

Изм. № 019 / 11.05.2021

Теркон ООД
България, п.к. 1756, гр. София
кв. „Дървеница“, ул. Жеко Войвода, 5, офис 3
тел.: +359 898 609 009
e-mail: office@tercon.net

До: г-н Христо Пачев
Управление „Търговско“
Отдел „Маркетинг и доставки“
„АЕЦ Козлодуй“ ЕАД
тел. + 359 973 7 61 40
e-mail: commercial@npp.bg

Относно: Покана за пазарна консултация No 46566 относно „Доставка на резервни части за основен ремонт на изправители и инвертори, производство на GUTOR Electronic LLC“.

Уважаеми г-н Пачев,

Във връзка с Покана за пазарна консултация №46566 и съгласно приложената към нея Приложение 1 - Техническа Спецификация, Ви предоставяме финансова оферта за доставка на посочените резервни части.

Приложения:

Приложение 1 – Финансова оферта (единична цена и обща стойност без ДДС, информация за срок и условия на доставка, съпроводителна документация при доставка, гаранция и гаранционни условия)

Приложение 2 – Описание на предлаганите резервни части

Приложение 3 – Информационен лист (точен адрес и лице за контакт)

Приложение 4 – Оторизационно писмо – Оригинал и превод

Заличено на основание ЗЗЛД

С уважение:

/В. Лазарова/

ФИНАНСОВА ОФЕРТА

към Пазарна консултация № 46566 относно:

„Доставка на резервни части за основен ремонт на изправители и инвертори производство на GUTOR Electronic LLC.“

№	ИД по BAAN	Наименование, обозначение за тип/ модел, техн. Описание	Каталожен номер на Гутор Електроникс	За монтаж в система със заводски типове	Заводски номер на системите на Гутор Електроникс	Количество/ брой	Единична цена	Обща цена
1	59855	Кондензатор / CAP EL 350V 20% 6800UF 85C RD	202-3682	SDC220/800-R; WDW3060-220/400-EAN; WDW3080-220/400-EAN; WDW3100-220/400-EAN; WEW1030-220/230-EAN; WDW3020-220/400-EAN; WDW3040-220/400-EAN	130983-02÷130984-02; 130993-02÷130995-02; 130977-01÷130995-01; 1080245001-01	475	431,85	205 128,75
2	10594	Кондензатор / CAP MTL PPR 450V 5% 12UF RD 250MM LEAD	234-1126			20	37,55	751,00
3	74308	Вентилатор / FAN SUB ASSY 230V AC	OM-90703			60	1 004,51	60 270,60
4	74309	Вентилатор / FAN ASSY 230VAC D150 HALL 3+4 MAT-N-LOK	ON-0882			10	903, 01	9 030,10
5	74310	Вентилатор / FAN D225MM 230V/150W 1170M ³ /H	490-0025			20	1 319,60	26 392,00
6	74311	Вентилатор / FAN 220MM 230V 900M ³ /H RADIAL	490-0023			45	681,41	30 663,45
7	111539	Памет с батерия / IC SRAM 8KX8 RTC 200NS W/BAT	351-0003			25	634,96	15 874,00
8	31113	Блок захранващ / COMPLETE PCB PSU 220VDC OUT 0500160	OP0284AB			30	5 562,87	166 886,08
9	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			12	116,18	1 394,12
10	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			14	132,31	1 852,37

11.1	-	Мостов кабел / CB03 Bridge wire	0W11712	WDW3100-220/400-EAN	130977, 130985	36	12,91	464,71
11.2	-	Кабел / CB03 400MM_4MM2 Wire	0W11711			18	22,59	406,62
11.3	-	Кабел / CB03 600MM_4MM2 Wire	0W11710			12	29,04	348,53
11.4	-	Кабел / CB03 180MM_4MM2 Wire	0W11714			6	19,36	116,18
11.5	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			12	116,18	1 394,12
11.6	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			24	132,31	3 175,49
11.7	-	Механичен комплект / CB03 AC MECH. KIT 375 3PH	0M-97224			2	1 177,90	2 355,80
11.8	-	Фиксатор към кондензатор / FIXING OF CABLE CONN TO CAPACITORS	0H-1082			2	19,36	38,73
11.9	-	Инсталационен комплект за монтажна плоча / CB MOUNTING PLATE INSTALATION KIT	0H-1083			2	29,04	58,09
11.10	-	Свързващ комплект / CB03 NEUTRAL CONNECTION KIT	0H-1541			2	25,82	51,63
11.11	-	Комплект за фиксиране на кабелите / CB03 WIRE FIXATION KIT	0H-1539			2	29,04	58,09
12.1	-	Мостов кабел / CB03 Bridge wire	0W11712	WDW3080-220/400-EAN	130978, 130979, 130986, 130987, 130988	90	12,91	1 161,76
12.2	-	Кабел / CB03 400MM_4MM2 Wire	0W11711			45	22,59	1 016,54
12.3	-	Кабел / CB03 180MM_4MM2 Wire	0W11714			15	19,36	290,44
12.4	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			45	116,18	5 227,93
12.5	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			30	132,31	3 969,36
12.6	-	Механичен комплект / CB03 AC MECH. KIT 375 3PH	0M-97224			5	1 177,90	5 889,49
12.7	-	Фиксатор към кондензатор / FIXING OF CABLE CONN TO CAPACITORS	0H-1082			5	19,36	96,81
12.8	-	Инсталационен комплект за монтажна плоча / CB MOUNTING PLATE INSTALATION KIT	0H-1083			5	29,04	145,22
12.9	-	Свързващ комплект / CB03 NEUTRAL CONNECTION KIT	0H-1541			5	25,82	129,08
12.10	-	Комплект за фиксиране на кабелите / CB03 WIRE FIXATION KIT	0H-1539			5	29,04	145,22

13.1	-	Мостов кабел / CB03 Bridge wire	0W11712	WDW3060-220/400-EAN	130981, 130982, 130989, 130990	72	12,91	929,41
13.2	-	Кабел / CB03 400MM_4MM2 Wire	0W11711			36	22,59	813,23
13.3	-	Кабел / CB03 180MM_4MM2 Wire	0W11714			12	19,36	232,35
13.4	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			12	116,18	1 394,12
13.5	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			24	132,31	3 175,49
13.6	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			24	132,31	3 175,49
13.7	-	Механичен комплект / CB03 AC MECH. KIT 375 3PH	0M-97224			4	1 177,90	4 711,59
13.8	-	Фиксатор към кондензатор / FIXING OF CABLE CONN TO CAPACITORS	0H-1082			4	19,36	77,45
13.9	-	Инсталационен комплект за монтажна плоча / CB MOUNTING PLATE INSTALATION KIT	0H-1083			4	29,04	116,18
13.10	-	Свързващ комплект / CB03 NEUTRAL CONNECTION KIT	0H-1541			4	25,82	103,27
13.11	-	Комплект за фиксиране на кабелите / CB03 WIRE FIXATION KIT	0H-1539			4	29,04	116,18
14.1	-	Мостов кабел / CB03 Bridge wire	0W11712	WDW3020-220/400-EAN	130992	6	12,91	77,45
14.2	-	Кабел / CB03 400MM_4MM2 Wire	0W11711			3	22,59	67,77
14.3	-	Кабел / CB03 180MM_4MM2 Wire	0W11714			3	19,36	58,09
14.4	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			3	116,18	348,53
14.5	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			3	132,31	396,94
14.6	-	Механичен комплект / CB03 AC MECH. KIT 375 3PH	0M-97222			1	1 268,26	1 268,26
14.7	-	Фиксатор към кондензатор / FIXING OF CABLE CONN TO CAPACITORS	0H-1082			1	19,36	19,36
14.8	-	Инсталационен комплект за монтажна плоча / CB MOUNTING PLATE INSTALATION KIT	0H-1083			1	29,04	29,04
14.9	-	Свързващ комплект / CB03 NEUTRAL CONNECTION KIT	0H-1541			1	25,82	25,82

14.10	-	Комплект за фиксиране на кабелите / CB03 WIRE FIXATION KIT	0H-1539			1	29,04	29,04
15.1	-	Мостов кабел / CB03 Bridge wire	0W11712	WDW3040-220/400-EAN	1080245001	12	12,91	154,90
15.2	-	Кабел / CB03 400MM_4MM2 Wire	0W11711			6	22,59	135,54
15.3	-	Кабел / CB03 600MM_4MM2 Wire	0W11710			3	29,04	87,13
15.4	-	Кабел / CB03 180MM_4MM2 Wire	0W11714			2	19,36	38,73
15.5	-	Кабел / CB03 850MM_4MM2 Wire	0W11713			1	38,73	38,73
15.6	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			6	116,18	697,06
15.7	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			6	132,31	793,87
15.8	-	Механичен комплект / CB03 AC MECH. KIT 375 3PH	0M-97222			1	1 268,26	1 268,26
15.9	-	Фиксатор към кондензатор / FIXING OF CABLE CONN TO CAPACITORS	0H-1082			1	19,36	19,36
15.10	-	Инсталационен комплект за монтажна плоча / CB MOUNTING PLATE INSTALATION KIT	0H-1083			1	29,04	29,04
15.11	-	Свързващ комплект / CB03 NEUTRAL CONNECTION KIT	0H-1541			1	25,82	25,82
15.12	-	Комплект за фиксиране на кабелите / CB03 WIRE FIXATION KIT	0H-1539			1	29,04	29,04
16.1	-	Мостов кабел / CB03 Bridge wire	0W11712	WEW1030-220/400-EAN (CONFIGURATION AS WEW1100-220/230-EAN)	130980, 130991	56	12,91	722,87
16.2	-	Кабел / CB03 400MM_4MM2 Wire	0W11711			12	22,59	271,08
16.3	-	Кабел / CB03 600MM_4MM2 Wire	0W11710			10	29,04	290,44
16.4	-	Кабел / CB03 180MM_4MM2 Wire	0W11714			10	19,36	193,63
16.5	-	Кондензатор / CAP 250 VAC 150UF 63.5 X 132 M12	234-9225			38	116,18	4 414,70
16.6	-	Кондензатор / CAP480 VAC 60UF 63.5 X 132 M12	234-9228			6	132,31	793,87
16.7	-	Механичен комплект / CB03 AC MECH. KIT 375 3PH	0M-97220			2	1 093,99	2 187,99
16.8	-	Фиксатор към кондензатор / FIXING OF CABLE CONN TO CAPACITORS	0H-1082			2	19,36	38,73
16.9	-	Инсталационен комплект за монтажна плоча / CB MOUNTING PLATE INSTALATION KIT	0H-1083			2	29,04	58,09

16.10	-	Свързващ комплект / CB03 NEUTRAL CONNECTION KIT	ОН-1541			2	25,82	51,63
16.11	-	Комплект за фиксиране на кабелите / CB03 WIRE FIXATION KIT	ОН-1539			2	29,04	58,09

Цена (в лева без ДДС)							574 345,94
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Време за доставка: 150 дни (във връзка с пандемията от КОВИД19 съществува вероятност и риск за удължаване на срока на доставка на отделни елементи)

Валидност на офертата: 20.07.2021

Начин на плащане: 50% авансово и 50% до 20 дни след доставката

Доставка: DDP АЕЦ Козлодуй

Гаранция и гаранционни условия: 12 месеца от датата на уведомяване, че стоките са готови за изпращане
Гаранцията ще бъде уважена само когато ремонтите / подмяната се извършват от сертифициран сервизен инженер на ГУТОР, само с части, доставени от ГУТОР и се използват в съответствие с предназначението им.

Съпроводителна документация при доставка:

- Сертификат за произход (при приложимост)
- Пакинг лист
- Декларация за съвместимост с оборудване тип SDC и WDW
- Декларация за гаранционен срок

Възникнали допълнителни изисквания подлежат на допълнително договаряне.

