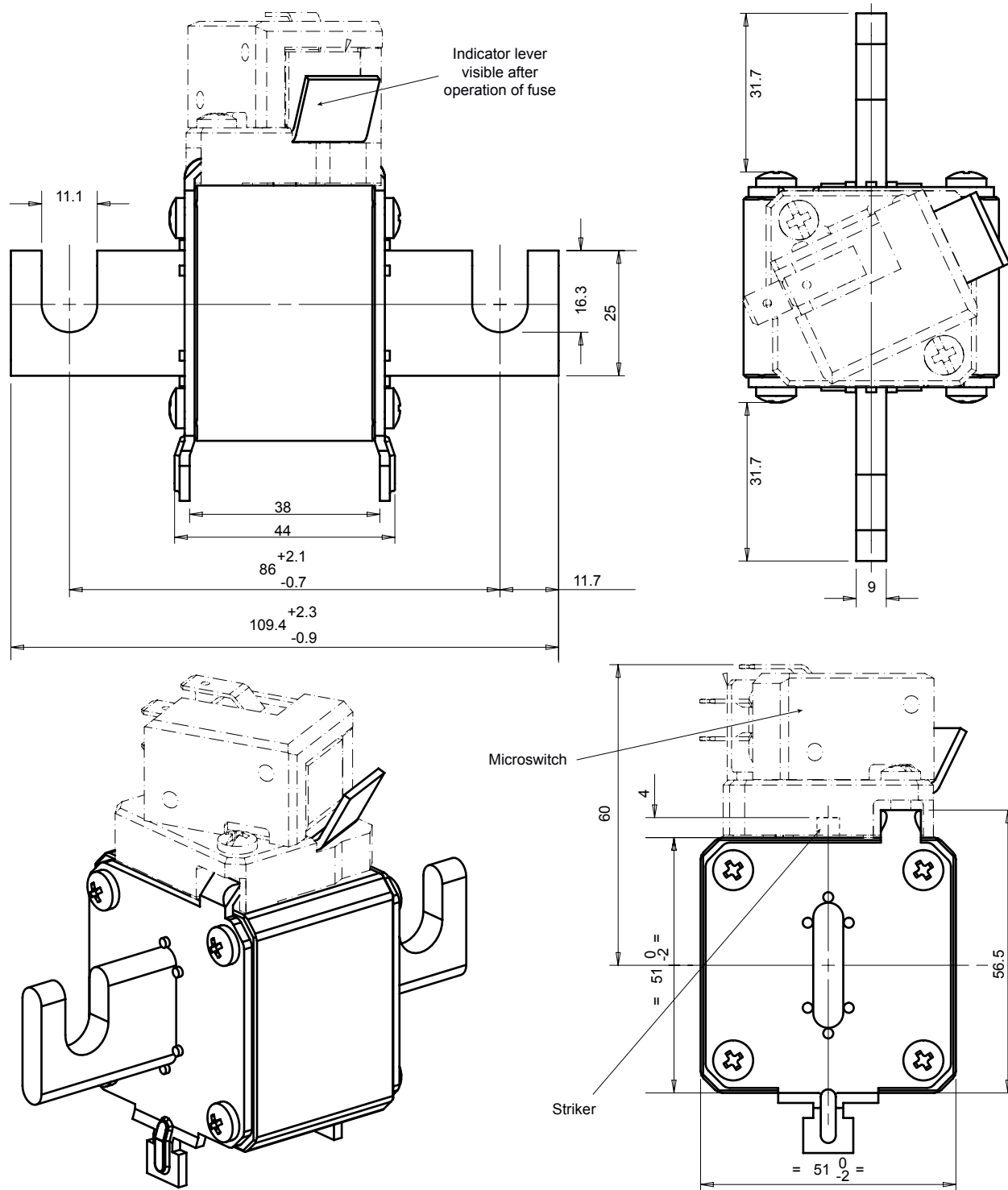
Dimensions in mm

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

DIMENSIONS

Size 31 type EF



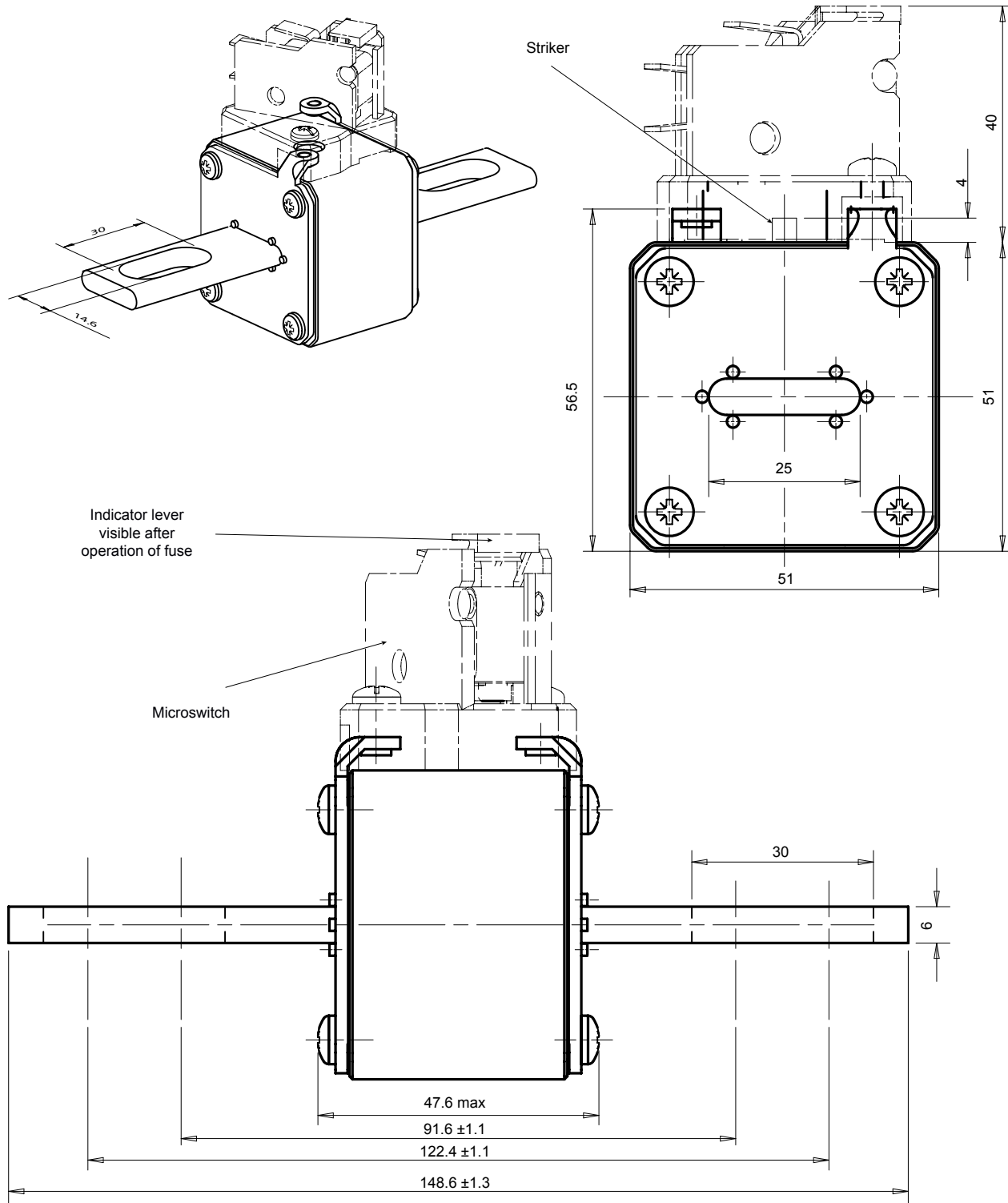
