

C-Charakteristik

na VDE
Thb Ansprechgrenze 1,13 - 1,45 x In,
magn. Ansprechgrenze 5 - 10 x In

Weitere technische Daten s. Seite A.3!

Technische Daten

Bemessungsstrom	(A)	0,5 - 63
Bemessungsspannung Un	(V)	230/400 ~ 220/440 =
Frequenz	(Hz)	50 ... 60 und DC
Anspruchwert der Kurzschluß- auslösung (magn.) bei	50...60Hz DC	= + 40%
	400Hz	+ 50%
Minimale Betriebsspannung U _{B min}	(V)	12 =
Schaltlebensdauer	mech. / elektr.	20.000 / 10.000
Klimafestigkeit gem. EN 60068-2		95%RH bei 55°C
Anschluß flexibler Leiter	(mm ²)	0,75 - 25 ¹⁾
Anschluß massiver Leiter	(mm ²)	0,75 - 35 ¹⁾
Polzahl		1, 2
Polbreite	(mm)	18
Gewicht	(g/Pol)	125

¹⁾ : Flexibler Leiter 0,75/1/1,5mm mit Aderendhülse

Bemessungsschaltvermögen ²⁾

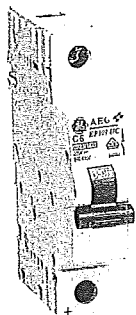
AC/DC gem. EN 60898-2	Polzahl	Un (V)	Icn (kA) ⁴⁾
	1, 2	230/400 ~	6
	1	125 =	10
	1, 2	220 =	6
	2	250 =	10
	2	440 =	6

AC gem. EN 60947-2 ³⁾	Polzahl	Un (V)	Icn (kA) ²⁾
	1	230 ~	10
	2	400 ~	10

²⁾ Testphase läuft

³⁾ Nach Inbetriebnahme und Beanspruchung des Leitungsschutzschalters mit mehr als 6 kA bei AC ist kein Wechsel zu DC möglich!

⁴⁾ bei 50 und 63A Icn = 4,5kA



1-polig



Bemessungs-
strom [A]

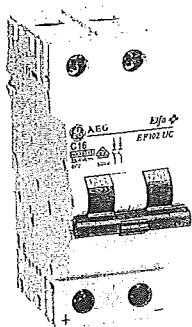
0,5
1
2
3
4
6
10
13
16
20
25
32
40
50
63

VE
[Stück]

Typ-
bezeichnung

Artikel-
nummer

12	EP101UCC0,5	566321
12	EP101UCC1	566322
12	EP101UCC2	566323
12	EP101UCC3	566324
12	EP101UCC4	566325
12	EP101UCC6	566326
12	EP101UCC10	566327
12	EP101UCC13	566328
12	EP101UCC16	566329
12	EP101UCC20	566330
12	EP101UCC25	566331
12	EP101UCC32	566332
12	EP101UCC40	566333
12	EP101UCC50	566334
12	EP101UCC63	566335



2-polig



0,5
1
2
3
4
6
10
13
16
20
25
32
40
50
63

6	EP102UCC0,5	566336
6	EP102UCC1	566337
6	EP102UCC2	566338
6	EP102UCC3	566339
6	EP102UCC4	566340
6	EP102UCC6	566341
6	EP102UCC10	566342
6	EP102UCC13	566343
6	EP102UCC16	566344
6	EP102UCC20	566345
6	EP102UCC25	566346
6	EP102UCC32	566347
6	EP102UCC40	566348
6	EP102UCC50	566349
6	EP102UCC63	566350

