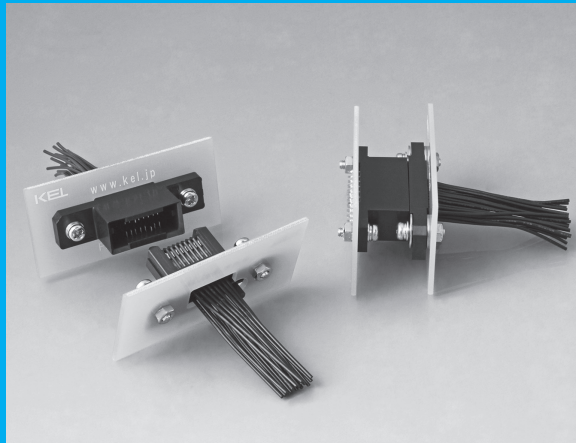


FAS SERIES

1.5mm PITCH DRAWER CONNECTOR

RoHS
Compliant



FEATURES

- ▶ Receptacle (FAS01: Cable side connector), Plug (FAS11: PCB side connector) and Cable plug (FAS12: Cable side connector for cable to cable) are available and can accommodate a wide range of usage.
- ▶ Downsized by more than 30% compared to FA Series.
- ▶ Absorbs $\pm 3\text{mm}$ gap in X and Y directions when mating.
- ▶ Floating structure of the screwed area enables $\pm 1.4\text{mm}$ displacement in X and Y directions in mated condition.
- ▶ Highly reliable design with effective mating length of 3.4mm.
- ▶ Twin leaf pinching 2 points structure ensures reliability with stable contact force and prevents contact buckling.
- ▶ Option applicable to hot swap.
(3 levels of hot swap can be applied for FAS12 series.)

ORDER CODE

FAS01-

①

②

*Please order in multiples of the quantity per package.

① **[Type] FAS01** : Receptacle (Cable side connector)

② **[Number of contacts]** 004 : 4pin 006 : 6pin 008 : 8pin 010 : 10pin 012 : 12pin 014 : 14pin 016 : 16pin 018 : 18pin 020 : 20pin
022 : 22pin 024 : 24pin 026 : 26pin 028 : 28pin 030 : 30pin 032 : 32pin 034 : 34pin 036 : 36pin 038 : 38pin 040 : 40pin

*FAS01-□□□ is sold only as a housing, and contacts are sold separately. Please check the "Crimp contact" page for contact order codes.

ORDER CODE

FAS11-

①

②

③

*Please order in multiples of the quantity per package.

① **[Type] FAS11** : Plug (PCB side connector)

② **[Number of contacts]** (Straight type) 004 : 4pin 008 : 8pin 010 : 10pin 016 : 16pin 024 : 24pin 026 : 26pin 028 : 28pin 030 : 30pin
032 : 32pin 034 : 34pin 036 : 36pin 038 : 38pin 040 : 40pin

(Right angle type) 004 : 4pin 016 : 16pin 022 : 22pin 026 : 26pin 028 : 28pin 030 : 30pin 032 : 32pin 040 : 40pin

③ **[Contact tail style]** No code : Straight L : Right angle

ORDER CODE

FAS12-

①

②

*Please order in multiples of the quantity per package.

① **[Type] FAS12** : Plug (Cable-relay type)

② **[Number of contacts]** 004 : 4pin 006 : 6pin 008 : 8pin 010 : 10pin 012 : 12pin 014 : 14pin 016 : 16pin 018 : 18pin 020 : 20pin
022 : 22pin 024 : 24pin 026 : 26pin 028 : 28pin 030 : 30pin 032 : 32pin 034 : 34pin 036 : 36pin 038 : 38pin 040 : 40pin

*FAS12-□□□ is sold only as a housing, and contacts are sold separately. Please check the "Crimp contact" page for contact order codes.

SPECIFICATIONS

Material and plating		Electrical characteristics	
Insulator material	Glass-filled PBT(UL94V-0), Black	Rated current	Refer the next page "Rated current table"
Contact material	[FAS01/12]Copper alloy [FAS11]Brass	Contact resistance	30mΩ max.
Contact plating	[FAS01/12] (Contact area) Gold over Nickel (Crimping area) Tin over Nickel [FAS11] (Contact area) Gold over Nickel (Terminal area) Gold over Nickel	Dielectric withstanding voltage	650V AC for 1 minute
		Insulation resistance	1000MΩ min. at 500V DC
		Operating temperature	-40°C to +85°C
Washer / Rivet material	Stainless steel	Durability of insertion and withdrawal	[FAS01/FAS11] (#597-□) 2,000 times (#597D-□) 5,000 times [FAS01/FAS12] (#597-□) 2,000 times (#597D-□) 7,000 times
		Applicable cable	#24/26/28 AWG Discrete wire cables (Outer diameter of cable coating : $\Phi 0.88$ to $\Phi 1.14\text{mm}$)