Dimensions in mm

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

DIMENSIONS

Size 31 type LI



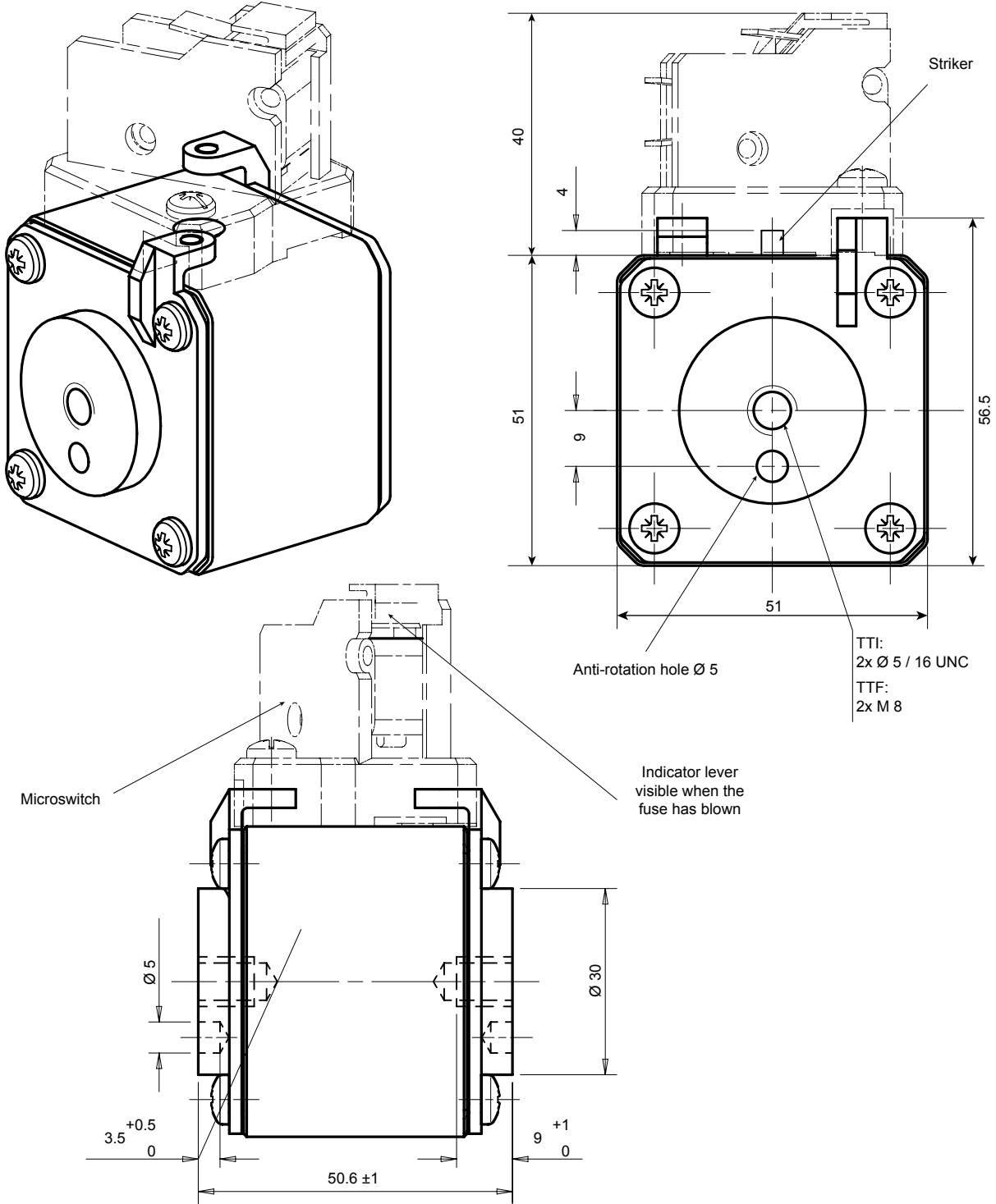