Rabattgruppe 11
Unverb. Preisempfehlung

Technical data MCB's

Series			CP60	EP60
Standards			EN 60898	BS EN 60898
Tripping characteristics			B, C	B, C, D
Nominal current			B: 6-32, C: 2-32	B 6-63, C/D 0.5 -63
Calibration temperature			30	30
Number of poles (# mod)			1+N (1 mod.)	1/1+N/2/3/4
Neutral pole protected			-	yes
Clip-on (rapid closing)			-	yes
Nominal voltage Un			-	-
AC	1P	V	-	240/415
	1P+N	V	230	240
	2P	V	-	415
	3P/3P+N/4P	V	-	415
	1P (1)	VDC	-	48
	2P (in series) (1)	VDC	-	110
Frequency		Hz	50 to 60	50 to 60
		Hz	DC: magn.trip +40%	DC: magn.trip +40%
		Hz	400Hz: magn.trip +50%	400Hz: magn.trip +50%
Maximum service voltage U _{max} between two wires			250	250/440; 53/120 DC
Minimum service voltage U _{min}			12	12; 12 DC
Selectivity class (EN 60898)			3	3
Isolator application			EN 60947-2	-
Rated insulation voltage	Pollution degree 2	V	500	500
	Pollution degree 3	V	440	440
Impulse withstand test voltage			6	6
Insulation resistance			1000	10000
Dielectric rigidity			2.5	2.5
Vibrations resistance (in x, y, z direction) (IEC 77/16.3)			3	3g
Endurance	electrical at Un, In		10000	10000
	mechanical		20000	20000
Utilisation category (EN 60947-2)			A	A
Protection degree (outside / inside enclosure)			IP20/IP40	IP20/IP40
Self-extinguish degree (according to UL94)			V2	V2
Tropicalisation (according to EN 60068-2 / DIN 40046)			+55°C/95% RH	+55°C / 95% RH
Operating temperature			-25/+55	-25/+55
Storage temperature			-55/+55	-55/+55
Terminal capacity	Rigid cable min/max (top)	mm ²	1/16	1/35
	Flexible cable min*/max (top)	mm ²	0.75/10	0.75/35
	Rigid cable min/max (bottom)	mm ²	1/16	1/35
	Flexible cable min*/max (bottom)	mm ²	0.75/10	0.75/35
	(*Flexible cable 0.75/1/1.5 mm ² with cable lug)			
	Torque	Nm	2.5	4.5
Add-on devices (side add-on)	Auxiliary contacts		yes	yes
	Tele U		-	yes
	Tele L		yes	yes
	Tele Mp		-	yes
	PBS		-	yes
Busbar systems	Pin		yes/yes	yes
	Fork		-	yes
Accessories			-	yes
Dimensions, weights, packaging			-	yes
# Poles				1
	(HxDxW) 86x68xW	mm	18	18
	Weight/pole	g	125 g	125 g
	Package/unit		12	12
Approvals			IMQ-KEMA	VDE-KEMA-CEBEC
Page			A.8	A.10

(1) Preferred values of rated control supply voltage (BS EN 60947-2): 24V, 48V, 110V, 125V, 220V, 250V

EP100	EP250	EP250 M	EP100 UC	Hti
BS EN 60898	BS EN 60947-2	BS EN 60898	VDE 0641 Teil2/3	BS EN 60947-2
B, C, D	3-5In(B)/5-10In(C)	M	B, C	3-5In/5-10In/10-20In
B 6-63, C/D 0.5 -63	B6-63/C0.5 -63	1.6 to 63	B 6-63, C 0.5 -63	80 to 125
30	30	30	30	40
1/1+N/2/3/4	1,2,3,4	2,3	1,2	1,2,3,4 (1½, 3, 4½, 6)
yes	-	-	-	-
yes	yes	-	yes	-
240/415	240/415	-	230/400	240/415
240	-	-	-	-
415	415	240	400	415
415	415	415	-	415
48	48	-	220	48
110	110	-	440	110
50 to 60	50 to 60	50 to 60	50 to 60 and DC	50 to 60
DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%	DC: magn.trip +40%
400Hz: magn.trip +50%	400Hz: magn.trip +50%	400Hz: magn.trip +50%	400Hz: magn.trip +50%	400Hz: magn.trip +50%
250/440; 53/120 DC	250/440; 53/120 DC	250/440; 53/120 DC	250/440; 250/440 DC	250/440; 53/120 DC
12; 12 DC	12; 12 DC	12; 12 DC	12; 12 DC	12; 12 DC
3	3	3	3	-
yes	yes	yes	yes	-
500	500	500	500	500
440	440	440	440	440
6	6	6	6	6
10000	10000	10000	10000	10000
2.5	2.5	2.5	2.5	2.5
3g	3g	3g	5g	3g
10000	10000	10000	1000	4000
20000	20000	20000	20000	10000
A	A	A	A	A
IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40	IP20/IP40
V2	V2	V2	V2	V2
+55°C / 95% RH	+55°C / 95% RH	+55°C / 95% RH	+55°C / 95% RH	+55°C / 95% RH
-25/+55	-25/+55	-25/+55	-25/+55	-25/+55
-55/+55	-55/+55	-55/+55	-55/+55	-55/+55
1/35	1/35	1/35	1/35	70
0.75/35	0.75/35	0.75/35	0.75/35	-
1/35	1/35	1/35	1/35	70
0.75/35	0.75/35	0.75/35	0.75/35	-
4.5	4.5	4.5	4.5	5
yes	yes	yes	yes	yes
yes	yes	yes	yes	-
yes	yes	yes	yes	yes
yes	yes	yes	yes	-
yes	yes	yes	yes	-
yes	yes	yes	yes	yes
yes	yes	yes	yes	-
yes	yes	yes	yes	-
yes	yes	yes	yes	-
1	1	1	1	1
18	18	18	18	27
125 g	125 g	125 g	125 g	-
12	12	12	12	8
VDE-KEMA-CEBEC	-	VDE in process	VDE in process	-
A.12	A.14	A.16	A.18	A.20