София

11.05.2021

Заличено на основание ЗЗЛД

Управител:

В. Лазарова

ALUMINIUM ELECTROLYTIC CAPACITOR - DATA SHEET

Screw Terminal

B43584 **85 °C / 15.000 h**

LL grade

For professional current
converter technology

Rated voltage up to 500V-

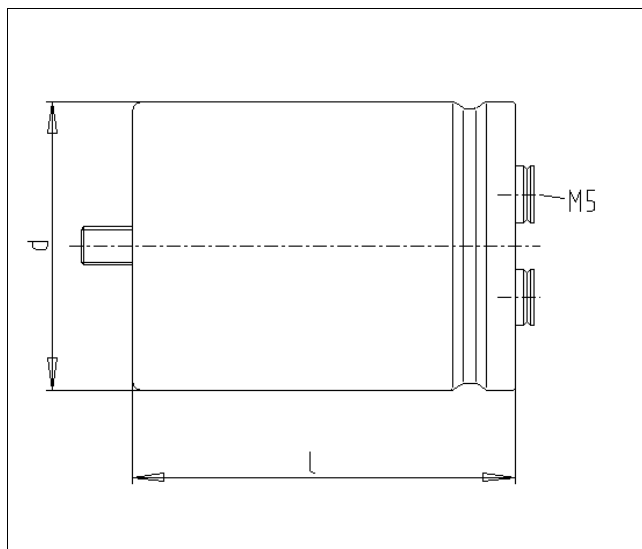
Part No.: B43584-S4688-M1
PA 4353

C_R / U_R : 6800 μ F / 350V

Case size: d: 76,9+0/-0,7mm, l: 146,5 $\pm$ 1mm

Drawing no.: C61010 S0503 A785

Customer: APC Gutor / Switzerland



TECHNICAL DATA:

Rated Capacitance C_R (100 Hz, 20 °C)	6800 μF	
Capacitance Tolerance	± 20 %	
Rated Voltage U_R	350 V	
Surge Voltage	400 V	
Operating Temperature Range	-25 / 85 °C	
Max. Leakage Current I_L (5 min, 20 °C)	8,7 mA	
Max. R_{ESR} (100 Hz, 20 °C)	25 m Ω	
Max. Impedance Z (10 kHz, 20 °C)	18 m Ω	
Rated Ripple Current I_{-R} (100Hz, 85 °C, 15.000h)	17 A	
Useful Life (40 °C, 33Arms @ 100/120Hz)	250.000 h	@ forced-air cooling 0,5m/s
Useful Life (55 °C, 33Arms @ 100/120Hz)	90.000 h	@ forced-air cooling 0,5m/s
Endurance (85 °C, U_R)	2.000 h	After test: $\Delta C/C: \leq \pm 10$ % of initial value $R_{ESR}: \leq 1,3 \times$ spec. value $I_L: \leq$ initial spec. value
Useful Life (85 °C, U_R , I_{-R})	15.000 h	After test: $\Delta C/C: \leq 30$ % of initial value $R_{ESR}: \leq 3 \times$ spec. value $I_L: \leq$ initial spec. value
Other Specifications	IEC 384-4, CECC 30 301 -803, Databook 2003	

Edition

1

File

KA4353.xls

Date

12.07.2004

Sign

DT

2

KA4353 Rev.2.xls

01.10.2004

DT

Icar Spa
Via Isonzo 10, 20052 Monza (Mi) , Italy
Ph. ++39-03983951 Fax ++39-039833227
www.icar.com – e-mail : sales@icar.com



MC3 Series 12 μ F

S.T. n. MC313071702 Rev.01

Icar p.n.

Customer:

Customer p.n.

General Characteristics

Case thermoplastic material
Polypropylene dielectric
Metallized plates
Self-healing capacitors
Filling with polyurethan-resine
Bipolar cable PVC insulating 2xAWG18
M8 fixing stud

Electrical Characteristics

Capacitance tolerance	$\pm 5\%$
Rated frequency	50/60 Hz
Climatic category	25/085/21
Nominal voltage Un	400 Vac / 450 Vac / 500 Vac
Expected life	30000h(A) / 10000h(B) / 1000h(D)
Max. RMS voltage	1,1 Un
Max. RMS current	1,3 In
Voltage rise/fall time (dV/dt) max.	20 V/ μ s
Test voltage between leads	2,0 Un 50 Hz for 2 sec.
Test voltage between leads and case	2,0 Kv 50 Hz for 2 sec.

Approvals

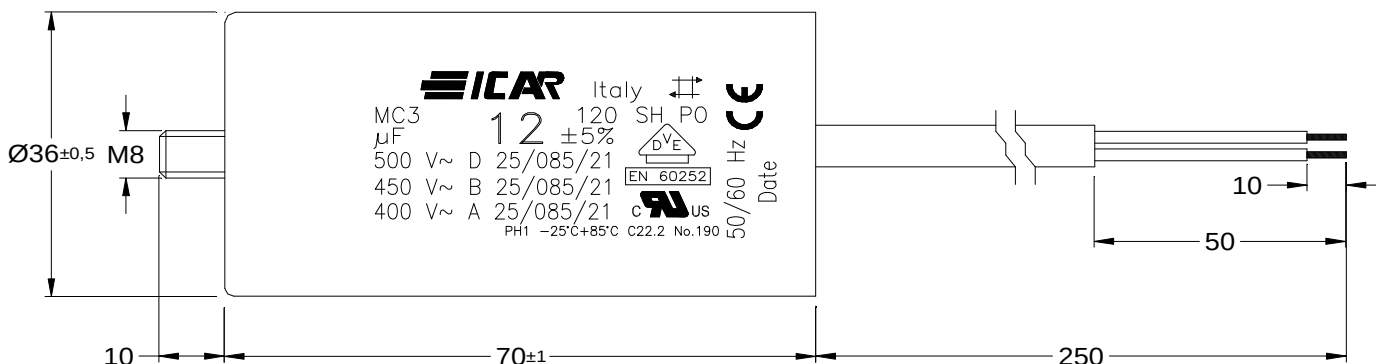


400 Vac 30000h (A)
450 Vac 10000h (B)
500 Vac 1000h (D)



C22.2 No.190
PH1 -25°C+85°C

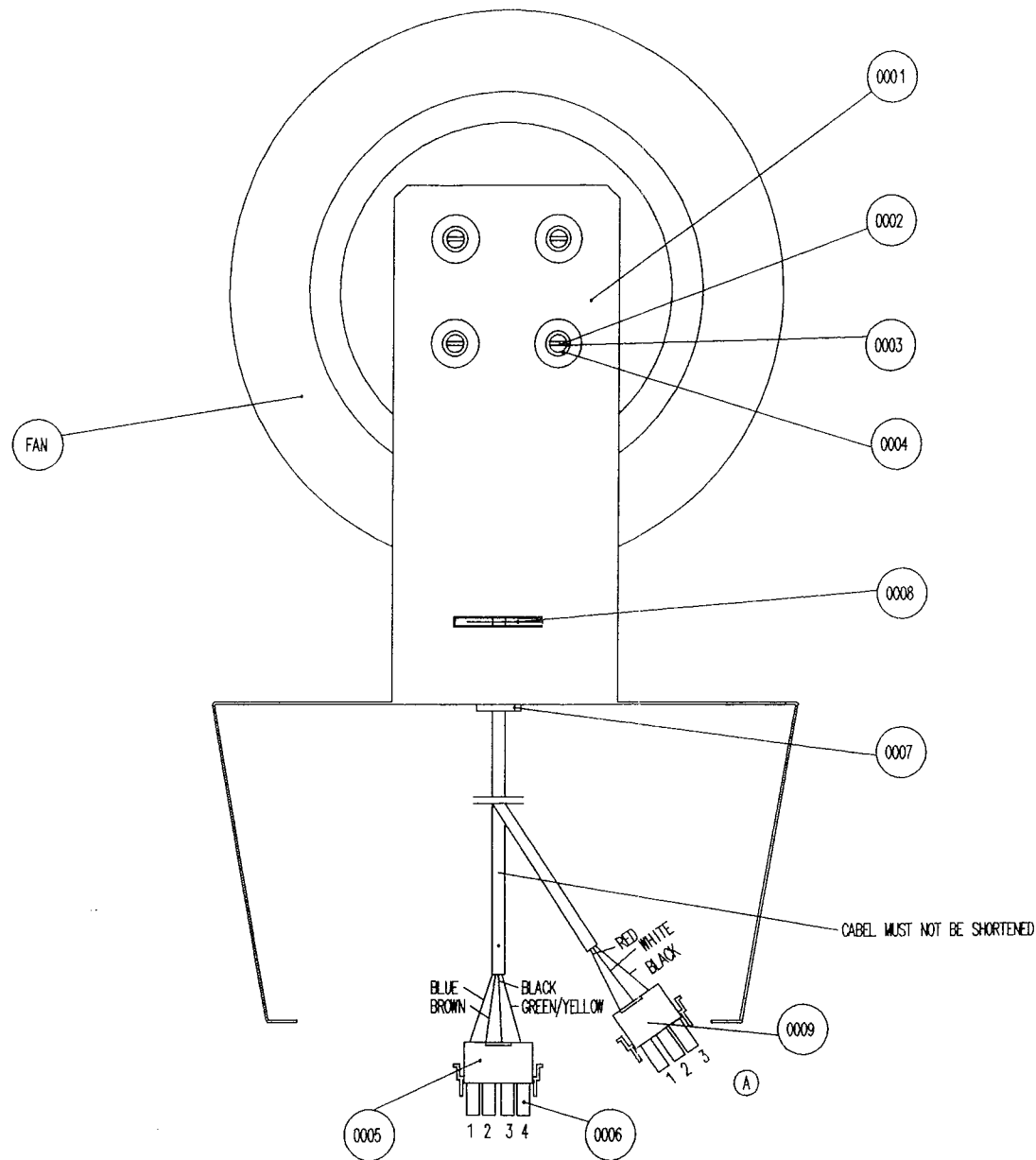
Dimensions



Data: 17-07-2013

Emesso:

Approvato:



SREWING TORQUE MOMENT :
If nothing else is stated use
Instruction P000751.

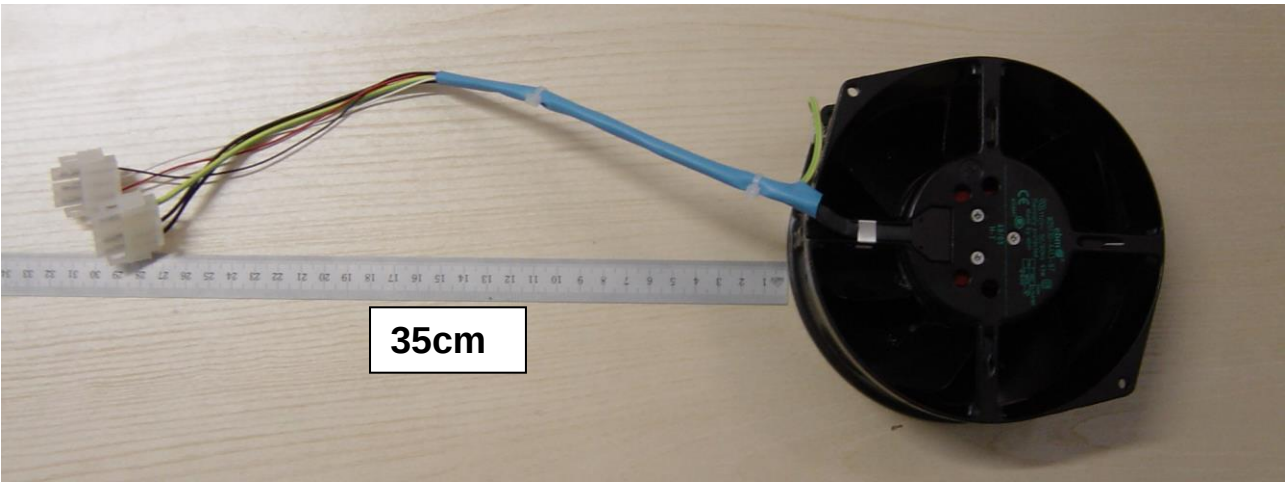
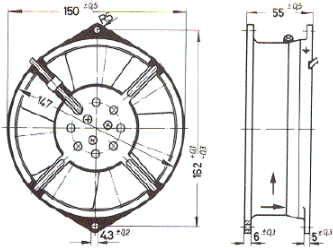
ANZUGSDREHMOMENT :
Wenn nichts anderes angegeben ist,
verwenden sie Instruktion P000751.