Dimensions in mm

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

DIMENSIONS

Size 31 type TTF & TTI



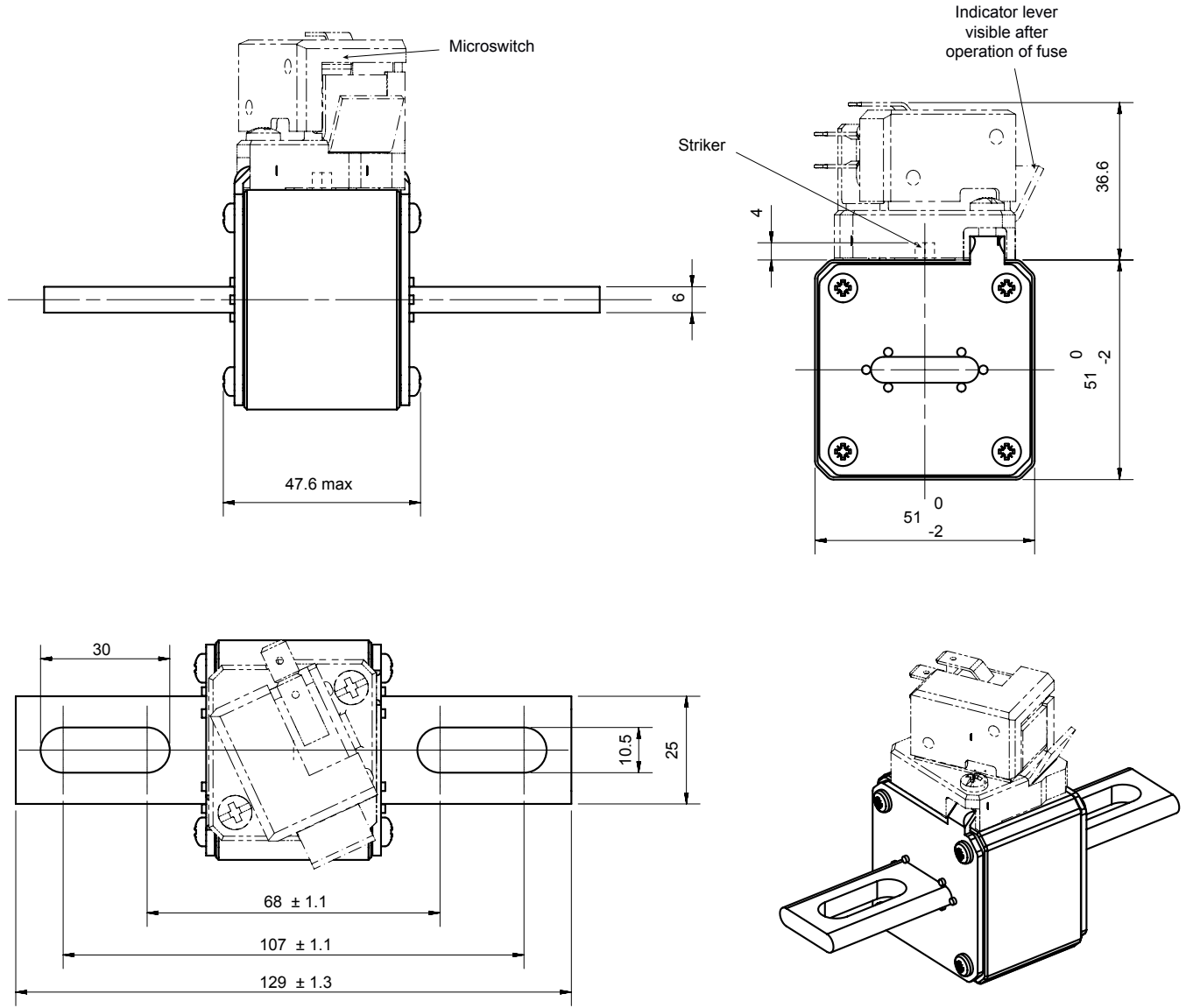
Dimensions in mm

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

DIMENSIONS

Size 31 type KI



Dimensions in mm

APPENDIX

Protistor® size 31 aR

690VAC (IEC) / 700VAC (UL)