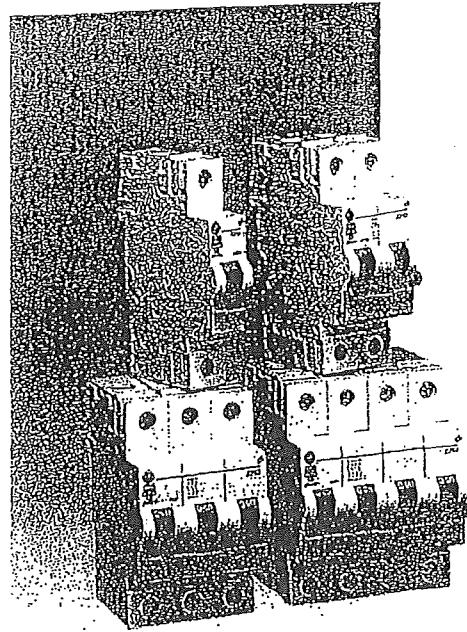


Short-circuit capacity of MCB's

Series				CP60	EP60
Short-circuit capacity AC					
BS EN 60898	Icn (rated)	1P	240/415 V	-	6
		1P+N	240 V	6	6
		2P	415 V	-	6
		3P/3P+N/4P	415 V	-	6
	Ics (ultimate)			100% Icu	100% Icu
BS EN 60947-2	Icu (ultimate)	1 P	127 V	-	20
			240 V	-	10
			415 V	-	3
		1+N /2 P	127 V	-	30
			240 V	10	20
		2 P	415 V	-	10
		3, 4 P	240 V	-	20
			415 V	-	10
			440 V	-	6
			Ics (service)		
Short-circuit capacity DC					
EN 60947-2	Icu (ultimate)	1 P	≤ 60 VDC	-	20
			≤ 220 VDC	-	-
		2 P	≤ 125 VDC	-	25
			≤ 440 VDC	-	-
	Ics (service)			-	100% Icu
Page				A.8	A.10

EP100	EP250	EP250M	EP100 UC	HI
10	-	-	6	-
10	-	-	-	-
10	-	-	6	-
10	-	-	-	-
75% Icu	-	-	-	-
30	50	-	-	-
15	50/25/20/15 ⁽¹⁾	-	10	B/C10, D 7.5
4	-	-	-	4.5
40	-	-	-	-
30	50/50/40/30 ⁽¹⁾	50/40/30 ⁽²⁾	-	20
15	50/25/20/15 ⁽¹⁾	25/20/15 ⁽²⁾	10	B/C10, D 7.5
30	50/50/40/30 ⁽¹⁾	50/40/30 ⁽²⁾	-	20
15	50/25/20/15 ⁽¹⁾	25/20/15 ⁽²⁾	-	B/C10, D 7.5
10	50/20/15/10 ⁽¹⁾	20/15/10 ⁽²⁾	-	-
50% Icu	50% Icu	50% Icu	-	100%
25	25	-	-	10
-	-	-	6	-
30	-	-	-	15
-	-	-	6	-
100% Icu	30	30	-	100% Icu
A.12	A.14	A.16	A.18	A.20