MARK.	CORRECTION	DATE	SIGN.	DATE	SIGN.	SCALE	DS/ISO 128	TITLE
(A)	PLUG ADDED	98.01.26	AJe	92.06.22	AJE	1:2		ASS. DWG. FAN SUB ASS.
				98.02.09	RI			
				98.01.26	02			
SHEET 1 OF 1								DRAWING NO. 1.800.495

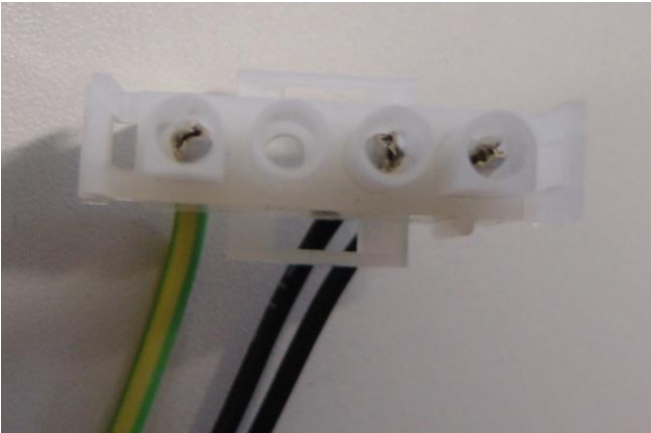
GUTOR		FAN ASSY 230VAC D150 HALL 3+4 MAT-N-LOK			
Project:	XXW / SDC			Reg. No.	Not used
Originator:	THA	Date:	21.06.2018	Rev. No.	2
Checked:		Rev. Date:		Page:	1 / 1

0N-0882

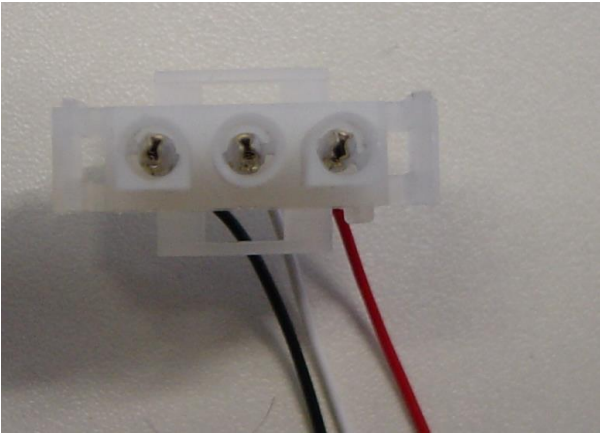
pcs	Part Number	Description
1	724-0013A	MATE-N-LOK CONNECTOR PLUG 3POS ROHS
1	724-0058-Z	CONN 4POLE PLUG MALE 0017589 ROHS
7	724-0040A	PIN MNL AWG24-18 BR-TN STRIP, ROHS
1	490-0021	FAN D130 SPEED380M3/H
1		Shrink sleeve
2		Wiring according to the picture



4pole connector

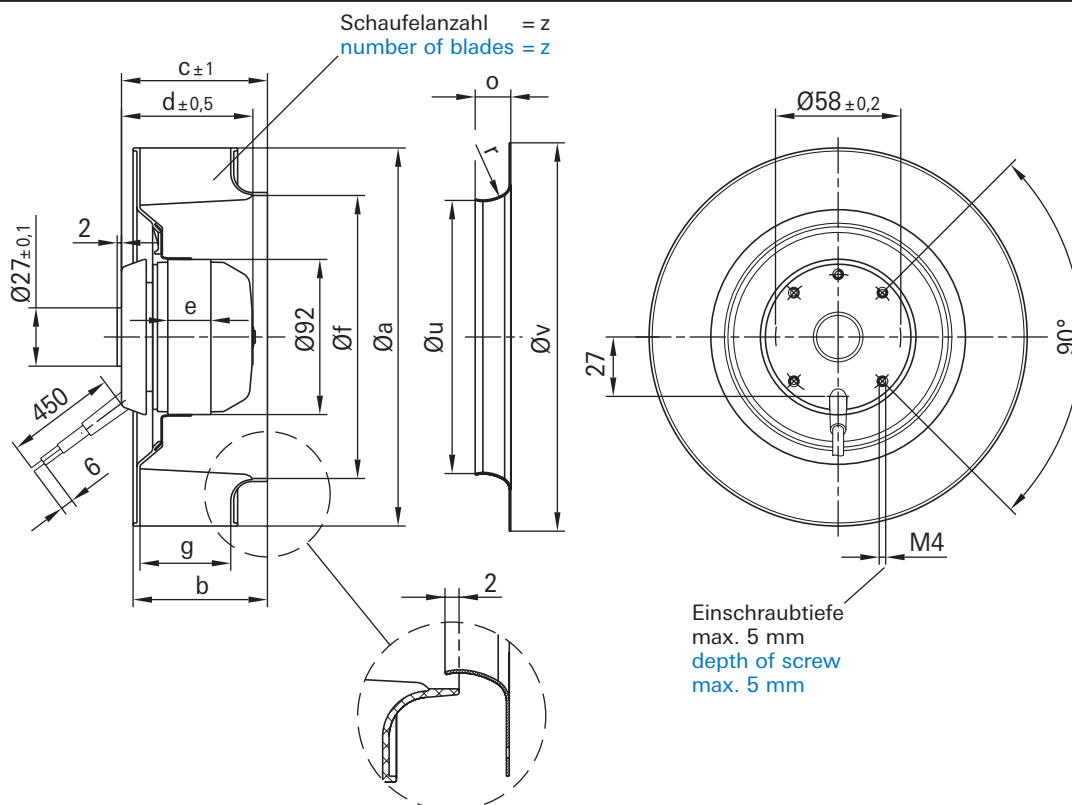


3 pole connector



Radialventilatoren ø 220 / 225, einseitig saugend

Centrifugal fans ø 220 / 225, single inlet



Typ / type	Motor / motor	Einströmdüse / inlet ring	a	b	c	d	e	f	g	o	r	u	v	z
R2E 220-AA	M2E 068-BF	09609-2-4013	220	63,0	71	63,0	15	159	44,0	21	22	155	252	11
R2E 220-AB	M2E 068-CF	09609-2-4013	220	63,0	71	73,0	25	159	44,0	21	22	155	252	11
R2E 225-BD	M2E 068-DF	96358-2-4013	225	89,3	99	83,0	35	153	62,6	28	25	146	223	7
R4E 225-AT	M4E 068-CF	96358-2-4013	225	89,3	99	72,6	25	153	62,6	28	25	146	223	7

Material

Vollkunststoffrad aus PA 6.6 GV,
Blechronde eingespritzt

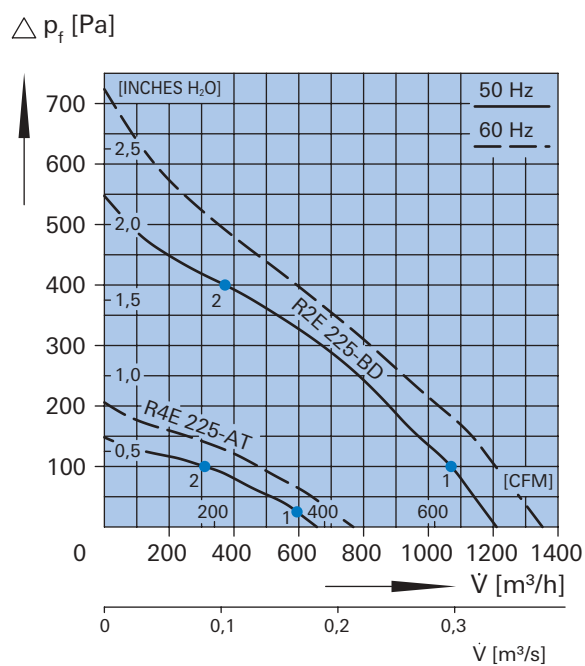
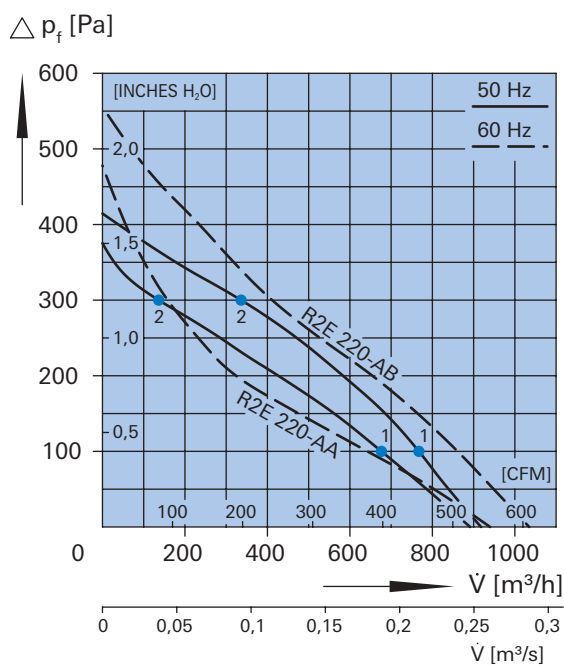
impeller completely made of
plastic PA 6.6 (polyamide, glass-
fibre reinforced), injection-
moulded round sheet-metal plate

Typ type	Spannung voltage VAC	Frequenz frequency Hz	Luftfördermenge air volume m³/h	Drehzahl speed min⁻¹	Leistungsaufnahme power input W	Stromaufnahme current draw A	Kondensator capacitor µF/VDB	Geräuschpegel noise level dBA	Zul. Umgeb. temp. perm. amb. temp. °C	Masse ca. approx. mass kg
R2E 220-AA40-05	230	50 60	860 900	2600 2700	85 90	0,38 0,40	3,0 / 400 2,0 / 400	73 74	40 40	1,5
R2E 220-AB06-05	230	50 60	885 990	2700 3050	85 115	0,38 0,51	2,5 / 400 2,5 / 400	72 75	55 55	2,5
R2E 225-BD92-09⁽¹⁾	230	50 60	1200 1340	2650 2950	135 200	0,60 0,88	4,0 / 450 4,0 / 450	69 71	60 60	2,3
R4E 225-AT01-05	230	50 60	655 765	1420 1660	40 37	0,20 0,18	1,5 / 400 1,0 / 400	59 61	50 80	1,8

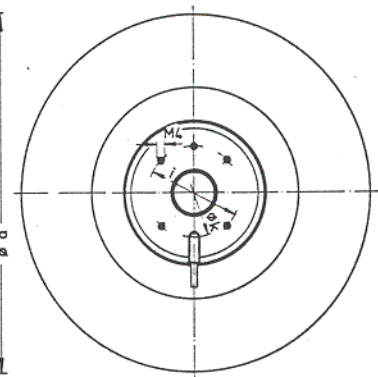
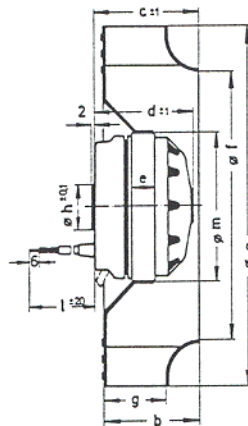
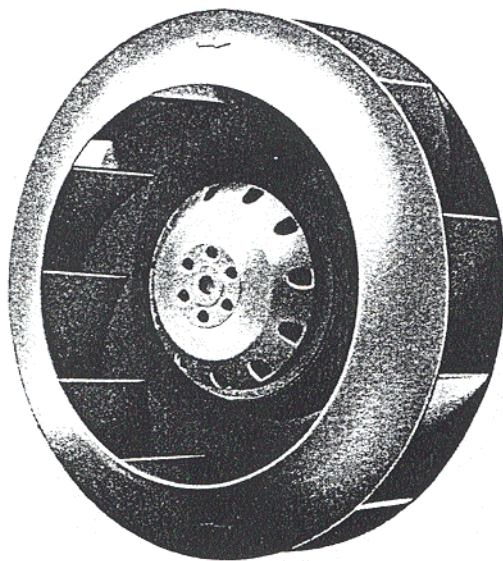
⁽¹⁾ Isolationsklasse "F" / insulation class "F"

Typ type	[Hz]	n [min ⁻¹]	P ₁ [W]
R2E 220-AA	50	1 2390	95
		2 2490	90
R2E 220-AB	50	1 2650	96
		2 2600	102