APPENDIX

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Catalog number	Item number	Description 1	Page
PC31UD69V160TF	M300299	6,9 URD 31 TT F 0160	2
PC31UD69V200TF	N300001	6,9 URD 31 TT F 0200	2
PC31UD69V250TF	P300002	6,9 URD 31 TT F 0250	2
PC31UD69V315TF	Q300003	6,9 URD 31 TT F 0315	2
PC31UD69V350TF	M300046	6,9 URD 31 TT F 0350	2
PC31UD69V400TF	R300004	6,9 URD 31 TT F 0400	2
PC31UD69V450TF	S300005	6,9 URD 31 TT F 0450	2
PC31UD69V500TF	T300006	6,9 URD 31 TT F 0500	2
PC31UD69V550TF	V300007	6,9 URD 31 TT F 0550	2
PC31UD69V630TF	W300008	6,9 URD 31 TT F 0630	2
PC31UD69V700TF	X300009	6,9 URD 31 TT F 0700	2
PC31UD69V800TF	Y300401	6,9 URD 31 TT F 0800	2
A070UD31TTI200	A300472	A 070 URD 31 TTI 0200	2
A070UD31TTI250	B300473	A 070 URD 31 TTI 0250	2
A070UD31TTI315	C300474	A 070 URD 31 TTI 0315	2
A070UD31TTI350	D300475	A 070 URD 31 TTI 0350	2
A070UD31TTI400	E300476	A 070 URD 31 TTI 0400	2
A070UD31TTI450	F300477	A 070 URD 31 TTI 0450	2
A070UD31TTI500	G300478	A 070 URD 31 TTI 0500	2
A070UD31TTI550	H300479	A 070 URD 31 TTI 0550	2
A070UD31TTI630	J300480	A 070 URD 31 TTI 0630	2
A070UD31TTI700	K300481	A 070 URD 31 TTI 0700	2
A070UD31TTI800	L300482	A 070 URD 31 TTI 0800	2
PC31UD69V160A	M300322	6,9 URD 31 D08 A 0160	3
PC31UD69V200A	Y300010	6,9 URD 31 D08 A 0200	3
PC31UD69V250A	Z300011	6,9 URD 31 D08 A 0250	3
PC31UD69V315A	A300012	6,9 URD 31 D08 A 0315	3
PC31UD69V350A	Q300049	6,9 URD 31 D08 A 0350	3
PC31UD69V400A	B300013	6,9 URD 31 D08 A 0400	3
PC31UD69V450A	C300014	6,9 URD 31 D08 A 0450	3
PC31UD69V500A	D300015	6,9 URD 31 D08 A 0500	3
PC31UD69V550A	E300016	6,9 URD 31 D08 A 0550	3
PC31UD69V630A	F300017	6,9 URD 31 D08 A 0630	3
PC31UD69V700A	G300018	6,9 URD 31 D08 A 0700	3
PC31UD69V800A	D300406	6,9 URD 31 D08 A 0800	3
PC31UD69V200D1A	H300019	6,9 URD 31 D11 A 0200	3
PC31UD69V250D1A	J300020	6,9 URD 31 D11 A 0250	3
PC31UD69V315D1A	K300021	6,9 URD 31 D11 A 0315	3
PC31UD69V350D1A	P300048	6,9 URD 31 D11 A 0350	3
PC31UD69V400D1A	L300022	6,9 URD 31 D11 A 0400	3
PC31UD69V450D1A	M300023	6,9 URD 31 D11 A 0450	3
PC31UD69V500D1A	N300024	6,9 URD 31 D11 A 0500	3
PC31UD69V550D1A	P300025	6,9 URD 31 D11 A 0550	3
PC31UD69V630D1A	Q300026	6,9 URD 31 D11 A 0630	3
PC31UD69V700D1A	R300027	6,9 URD 31 D11 A 0700	3
PC31UD69V800D1A	H300709	6,9 URD 31 D11 A 0800	3
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A070UD31KI315	V300030	A 070 URD 31 KI 0315	4
A070UD31KI350	R300050	A 070 URD 31 KI 0350	4
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Protistor® size 31 aR

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