(1) 0.5 -4A/6-25A/32-40A/50-63A
(2) ≤25A/40A/63A



Miniature Circuit Breakers

EP60

BS EN 60898 6000

3

BS EN 60947 10 kA

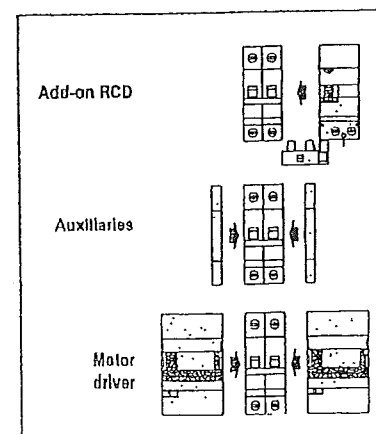
Applications



Approvals



Add-on devices



Add-on devices

- Auxiliary contacts ⑤ pg C.4
- Shunt trip ⑤ pg C.6
- Undervoltage release ⑤ pg C.6
- Panel board switch ⑤ pg C.6
- Motor operator ⑤ pg C.8

Accessories ⑤ pg A.24

Busbars ⑤ pg E.1

More technical data ⑤ chap. T1

Dimensions ⑤ pg A.26

Performance

Thermal setting I_n	(A) 0.5 - 63
Rated voltage AC U_n	(V) 240/415
Minimum operating voltage $U_{a\ min}$	(V) 12
Tripping characteristics	B-C-D
Selectivity class	3
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to EN 60068-2	95%RH at 55°C
Terminal capacity flexible/rigid cable (mm ²)	25-35
Poles	1; 1+N, 2, 3, 4
Weight	(g/pole) 125

Short-circuit capacity

AC acc. to BS EN 60898

Poles	V	I_{cn}/I_{cs} (kA)
1-4	240/415	6

AC acc. to BS EN 60947-2

Poles	V	I_{cu} (kA) ⁽¹⁾
1	240	10
1+N, 2	127	30
	240	20
2	415	10
3, 4	240	20
	415	10