Typ type	[Hz]	n [min ⁻¹]	P ₁ [W]
R2E 225-BD	50	1 2610	146
		2 2650	138
R4E 225-AT	50	1 1410	41
		2 1400	43



Motorised Centrifugal Impeller single inlet



Kabelauführung K

A = axial

X = variabel

Cable Exit K

A = axial

X = variable

Typ/Type	a	b	c	d	e	f	g	h	i	k	l	m	K
R2S 133-AB 03-05	133	59,5	91	56	15	90,5	43	—	58	54	300	72	A
R2S 175-AB 56-01	175	62	69	61,5	20	131	38	—	58	54	400	72	X
R2E 180-AO 02-05	180	47	54,5	60	12	131	30	27	58	55	450	92	X
R2E 180-AS 77-05	180	78	84,5	65	15	131	61	27	58	55	450	92	X
R2E 190-AE 77-05	190	62,5	68,5	62,5	15	131	45	27	58	55	450	92	X
R2E 220-AA 40-05	220	63	71	62	15	159	45	27	58	55	450	92	X
R2E 225-AT 51-05	225	63,3	69	82,5	35	153	38	27	58	55	450	92	X
R2E 225-AU 64-05	227	88,3	99	82,5	35	153	63	27	58	55	450	92	X
R2E 250-AH 01-05	252	84,3	99	91,5	42	172	56	27	58	55	450	92	A
R2E 250-AI 05-05	252	73,3	89	82,5	35	172	45	27	58	55	450	92	A

Typ Type

Spannung
Voltage
V

Frequenz
Frequency
Hz

Luftfördermenge
Air volume
m³/h

Drehzahl
Speed
min⁻¹

Leistungsaufn.
Input
W

Stromaufnahme
Current consumpt.
A

Kondensator
Capacitor
µF

Geräuschpegel
Noise level
dBA

Zul. Umgeb. Temp.
Admissible
ambient temp.
°C

R2S 133-AB 03-05

230

50/
60

260
300

2800
3250

43
42

0,28
0,25

—

55
59

45/
55

R2S 175-AB 56-01

230

50/
60

430
380

2350
2250

70
65

0,31
0,29

—

56
54

40/
45

R2E 180-AO 02-05

230

50/
60

425
460

2400
2600

60
70

0,27
0,31

1,5
1,5

62
64

50/
60

R2E 180-AS 77-05

230

50/
60

570
570

2300
2300

82
100

0,36
0,45

2
2

63
63

45/
35

R2E 190-AE 77-05

230

50/
60

575
600

2350
2350

80
98

0,36
0,44

2
2

63
63

40/
40

R2E 220-AA 40-05

230

50/
60

860
900

2600
2700

85
90

0,38
0,4

3
2

73
74

40/
40

R2E 225-AT 51-05

230

50/
60

850
945

2650
2950

105
145

0,46
0,64

3
3

70
72

60/
65

R4E 225-AU 64-05

230

50

1170

2700

150

0,66

4

71

50

R2E 250-AH 01-05

230

50

1510

2700

170

0,75

5

76

40

R2E 250-AI 05-05

230

50

1220

2650

115

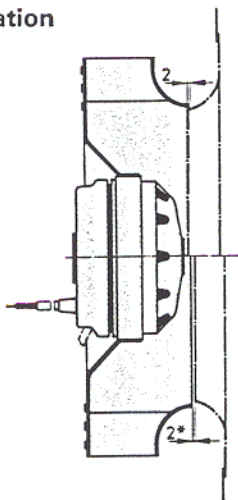
0,51

4

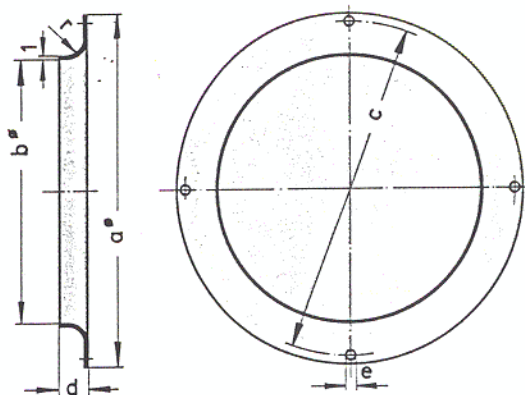
73

40

Einbauanordnung Mounting configuration



Einströmdüsen Inlet rings



Typ/Type	a	b	c	d	e	r	Best.-Nr. / p/n	L
*R2S 133	129	87	118	13	4,5	7	9566-2-4013	K
*R2E 180	170	125,5	158	14	4,5	10	9576-2-4013	K
*R2S 175	170	125,5	158	14	4,5	10	9576-2-4013	K
R2E 190	170	125,5	158	14	4,5	10	9576-2-4013	K
R2E 220	252	155	245	20	4,5	22,5	9609-2-4013	K
R2E 225	223	146,0	210	28	4,5	25	96358-2-4013	K
R2E 250	255	164,5	240	31	4,5	28	96359-2-4013	B

Lüfterradausführung L: Impeller material L:

B = Blech / K = Kunststoff

B = sheet steel / K = plastic

Drehrichtung: Direction of rotation:

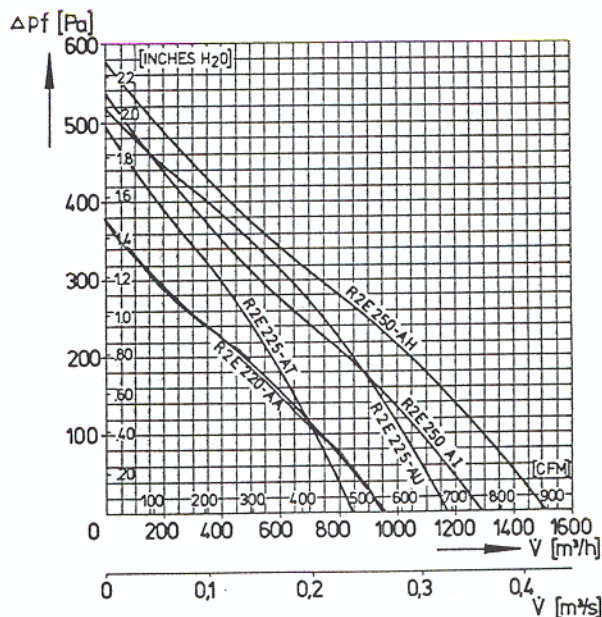
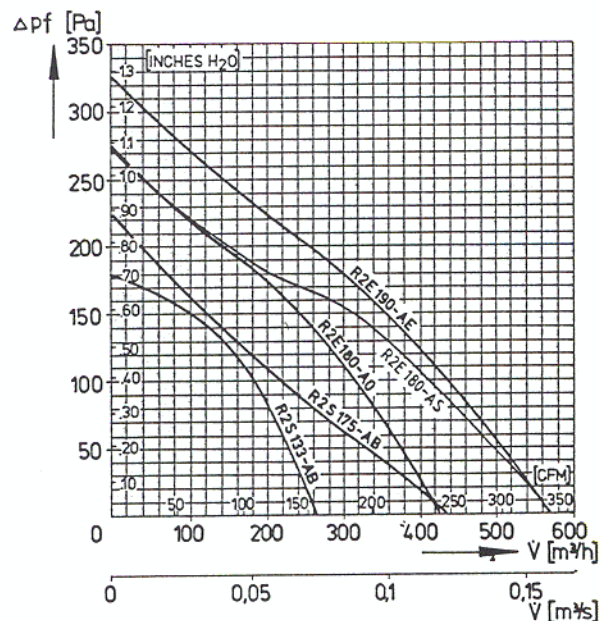
Rechts auf Ansaugseite gesehen

Clockwise as seen from inlet side

Luftleistungskennlinie: Air performance curve:

Mit Einstömdüse ermittelt

Determined with inlet ring





M48T08 M48T18

64 Kbit (8Kb x 8) TIMEKEEPER® SRAM

- INTEGRATED ULTRA LOW POWER SRAM, REAL TIME CLOCK, POWER-FAIL CONTROL CIRCUIT and BATTERY
- BYTEWIDE™ RAM-LIKE CLOCK ACCESS
- BCD CODED YEAR, MONTH, DAY, DATE, HOURS, MINUTES and SECONDS
- TYPICAL CLOCK ACCURACY of ± 1 MINUTE a MONTH, at 25°C
- AUTOMATIC POWER-FAIL CHIP DESELECT and WRITE PROTECTION
- WRITE PROTECT VOLTAGES (V_{PFD} = Power-fail Deselect Voltage):
 - M48T08: $4.5V \leq V_{PFD} \leq 4.75V$
 - M48T18: $4.2V \leq V_{PFD} \leq 4.5V$
- SOFTWARE CONTROLLED CLOCK CALIBRATION for HIGH ACCURACY APPLICATIONS
- SELF-CONTAINED BATTERY and CRYSTAL in the CAPHAT DIP PACKAGE
- PACKAGING INCLUDES a 28-LEAD SOIC and SNAPHAT® TOP (to be Ordered Separately)
- SOIC PACKAGE PROVIDES DIRECT CONNECTION for a SNAPHAT TOP which CONTAINS the BATTERY and CRYSTAL
- PIN and FUNCTION COMPATIBLE with DS1643 and JEDEC STANDARD 8K x 8 SRAMS

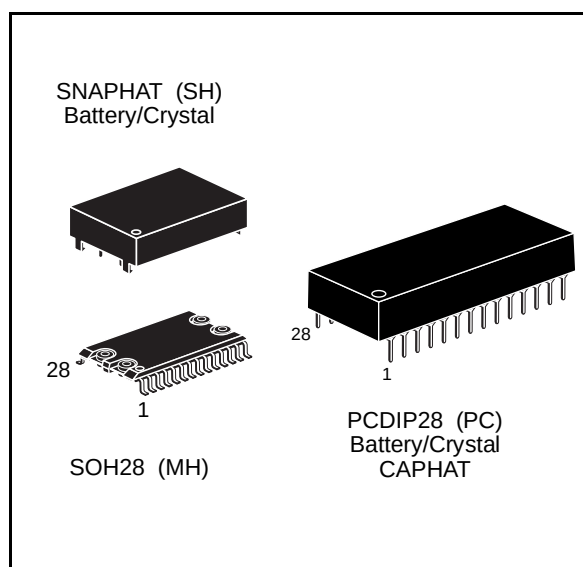


Figure 1. Logic Diagram

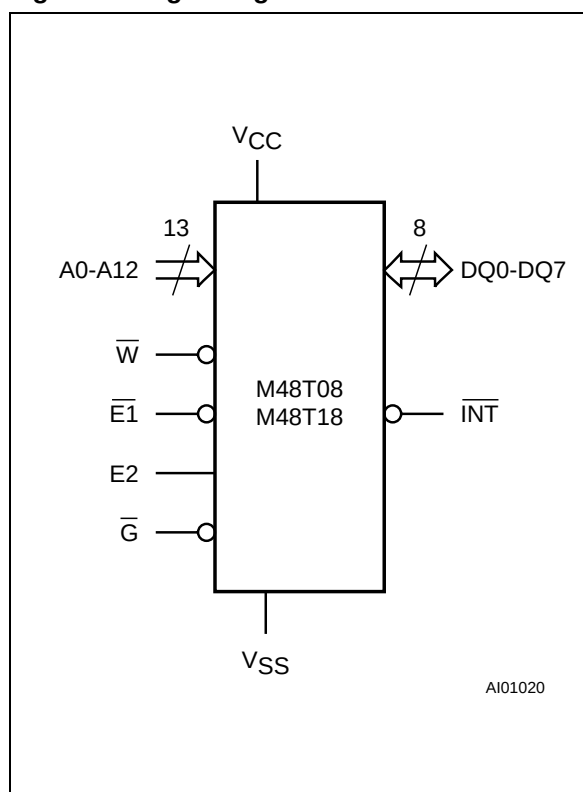


Table 1. Signal Names

A0-A12	Address Inputs
DQ0-DQ7	Data Inputs / Outputs
$\overline{\text{INT}}$	Power Fail Interrupt (Open Drain)
$\overline{\text{E1}}$	Chip Enable 1
E2	Chip Enable 2
$\overline{\text{G}}$	Output Enable
$\overline{\text{W}}$	Write Enable
V _{CC}	Supply Voltage
V _{SS}	Ground

M48T08, M48T18

Figure 2A. DIP Pin Connections

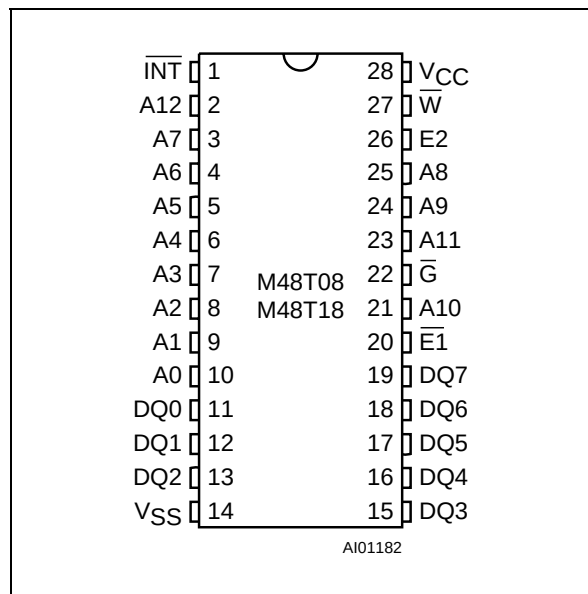


Figure 2B. SOIC Pin Connections

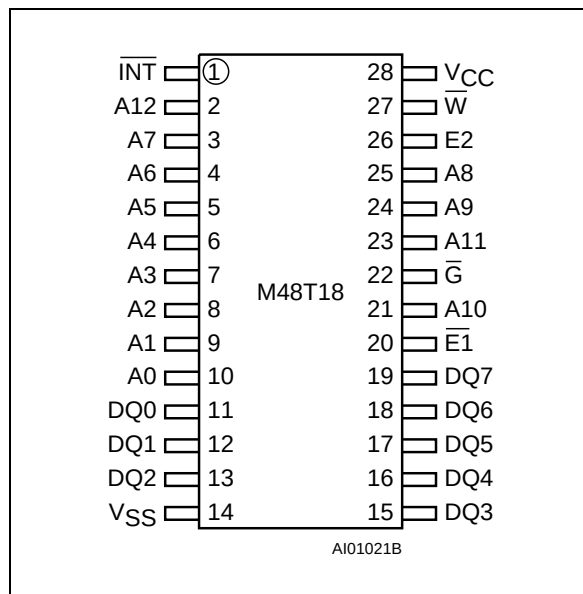


Table 2. Absolute Maximum Ratings ⁽¹⁾

Symbol	Parameter	Value	Unit
T _A	Ambient Operating Temperature	0 to 70	°C
T _{STG}	Storage Temperature (V _{CC} Off, Oscillator Off)	-40 to 85	°C
T _{SLD} ⁽²⁾	Lead Solder Temperature for 10 seconds	260	°C
V _{IO}	Input or Output Voltages	-0.3 to 7	V
V _{CC}	Supply Voltage	-0.3 to 7	V
I _O	Output Current	20	mA
P _D	Power Dissipation	1	W

Notes: 1. Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational section of this specification is not implied. Exposure to the absolute maximum rating conditions for extended periods of time may affect reliability.

2. Soldering temperature not to exceed 260°C for 10 seconds (total thermal budget not to exceed 150°C for longer than 30 seconds).

CAUTION: Negative undershoots below -0.3 volts are not allowed on any pin while in the Battery Back-up mode.

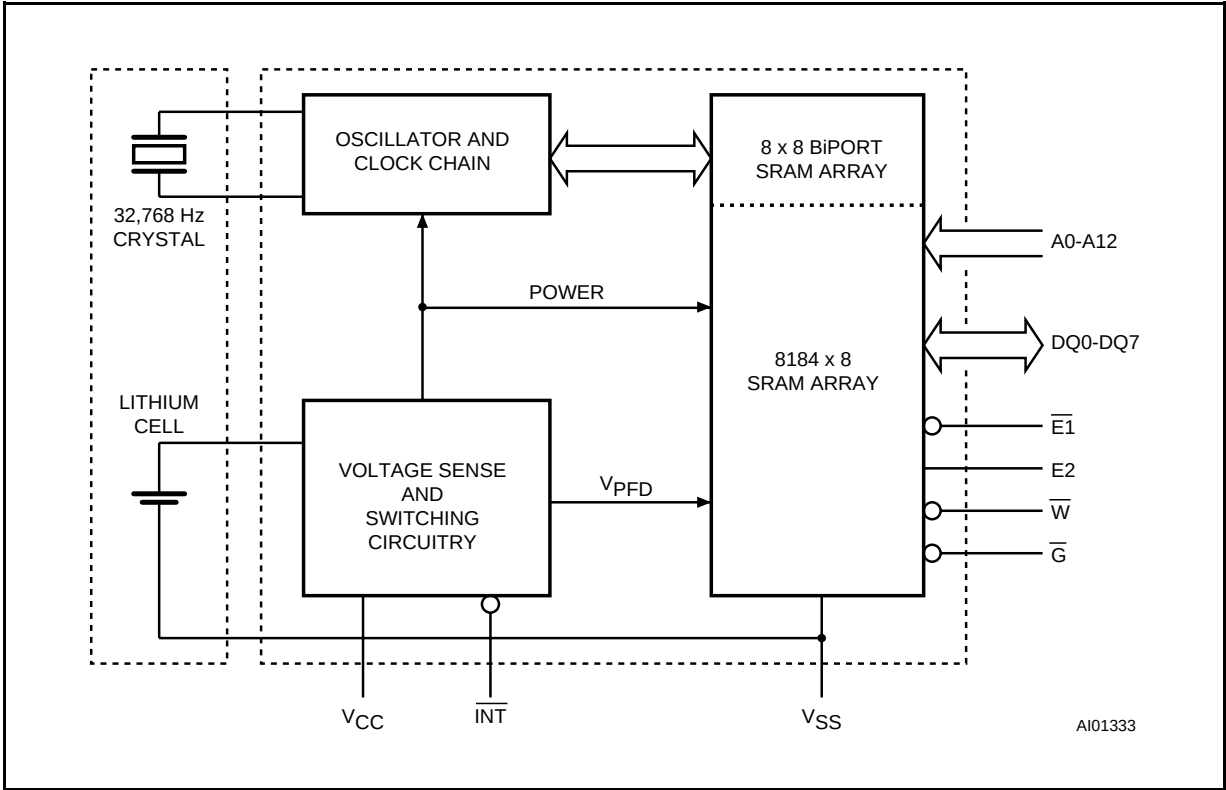
CAUTION: Do NOT wave solder SOIC to avoid damaging SNAPHAT sockets.

Table 3. Operating Modes

Mode	V _{CC}	E1	E2	G	W	DQ0-DQ7	Power
Deselect	4.75V to 5.5V or 4.5V to 5.5V	V _{IH}	X	X	X	High Z	Standby
Deselect		X	V _{IL}	X	X	High Z	Standby
Write		V _{IL}	V _{IH}	X	V _{IL}	D _{IN}	Active
Read		V _{IL}	V _{IH}	V _{IL}	V _{IH}	D _{OUT}	Active
Read		V _{IL}	V _{IH}	V _{IH}	V _{IH}	High Z	Active
Deselect	V _{SO} to V _{PFD} (min)	X	X	X	X	High Z	CMOS Standby
Deselect	≤ V _{SO}	X	X	X	X	High Z	Battery Back-up Mode

Notes: 1. X = V_{IH} or V_{IL}; V_{SO} = Battery Back-up Switchover Voltage.

Figure 3. Block Diagram



DESCRIPTION

The M48T08/18 TIMEKEEPER® RAM is an 8K x 8 non-volatile static RAM and real time clock which is pin and functional compatible with the DS1643. The monolithic chip is available in two special packages to provide a highly integrated battery backed-up memory and real time clock solution.

The M48T08/18 is a non-volatile pin and function equivalent to any JEDEC standard 8K x 8 SRAM. It also easily fits into many ROM, EPROM, and EEPROM sockets, providing the non-volatility of PROMs without any requirement for special write timing or limitations on the number of writes that can be performed.

The 28 pin 600mil DIP CAPHAT™ houses the M48T08/18 silicon with a quartz crystal and a long life lithium button cell in a single package.

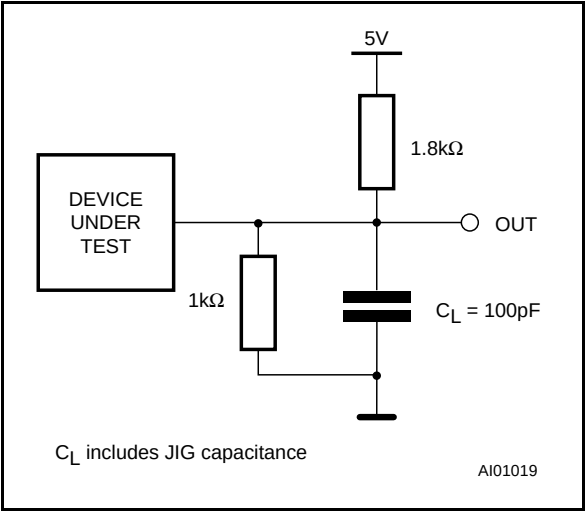
The 28 pin 330mil SOIC provides sockets with gold plated contacts at both ends for direct connection to a separate SNAPHAT housing containing the battery and crystal. The unique design allows the SNAPHAT battery package to be mounted on top of the SOIC package after the completion of the surface mount process. Insertion of the SNAPHAT housing after reflow prevents potential battery and crystal damage due to the high temperatures required for device surface-mounting. The SNAPHAT housing is keyed to prevent reverse insertion.

Table 4. AC Measurement Conditions

Input Rise and Fall Times	≤ 5ns
Input Pulse Voltages	0 to 3V
Input and Output Timing Ref. Voltages	1.5V

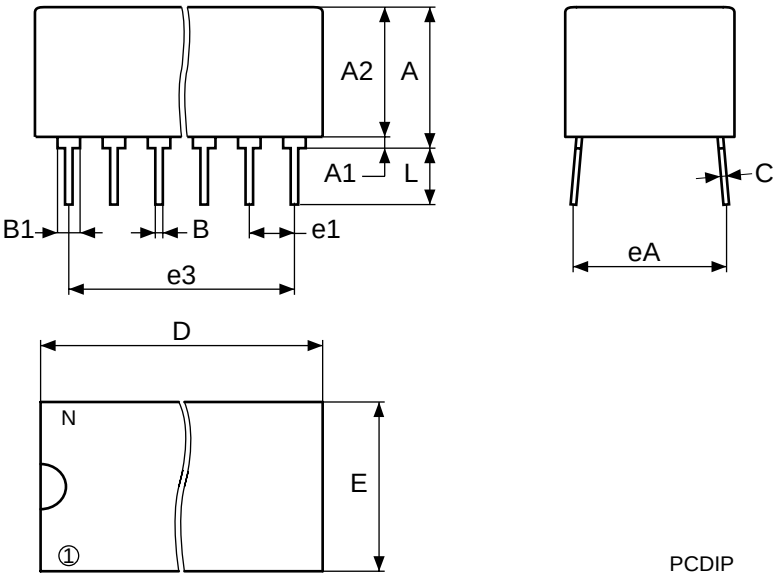
Note that Output Hi-Z is defined as the point where data is no longer driven.