DC acc. to BS EN 60947-2

Poles	VDC	I_{cu} (kA)/ I_{cs} (kA)
1	60	20
2	125	25

(1) I_{cs} = 75% I_{cu}

Series EP60 - 6kA - characteristics B-C-D

	I_n (A)	Cat. nr.	Ref. nr.	Cat. nr.	Ref. nr.	Cat. nr.	Ref. nr.	Pack.
1P 1 mod.	0.5			EP61 C0.5	672036	EP61 D0.5	566526	1/12
	1			EP61 C01	672037	EP61 D01	566527	1/12
	2			EP61 C02	672038	EP61 D02	566528	1/12
	3			EP61 C03	672039	EP61 D03	566529	1/12
	4			EP61 C04	672040	EP61 D04	566530	1/12
	6	EP61 B06	674265 ⁽¹⁾	EP61 C06	672041	EP61 D06	566531	1/12
	10	EP61 B10	674266 ⁽¹⁾	EP61 C10	672043	EP61 D10	566532	1/12
	16	EP61 B16	674267 ⁽¹⁾	EP61 C16	672045	EP61 D16	566534	1/12
	20	EP61 B20	674268 ⁽¹⁾	EP61 C20	672046	EP61 D20	566535	1/12
	25	EP61 B25	674269 ⁽¹⁾	EP61 C25	672047	EP61 D25	566536	1/12
1/2 2 mod.	32	EP61 B32	674270 ⁽¹⁾	EP61 C32	672048	EP61 D32	566537	1/12
	40	EP61 B40	674271 ⁽¹⁾	EP61 C40	672049	EP61 D40	566538	1/12
	50	EP61 B50	674272 ⁽¹⁾	EP61 C50	672050	EP61 D50	566539	1/12
	63	EP61 B63	674273 ⁽¹⁾	EP61 C63	672051	EP61 D63	566540	1/12
	0.5			EP61N C0.5	672052	EP61N D0.5	566586	1/6
	1			EP61N C01	672053	EP61N D01	566587	1/6
	2			EP61N C02	672054	EP61N D02	566588	1/6
	3			EP61N C03	672055	EP61N D03	566589	1/6
	4			EP61N C04	672056	EP61N D04	566590	1/6
	6	EP61N B06	672137	EP61N C06	672057	EP61N D06	566591	1/6
1/2 N 2 mod.	10	EP61N B10	672139	EP61N C10	672059	EP61N D10	566593	1/6
	16	EP61N B16	672141	EP61N C16	672061	EP61N D16	566594	1/6
	20	EP61N B20	672142	EP61N C20	672062	EP61N D20	566595	1/6
	25	EP61N B25	672143	EP61N C25	672063	EP61N D25	566596	1/6
	32	EP61N B32	672144	EP61N C32	672064	EP61N D32	566597	1/6
	40	EP61N B40	672145	EP61N C40	672065	EP61N D40	566598	1/6
	50	EP61N B50	672146	EP61N C50	672066	EP61N D50	566599	1/6
	63	EP61N B63	672147	EP61N C63	672067	EP61N D63	566600	1/6
	0.5			EP62 C0.5	672068	EP62 D0.5	566566	1/6
	1			EP62 C01	672069	EP62 D01	566567	1/6
2P 2 mod.	2			EP62 C02	672070	EP62 D02	566568	1/6
	3			EP62 C03	672071	EP62 D03	566569	1/6
	4			EP62 C04	672072	EP62 D04	566570	1/6
	6	EP62 B06	672153	EP62 C06	672073	EP62 D06	566571	1/6
	10	EP62 B10	672155	EP62 C10	672075	EP62 D10	566572	1/6
	16	EP62 B16	672157	EP62 C16	672077	EP62 D16	566574	1/6
	20	EP62 B20	672158	EP62 C20	672078	EP62 D20	566575	1/6
	25	EP62 B25	672159	EP62 C25	672079	EP62 D25	566576	1/6
	32	EP62 B32	672160	EP62 C32	672080	EP62 D32	566577	1/6
	40	EP62 B40	672161	EP62 C40	672081	EP62 D40	566578	1/6
1/2 3/4 2/1 4/3	50	EP62 B50	672162	EP62 C50	672082	EP62 D50	566579	1/6
	63	EP62 B63	672163	EP62 C63	672083	EP62 D63	566580	1/6
	0.5			EP63 C0.5	672084	EP63 D0.5	566606	1/4
	1			EP63 C01	672085	EP63 D01	566607	1/4
	2			EP63 C02	672086	EP63 D02	566608	1/4
	3			EP63 C03	672087	EP63 D03	566609	1/4
	4			EP63 C04	672088	EP63 D04	566610	1/4
	6	EP63 B06	674274 ⁽²⁾	EP63 C06	672089	EP63 D06	566611	1/4
	10	EP63 B10	674275 ⁽²⁾	EP63 C10	672091	EP63 D10	566612	1/4
	16	EP63 B16	674276 ⁽²⁾	EP63 C16	672093	EP63 D16	566614	1/4
1/2 3/4 5/6 2/1 4/3 6/5	20	EP63 B20	674277 ⁽²⁾	EP63 C20	672094	EP63 D20	566615	1/4
	25	EP63 B25	674278 ⁽²⁾	EP63 C25	672095	EP63 D25	566616	1/4
	32	EP63 B32	674279 ⁽²⁾	EP63 C32	672096	EP63 D32	566617	1/4
	40	EP63 B40	674280 ⁽²⁾	EP63 C40	672097	EP63 D40	566618	1/4
	50	EP63 B50	674281 ⁽²⁾	EP63 C50	672098	EP63 D50	566619	1/4
	63	EP63 B63	674282 ⁽²⁾	EP63 C63	672099	EP63 D63	566620	1/4
	0.5			EP64 C0.5	672100	EP64 D0.5	566646	1/3
	1			EP64 C01	672101	EP64 D01	566647	1/3
	2			EP64 C02	672102	EP64 D02	566648	1/3
	3			EP64 C03	672103	EP64 D03	566649	1/3
1/2 3/4 5/6 7/8 2/1 4/3 6/5 8/7	4			EP64 C04	672104	EP64 D04	566650	1/3
	6	EP64 B06	672185	EP64 C06	672105	EP64 D06	566651	1/3
	10	EP64 B10	672187	EP64 C10	672107	EP64 D10	566652	1/3
	16	EP64 B16	672189	EP64 C16	672109	EP64 D16	566654	1/3
	20	EP64 B20	672190	EP64 C20	672110	EP64 D20	566655	1/3
	25	EP64 B25	672191	EP64 C25	672111	EP64 D25	566656	1/3
	32	EP64 B32	672192	EP64 C32	672112	EP64 D32	566657	1/3
	40	EP64 B40	672193	EP64 C40	672113	EP64 D40	566658	1/3
	50	EP64 B50	672194	EP64 C50	672114	EP64 D50	566659	1/3
	63	EP64 B63	672195	EP64 C63	672115	EP64 D63	566660	1/3

Remark: 3P+N (4 modules) on request.