Figure 4. AC Testing Load Circuit



PCDIP28 - 28 pin Plastic DIP, battery CAPHAT

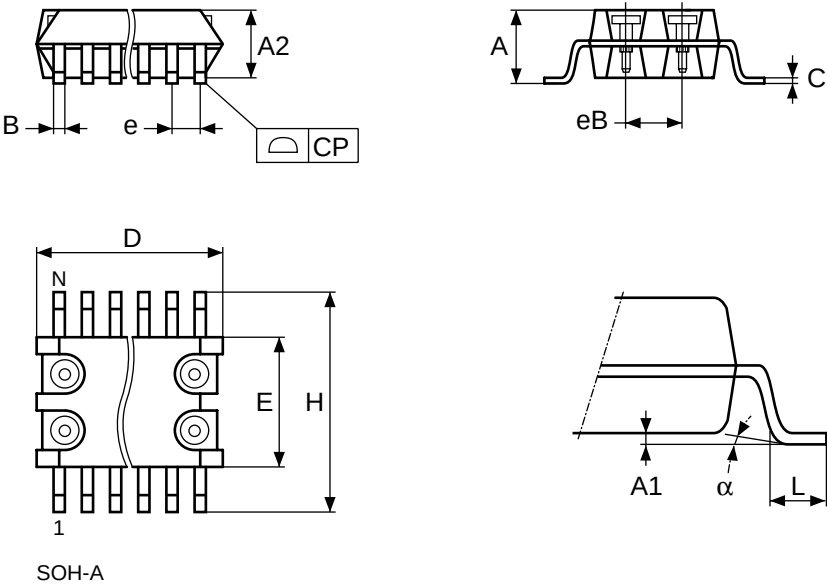
Symb	mm			inches		
	Typ	Min	Max	Typ	Min	Max
A		8.89	9.65		0.350	0.380
A1		0.38	0.76		0.015	0.030
A2		8.38	8.89		0.330	0.350
B		0.38	0.53		0.015	0.021
B1		1.14	1.78		0.045	0.070
C		0.20	0.31		0.008	0.012
D		39.37	39.88		1.550	1.570
E		17.83	18.34		0.702	0.722
e1		2.29	2.79		0.090	0.110
e3		29.72	36.32		1.170	1.430
eA		15.24	16.00		0.600	0.630
L		3.05	3.81		0.120	0.150
N	28			28		



Drawing is not to scale.

SOH28 - 28 lead Plastic Small Outline, battery SNAPHAT

Symb	mm			inches		
	Typ	Min	Max	Typ	Min	Max
A			3.05			0.120
A1		0.05	0.36		0.002	0.014
A2		2.34	2.69		0.092	0.106
B		0.36	0.51		0.014	0.020
C		0.15	0.32		0.006	0.012
D		17.71	18.49		0.697	0.728
E		8.23	8.89		0.324	0.350
e	1.27	—	—	0.050	—	—
eB		3.20	3.61		0.126	0.142
H		11.51	12.70		0.453	0.500
L		0.41	1.27		0.016	0.050
α		0°	8°		0°	8°
N	28			28		
CP			0.10			0.004

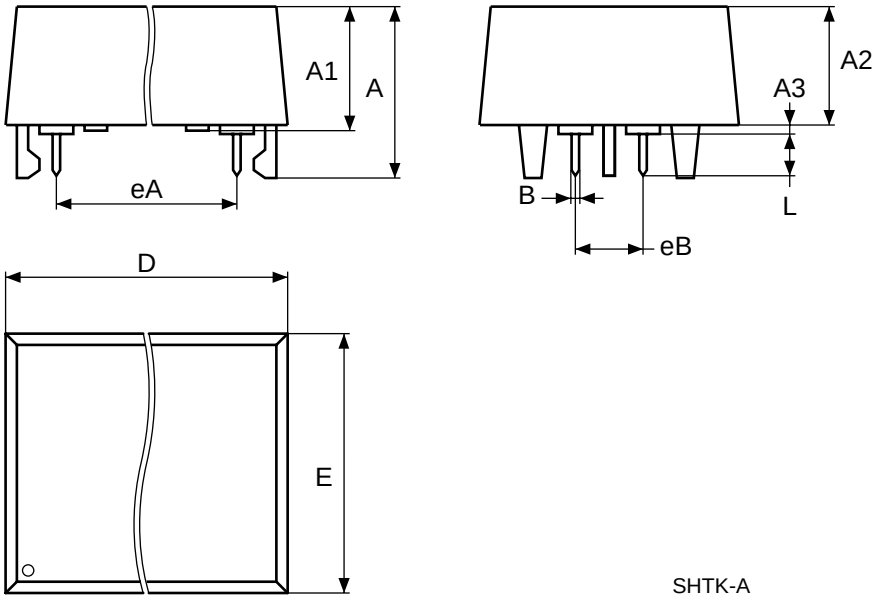


Drawing is not to scale.



SH - SNAPHAT Housing for 28 lead Plastic Small Outline

Symb	mm			inches		
	Typ	Min	Max	Typ	Min	Max
A			9.78			0.385
A1		6.73	7.24		0.265	0.285
A2		6.48	6.99		0.255	0.275
A3			0.38			0.015
B		0.46	0.56		0.018	0.022
D		21.21	21.84		0.835	0.860
E		14.22	14.99		0.560	0.590
eA		15.55	15.95		0.612	0.628
eB		3.20	3.61		0.126	0.142
L		2.03	2.29		0.080	0.090



Drawing is not to scale.

 by Schneider Electric		Specification for XXW PSUs with AC and DC input			
Project:	XXW			Reg. No.	0S-0512
Originator:	KPI	Date:	26.06.2013	Rev. No.	1
Checked:	RST	Rev. Date:		Page:	1 / 7

Summary:

This document specifies the XXW PSUs 0P0281, 0P0282, 0P0284 and 0P0285.

Rev.	Date	Initials	Remark
1	26.06.2013	KPI	Initial release based on 7600143r07, tolerance of 20 V output corrected

Table of Contents:

1. Main Function	2
2. Adjustment	4
3. Inputs and Outputs	4
4. Mechanical Drawing	6
5. Appendix 1	7

 by Schneider Electric		Specification for XXW PSUs with AC and DC input			
Project:	XXW			Reg. No.	0S-0512
Originator:	KPI	Date:	26.06.2013	Rev. No.	1
Checked:	RST	Rev. Date:		Page:	2 / 7

1. MAIN FUNCTION

The PSU/ PSU mains transformer unit combination provides S.E.L.V. (Safe Extra Low Voltage) output voltages of +20V, +12V, +5V and -12V.

The electrical descriptions of this specification refer to the combination of the PSU PCB, and the PSU transformer unit, as they are inseparable, if S.E.L.V. must be obtained on the outputs.

The Power Supply Unit (PSU) combined with PSU transformer unit, supplies the internal electronics of UPS systems. It can be supplied from 3 independent power sources (2 AC- and 1 DC source) e.g. the UPS battery as DC source and the input mains and bypass mains of the UPS system as AC sources.

DESCRIPTION	NOM. VALUE	TOLERANCE	CONDITION
DC-supply	See Appendix 1		
High DC alarm	See Appendix 1		
Converter shut-down limit	See Appendix 1		
+20 V output	+20,3 V/ Max. 4,8 A	± 1 V	AC power source tolerance, load: 10-100% load steps: 10-100-10%
+12 V output	+13 V/ Max. 1,0 A	$\pm 0,8$ V	As for +20 V
+5 V output	+5,25 V/ Max. 1,8 A Short time over-load, min. 2,0 A	+0,1 V -0,15 V	As for +20 V
-12 V output	-13 V/ Max. -0,5 A	-10,8 V...-13,0 V	As for +20 V I_{load} on the -12 V output must not exceed I_{load} on the +5 V output
Ripple on outputs	0,3 Vpp		As for +20V
Max. total output power	130 W	+0 %	

GUTOR by Schneider Electric		Specification for XXW PSUs with AC and DC input			
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Originator:	KPI	Date:	26.06.2013	Rev. No.	1
Checked:	RST	Rev. Date:		Page:	3 / 7

DESCRIPTION	NOM. VALUE	TOLERANCE	CONDITION
Over voltage crowbar limits:			
+20 V output	24 Vdc	+1,5 V/ -1 V	
+12 V output	15 Vdc	±1 V	
+5 V output	6,5 Vdc	±0,5 V	
-12 V output	-15 Vdc	±1 V	
UVLO limits:			
Turn on	22,2 V	±1,3 V	
Turn off	13,2 V	±0,8 V	
PSU fault alarm limits:			
+20 V output	17,5 V	±5 %	
+12 V output	9,8 V	±5 %	
+5 V output	4,5 V	±5 %	
-12 V output	-10,1 V	±5 %	
PSU "turn off" input	12 V logic	Active	+12 V (pulled up internally)
		Not active	0 V (pulled down externally)
T _{amb}	25 °C	±25 °C	Vertical mounting of PCB with L201 in the upper left corner

Overvoltage protected according to VDE160 (= DIN EN 50178, DS 5103, "Ausrüstung von Starkstromanlagen mit elektronischen Betriebsmitteln,") *).

Transient protected according to DS5103 ("immunity of electrical equipment against conducted transients"), installation category III *).

Drop-outs in the DC supply of less than 20mS do not affect the outputs.

*) PSU incl. PSU transformer unit.

GUTOR by Schneider Electric		Specification for XXW PSUs with AC and DC input			
Project:	XXW			Reg. No.	0S-0512
Originator:	KPI	Date:	26.06.2013	Rev. No.	1
Checked:	RST	Rev. Date:		Page:	4 / 7

2. ADJUSTMENT

The +5V output is adjustable from 4,2 V to 5,9 V. The voltage increases by turning R223 clockwise.

3. INPUTS AND OUTPUTS

TERMINAL	FUNCTION	ELECTRICAL DATA
X001:1	DC supply from mains transformer unit X001:5	23 .. 48 Vdc/ 10 A RMS } parallel
X001:2	DC supply from mains transformer unit X001:6	23 .. 48 Vdc/ 10 A RMS
X001:3	DC supply from mains transformer unit X001:7	0 V, 10 A RMS } parallel
X001:4	DC supply from mains transformer unit X001:8	0 V, 10 A RMS
X002:1	DC supply from bypass mains transformer unit X001:5	23 .. 48 Vdc/ 10 A RMS } parallel
X002:2	DC supply from bypass mains transformer unit X001:6	23 .. 48 Vdc/ 10 A RMS
X002:3	DC supply from bypass mains transformer unit X001:7	0 V, 10 A RMS } parallel
X002:4	DC supply from bypass mains transformer unit X001:8	0 V, 10 A RMS
X003:1	DC supply +	See Appendix 1
X003:2	NC	
X003:3	DC supply -	0 V

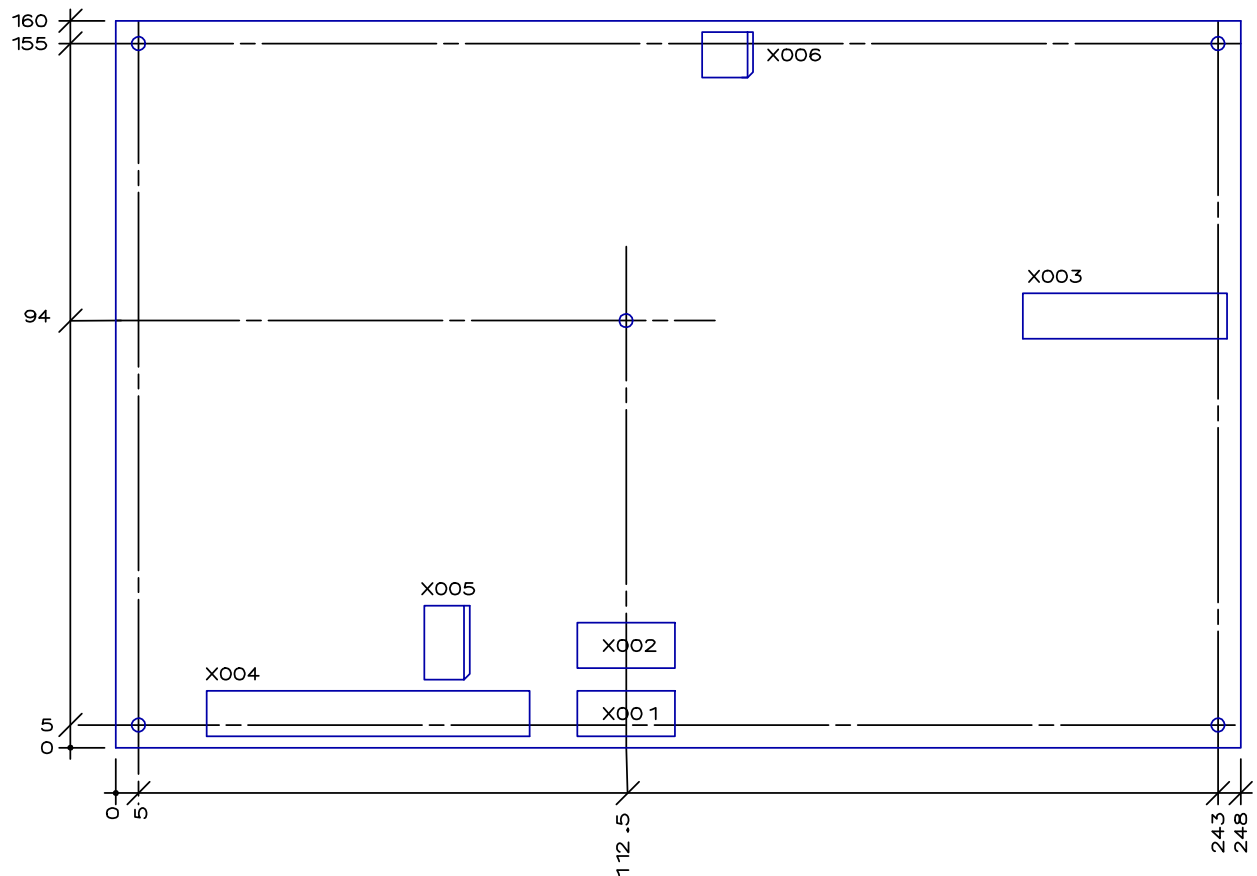
Specification for XXW PSUs with AC and DC input

Project:	XXW	Reg. No.	0S-0512
Originator:	KPI	Date:	26.06.2013
Checked:	RST	Rev. No.	1
		Rev. Date:	
		Page:	5 / 7

TERMINAL	FUNCTION	ELECTRICAL DATA
X004:1	Input: PSU "TURN OFF"	12V logic High = "TURN OFF"
X004:2 .. 3	+5 V output	+5,25 V +0,1 V -0,15 V, max. 1,8 A
X004:4	Output: High DC	5V logic, 5V = High DC
X004:5 .. 7	+5 V output	+5,25 V +0,1 V -0,15 V, max. 1,8 A
X004:8 .. 23	Output GND	0 V
X004:24 .. 27	+12 V output	+13 V $\pm$ 0,8 V, max. 1,0 A
X004:28	-12 V output	-10,8 V .. -13,0 V, max. 0,5 A I_{load} on the +12 V output must not exceed I_{load} on the +5 V output.
X004:29 .. 38	+20 V output	20,3 V $\pm$ 1 V, max. 4,8 A incl. current on X005
X004:39 .. 40	NC	
X005:1	+20 V output	20,3 V $\pm$ 1 V, max. 0,75 A
X005:2	Output GND	0 V
X005:3	+20 V output	20,3 V $\pm$ 1 V, max. 0,75 A
X005:4	Output GND	0V
X006:1	Output: PSU fault collector	Optocoupler output, 50 V, 3 mA Optocoupler inactive: fault
X006:2	Output: PSU fault emitter	Optocoupler output, 50 V, 3 mA Optocoupler inactive: fault

GUTOR by Schneider Electric		Specification for XXW PSUs with AC and DC input			
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Originator:	KPI	Date:	26.06.2013	Rev. No.	1
Checked:	RST	Rev. Date:		Page:	6 / 7

4. MECHANICAL DRAWING



Dimensions: 160mm x 248 mm
Max. height: 45 mm
Weight: 750 g

GUTOR by Schneider Electric		Specification for XXW PSUs with AC and DC input			
Project:	XXW			Reg. No.	0S-0512
Originator:	KPI	Date:	26.06.2013	Rev. No.	1
Checked:	RST	Rev. Date:		Page:	7 / 7

5. APPENDIX 1

PSU No.	0P0281	0P0285	0P0284	0P0282
DC working voltage	48,5 V .. 100 V	72 V .. 170 V	170 V .. 302 V	318 V .. 500 V
Absolute max. DC voltage, max. 30 s	110 V	180 V	350 V	550 V
High DC alarm	103 V $\pm$ 2 V	170,5 V $\pm$ 3 V	325 V $\pm$ 6 V	550 V $\pm$ 10 V
Converter Auto start/ shutdown limit	48,5 V $\pm$ 1,6 V	72 V $\pm$ 2,5 V	146 V $\pm$ 7,5 V	285 V $\pm$ 14 V

		Modification Information (MI)			
Part:	0P0284AB	COMPLETE PCB PSU 220VDC OUT 0500160		Reg. No.	0P0284AB -MI
Originator	YLE	Date:	25.03.2020	Rev. No.	01
Checked	SCN	Rev. Date:		Page:	1 / 1

Rev.	Ver.	Date	Initials	Remark
-	-	-	-	Initial
-	AA	24.08.2018	SCN	Changed to 0P0284AA with coating guide update
1	AB	09.06.2020	SCN	RoHS and coating version release

Conclusion

The replacement will fit in form and function according to the following checked points.

Seismic	0P0284AB has the same seismic behavior as 0P0284AA.
EMC	0P0284AB has the same EMC behavior as 0P0284AA.
Mechanic	0P0284AB has the same dimensions and fixing points as 0P0284AA.
Electric	The same functionality is provided by 0P0284AB as by 0P0284AA.
Other	0P0284AB does fulfill the same standards as 0P0284AA. Moreover, it complies with the RoHS regulation and is coated to improve protection of product in harsh environment.

What has changed?

Components, PCBs, soldering materials and tools used are now lead-free.

0P0284AB is coated according to coating instruction.

Why the change?

Gutor's products are aligning with the standards given by the RoHS regulation and Schneider Electric Visual Acceptability Criteria under FTF50081.

Which part can be replaced by the new part?

0P0284AA → 0P0284AB

If any, all the part numbers previously replaced by 0P0284AA can now be replaced by 0P0284AB.

The replacement will fit in form and function.

What has to be considered with the new part?

Nothing, the replacement is downward compatible.



Film capacitors - Power Electronic Capacitors

MKP PEC AC

Series/Type:	B3236X
Ordering code:	B32361-A2157-J051
Date:	2015/3/17
Version:	03

GUTOR ELECTRONIC LLC
CH - 5430 Wettingen / Switzerland
Hardstrasse 72 -74, ☎ 056 437 34 34

Заличено на основание ЗЗЛД

CHARACTERISTICS

C_N	150	μF
Tol.	5	%
U_{RMS}	250	V
U_{RAC}	350	V_{ac}
I_{max}	25	A
R_S	6.3	m Ω
$\tan\delta_o$	$2 \cdot 10^{-4}$	

MAXIMUM RATINGS

V_{max}	300Vrms
(@ Max. Ambient Temp.:45°C)	
$\hat{I}$	1,300 A
I_S	4,000 A
$(du/dt)_{max}$	9 V/ μs
$(du/dt)_S$	27 V/ μs

TEST DATA

U_{TT}	540	Vac, 2s
U_{TC}	4000	Vac, 10s
$R_{is} \times C \geq$	45000	s
$\tan\delta_{(100Hz)} \leq$	$1 \cdot 10^{-3}$	

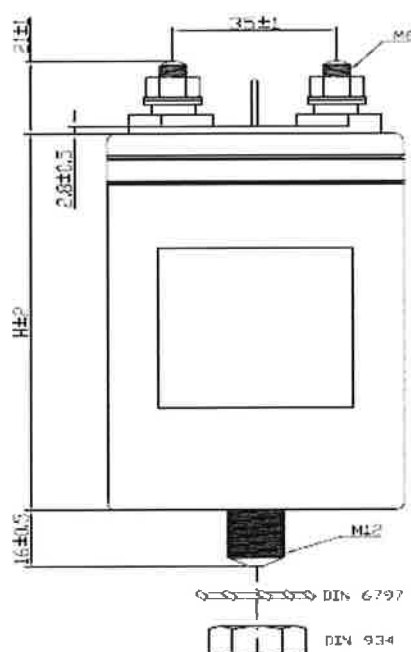
CLIMATIC CATEGORY 40/70/21

Θ_{min}	- 40	°C
Θ_{max}^*	+ 70	°C
Θ_{HS}	+ 85	°C
Θ_{stg}	-40 ... +85	°C

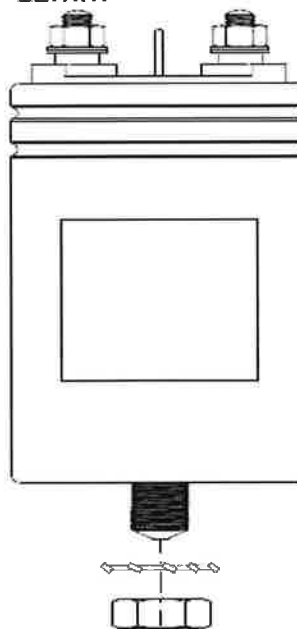
Average Rel. Humidity $\leq$ 95%

$t_{LD} (co)$	100 000	h
$\alpha_{FQ} (co)$	300	fit
Max. altitude	2000	m
Cooling	Naturally	
Pollution degree	PD4	
Standards	IEC 61071	
	UL810 - Overpressure disconnecter	

Before Safety
Device operation



After Safety
Device operation
Max. Expansion
12mm



GENERAL DATA

Dimensions (DxH)	63.5 X 132 mm
Weight	0.5±0.05kg
Resin filling	Non PCB
	Soft Polyurethane
Fixing	M12 stud on bottom of aluminum can
Max. Torque	12 Nm
Terminals	Screw terminals M6
Max. Torque	4 Nm

	T x T	T x C
Creepage Distance	30 mm	12 mm
Clearance Distance	23 mm	13 mm

* Considering mounting position with terminals to the top. For other mounting position, please request evaluation.

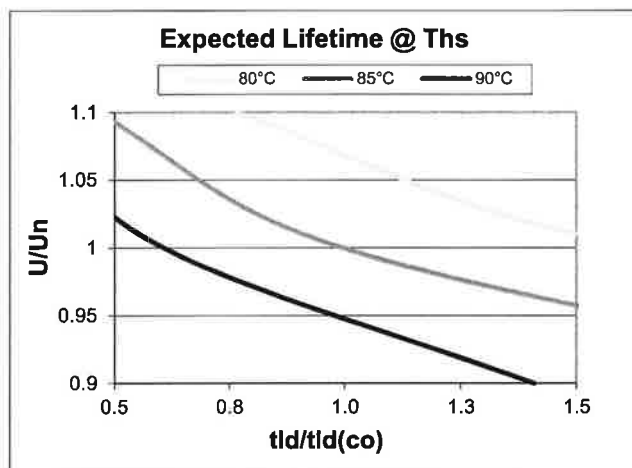
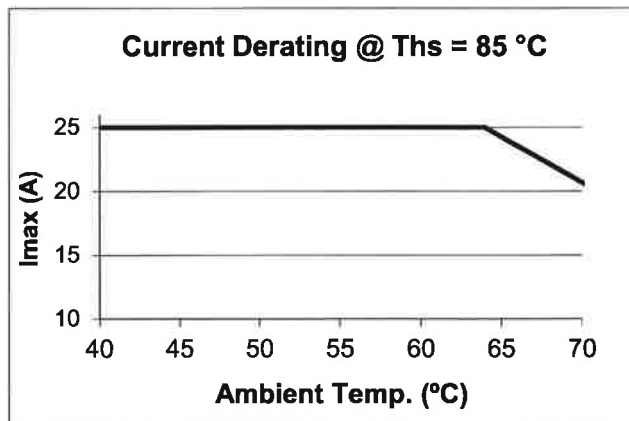
CAP PW PD

2015/3/17

Please read *Cautions and warnings* and
Important notes at the end of this document.

***CURRENT DERATING**

$Q_{HS} = +85\text{ °C}$ / Natural convection



Label Design

B32361A2157J051

150μF ± 5%

U_{RAC}/U_{RMS} 250V~
 U_{RDC}/U_N 750V-

IEC 61071-1/2 50/60Hz $U_i=4/-K_v$
 Overpressure disconnect SH
 No PCB -40...+70°C
 Protected 10K AFC File E106388
 Discharge before handling
 Made by EPCOS 25 Z 2015

12345678901

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that **in individual cases, a malfunction of passive electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of a passive electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of a passive electronic component.

3. The warnings, cautions and product-specific notes must be observed.

4. In order to satisfy certain technical requirements, **some of the products described in this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as "hazardous")**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.

5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.

We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available.

6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.