(1) Pack.: 12

(2) Pack.: 4

Miniature Circuit Breakers

EP100 UC

IEC 60898-2 6000 T15⁽¹⁾
DIN VDE 0641

IEC 60947-2 10kA⁽²⁾

Applications

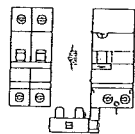


Standards / Marking

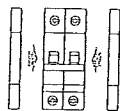
IEC 60898-2, DIN VDE 0641 CE

Add-on devices

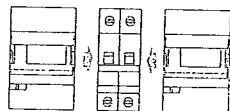
Add-on RCD



Auxiliaries



Motor operator



- Add-on RCD pg B.14
- Auxiliary contacts pg C.4
- Shunt trip pg C.6
- Undervoltage release pg C.6
- Panel Board Switch pg C.6
- Motor operator pg C.8

- Accessories pg A.35
- Busbars pg E.1
- More technical data chap. T1
- Dimensions pg A.36

Performance

Thermal setting In	(A) 0.5 -63
Rated voltage AC Un	(V) 230/400 220/440 ==
Minimum operating voltage U _{Bmin}	(V) 12 12 ==
Tripping characteristics	B-C
Mechanical/electrical endurance	20000/10000
Tropicalisation acc. to IEC 60068-2	95%RH at 55°C
Terminal capacity flexible/rigid cable (mm ²)	25-35
Poles ⁽³⁾	1, 2
Weight	(g/pole) 120

Short-circuit capacity

AC/DC acc. to IEC 60898-2

Poles	V	I _{cn} =I _{cs} (kA) ⁽¹⁾
1	125 DC	10
1, 2	230/400 220 DC	6
2	250 DC 440 DC	10 6

AC acc. to IEC 60947-2⁽²⁾

Poles	V	I _{cu} (kA)
1	240	10
2	415	10

⁽¹⁾ Up to 40A included; 50 and 63A: 4500

⁽²⁾ On request

⁽³⁾ Polarity labeling to be respected due to the permanent magnet in the MCB

Series EP100 UC - 10kA - characteristic B-C

1P
1 mod.



2
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In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
0.5			EP101UCC0.5	673301	12
1			EP101UCC01	673302	12
2			EP101UCC02	673303	12
4			EP101UCC04	673305	12
6	EP101UCB06	673333	EP101UCC06	673306	12
10	EP101UCB10	673334	EP101UCC10	673308	12
16	EP101UCB16	673335	EP101UCC16	673310	12
20	EP101UCB20	673336	EP101UCC20	673311	12
25	EP101UCB25	673337	EP101UCC25	673312	12
32	EP101UCB32	673338	EP101UCC32	673313	12
40	EP101UCB40	673339	EP101UCC40	673314	12
50	EP101UCB50	673340	EP101UCC50	673315	12
63	EP101UCB63	673341	EP101UCC63	673316	12

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In (A)	Cat. No.	Ref. No.	Cat. No.	Ref. No.	Pack.
0.5			EP102UCC0.5	673317	6
1			EP102UCC01	673318	6
2			EP102UCC02	673319	6
4			EP102UCC04	673321	6
6	EP102UCB06	673342	EP102UCC06	673322	6
10	EP102UCB10	673343	EP102UCC10	673324	6
16	EP102UCB16	673344	EP102UCC16	673326	6
20	EP102UCB20	673345	EP102UCC20	673327	6
25	EP102UCB25	673346	EP102UCC25	673328	6
32	EP102UCB32	673347	EP102UCC32	673329	6
40	EP102UCB40	673348	EP102UCC40	673330	6
50	EP102UCB50	673349	EP102UCC50	673331	6
63	EP102UCB63	673350	EP102UCC63	673332	6