7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CSSP, MiniBlue, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseMod, SIFI, SIKOREL, SilverCap, SIMDAD, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.



Film capacitors - Power Electronic Capacitors

MKP PEC AC

Series/Type:	B3236X
Ordering code:	B32361-A4606-J081
Date:	2015/3/17
Version:	3

CHARACTERISTICS

C_N	60	μF
Tol.	5	%
U_{RMS}	480	V
U_N	680	V_{ac}
I_{max}	25	A
R_S	7.7	$\text{m}\Omega$
L_{self}	265	nH
$\tan\delta_o$	$2 \cdot 10^{-4}$	

MAXIMUM RATINGS

$\hat{I}$	850	A
I_S	2,600	A
$(du/dt)_{\text{max}}$	14	$\text{V}/\mu\text{s}$
$(du/dt)_S$	42	$\text{V}/\mu\text{s}$

TEST DATA

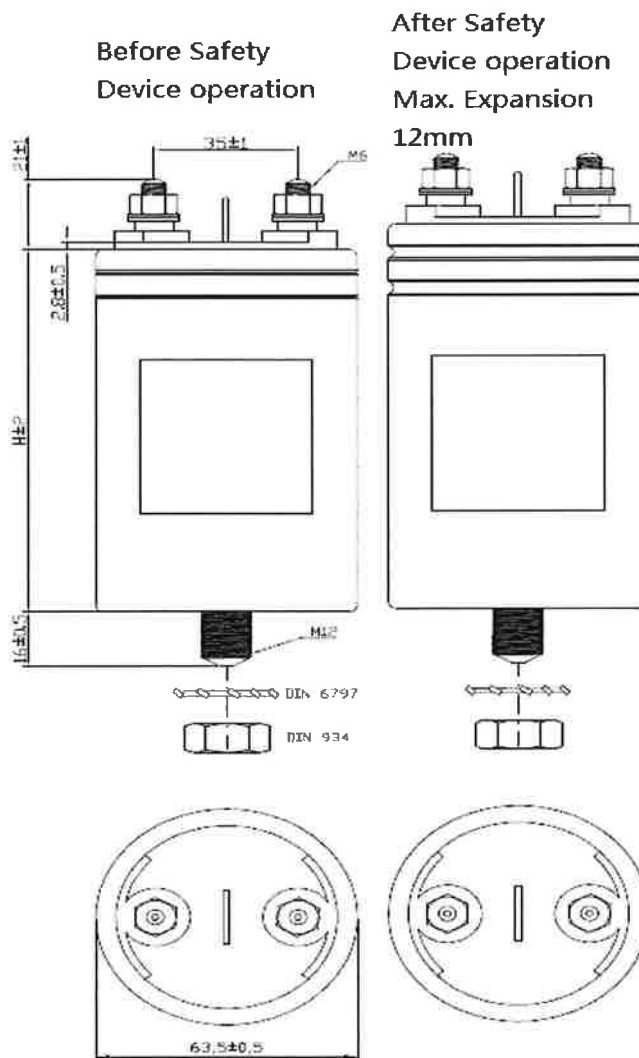
U_{TT}	1030	$V_{\text{ac}}, 2\text{s}$
U_{TC}	4000	$V_{\text{ac}}, 10\text{s}$
$R_{\text{IS}} \times C \geq$	18000	s
$\tan\delta_{(100\text{Hz})} \leq$	$1 \cdot 10^{-3}$	

CLIMATIC CATEGORY 40/70/21

Θ_{min}	-40	$^{\circ}\text{C}$
Θ_{max}^*	+70	$^{\circ}\text{C}$
Θ_{HS}	+85	$^{\circ}\text{C}$
Θ_{stg}	-40 ... +85	$^{\circ}\text{C}$

Average Rel. Humidity $\leq 95\%$

$t_{\text{LD (co)}}$	100 000	h
$\alpha_{\text{FQ (co)}}$	300	fit
Max. altitude	2000	m
Cooling	Naturally	
Pollution degree	PD4	
Standards	IEC 61071	
	UL810 - Overpressure disconnecter	



GENERAL DATA

Dimensions D x H	63.5 X 132 mm
Weight	$0.5 \pm 0.05\text{kg}$
Resin filling	Non PCB
	Soft Polyurethane
Fixing	M12 stud on bottom of aluminum can
Max. Torque	12 Nm
Terminals	Screw terminals M6
Max. Torque	4 Nm

	T x T	T x C
Creepage Distance	30 mm	12 mm
Clearance Distance	23 mm	13 mm

* Considering mounting position with terminals to the top. For other mounting position, please request evaluation.

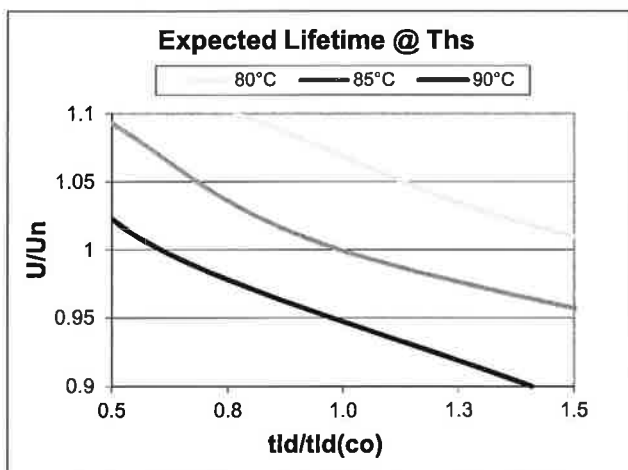
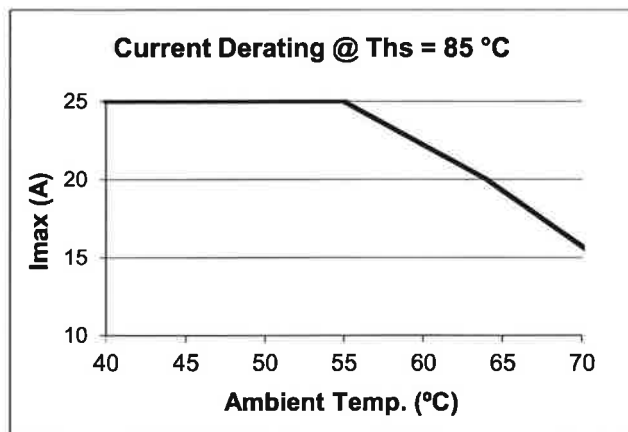
CAP PW PD

2015/3/17

Please read *Cautions and warnings* and *Important notes* at the end of this document.

***CURRENT DERATING**

$Q_{HS} = +85\text{ °C}$ / Natural convection



Label Design

B32361A4606J081

60μF ± 5%

U_{RAC}/U_{RMS} 480V~
 U_{RDC}/U_N 1200V-

IEC 61071-1/2 50/60Hz $U_i=4/-Kv$
 Overpressure disconnecter SH
 No PCB -40...+70°C
 Protected 10K AFC File E106388
 Discharge before handling
 Made by EPCOS 25 Z 2015

12345678901

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To Whom It May Concern

31 May 2016

Subject: CB03 Modification

Dear Customer

Please read this information sheet carefully and come back to us if you need further information.

As a part of continuous product development of the Gutor product line XXW, securing the high reliability the Gutor product line is known for, a second make of an AC Power Electronic Capacitors has been introduced. The new capacitors are coming from the worldwide known manufacturer of Power Electronic Capacitors EPCOS, a TDK Group Company.

Part number 234-9225: CAP 250 VAC 150 μ F 63.5 X 132 M12

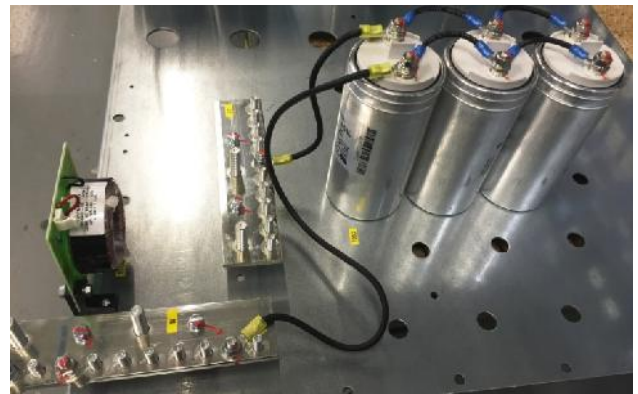
Part number 234-9228: CAP 480 VAC 60 μ F 63.5 X 132 M12

The following main criteria are considered for replacements:

Seismic	No changes to seismic behavior.
EMC	No changes to EMC behavior.
Mechanic	Mechanical dimensions of part number 234-9225 / 234-9228 compared to parts 234-0117 / 234-0556 are different. Cables are not connected by Faston plugs anymore, now they get screwed on. Gutor provides cable connection set number with part number 0H-1082 containing all the important items.
other	IEC standards remain the same as already applied.

Due to different mechanical dimensions of the capacitors some mechanical parts have been adapted. The capacitor mounting plate can be installed at the same location. Replacement kit with part number 0H-1083 is provided for the metal plate installation.

The calculated capacitor lifetime is also 9 years with even more safety margin. As usual, the job is not finished with the mechanical replacement of the filtering components. Filter current calibration is an indispensable part of the maintenance task that our Field Service Engineers can provide to you.



The EPCOS capacitors have been released for new built systems as well as for refurbishment of the existing Gutor UPS line XXW, based on the theoretical calculation of operational lifetime, the confirmation by the accelerated lifetime tests and the final overall UPS system test.

Yours sincerely,

Bruno Gähwiler
Spare Parts Coordinator
bruno.gaehwiler@schneider-electric.com

Florian Meichtry
Global Service Marketing Manager
florian.meichtry@schneider-electric.com

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Fax: + 41 (0) 56 437 3444

schneider-electric.com/gutor

ИНФОРМАЦИОНЕН ЛИСТ

Наименование на Кандидата:	ТЕРКОН ООД
Седалище по регистрация:	България, гр. София, кв. Дървеница, ул. Жеко Войвода, No 5, офис 3
Точен адрес за кореспонденция:	България, гр. София, кв. Дървеница, ул. Жеко Войвода, No 5, офис 3
Лице за контакти:	Траян Лазаров – Тех. директор
Телефонен номер:	+359 898 609 009
Електронен адрес:	office@tercon.net
ИН по ЗДДС и държава на данъчна регистрация:	BG 200681668 България

Заличено на основание ЗЗЛД

Управител:.....

Валя Лазарова

Wettingen, 5th February 2021

Authorization letter

Ref: No - RO_NPP_2101.01

Dear Customer,

Gutor Electronic LLC Switzerland herewith confirms that

Tercon OOD
5 Zheko Voivoda Street
Office No. 3
1756 Sofia Bulgaria
Tel. +359 2 875 3556
Mobile +359 898 609 009

is authorized to resell the Gutor spare parts related to our industrial systems located at Kozloduy NPP PLC in Bulgaria.

Gutor Electronic LLC (Gutor) guarantees standard warranty obligation for spare parts shall be according to the Gutor General Terms and Conditions for sale (latest edition).

Best regards

Заличено на основание ЗЗЛД

Mirella Bek
CFO
GUTOR Electronic LLC

Schneider Electric

Gutor Electronic LLC
Hardstrasse 72-74
5430 Wettingen / Switzerland
Phone: + 41 (0) 56 437 3434
Fax: + 41 (0) 56 437 3444

schneider-electric.com/gutor

Ветинген, 5 февруари 2021

Оторизационно писмо

Реф номер – RO-NPP_2101.01

Уважаеми клиенти,

ГУТОР Електроник Швейцария, с настоящето потвърждава, че:

ТЕРКОН ООД

5, ул. "Жеко Войвода"

офис 3

1756, София, България

Телефон: +359 2 875 3556

Мобилен: +359 898 609 009,

е оторизирана да препродава резервни части свързани с нашите индустриални системи, намиращи се в АЕЦ Козлодуй, България.

ГУТОР Електроник гарантира, че стандартните гаранционни условия за резервни части трябва да бъдат в съответствие с общите условия на ГУТОР Електроник за продажба (последно издание).

С най-добри пожелания!

/подпис/

Мирела Бек

ГФД (СФО)

ГУТОР Електроник