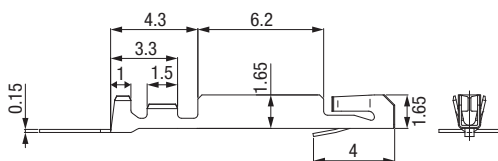
Rated current table

Mating matrix		Cable size	Rated current
Receptacle	Plug		
FAS01-□□□	FAS11-□□□	AWG#24	3.0A MAX. per contact
		AWG#26	2.5A MAX. per contact (3A is applicable for 20 pin and under.)
		AWG#28	2.5A MAX. per contact (3A is applicable for 10 pin and under.)
	FAS11-□□□L	AWG#24	2.5A MAX. per contact (3A is applicable for 20 pin and under.)
		AWG#26	2.0A MAX. per contact (3A is applicable for 10 pin and under.)
		AWG#28	2.0A MAX. per contact (3A is applicable for 10 pin and under.)
	FAS12-□□□	AWG#24	2.5A MAX. per contact (3A is applicable for 20 pin and under.)
		AWG#26	2.0A MAX. per contact (3A is applicable for 10 pin and under.)
		AWG#28	1.5A MAX. per contact (3A is applicable for 8 pin and under.)

Crimp contact

Unit : mm

◆ Crimp contact for FAS01-□□□ receptacle (Cable side connector)



▶ Product table

Part number	No. of packaging
#597□-□	10,000

Packaging style
Reel

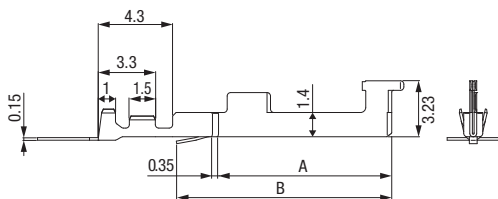
ORDER CODE

#597 - □ □
① ② ③

*Please order in multiples of the quantity per package.

- ① **[Contact] #597** : Crimping type contact for FAS01
- ② **[Gold plating thickness]** No code : 0.05μm min. D : 0.25μm min.
- ③ **[Applicable cable size]** No code : #26 AWG and #28 AWG
(Outer diameter of cable coating: φ 0.88 to φ 1.00mm)
1 : #24 AWG (Outer diameter of cable coating: φ 1.08 to φ 1.14mm)

◆ Crimp contact for FAS12-□□□ plug (Cable relay type)



▶ Product table / Dimensions

Part number	A	B	No. of packaging
#615,#615-1	10.0	12.41	5,000
#615-2,3	11.0	13.41	5,000
#615-4,5	9.0	11.41	5,000

Packaging style
Reel

ORDER CODE

#615 - □ □
① ②

*Please order in multiples of the quantity per package.

- ① **[Contact] #615** : Crimping type contact for FAS12
- ② **[Applicable cable size]**
Standard terminal
No code : #26 AWG and #28AWG (Cable diameter: φ 0.88mm to φ 1.00mm)
1 : #24 AWG (Outer diameter of cable coating: φ 1.08mm to φ 1.14mm)
Long terminal
2 : #26 AWG and #28AWG (Cable diameter: φ 0.88mm to φ 1.00mm)
3 : #24 AWG (Outer diameter of cable coating: φ 1.08mm to φ 1.14mm)
Short terminal
4 : #26 AWG and #28AWG (Cable diameter: φ 0.88mm to φ 1.00mm)
5 : #24 AWG (Outer diameter of cable coating: φ 1.08mm to φ 1.14mm)

Assembly tool

▶ Crimping hand tool

Part number	CH-05	CH-10	CH-11
Series name	FAS01	FAS12	
Applicable cable size	#26 AWG, #28 AWG	#24 AWG	#26 AWG, #28 AWG
Crimp contact	#597□	#597□-1	#615,#615-2,4

▶ Crimping machine

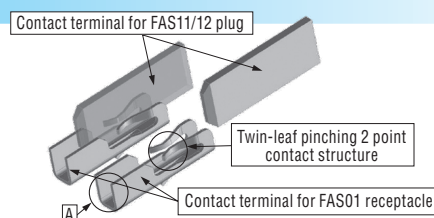
Crimp contact	#597□	#597□-1	#615,#615-2,4	#615-1,3,5
Manufacturer	Japan Automatic Machine Co., Ltd.			
Crimping machine	LPC220S			
Applicator	EFS857400	EFS866100	EFS876700K	EFS876600K

*A crimping machine and applicator can be purchased from Japan Automatic Machine Co., Ltd.

Twin-Leaf Pinching 2 point contact structure

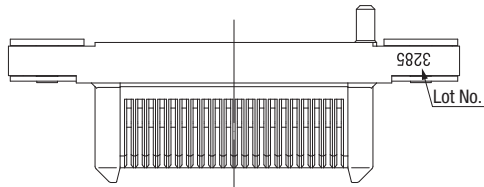
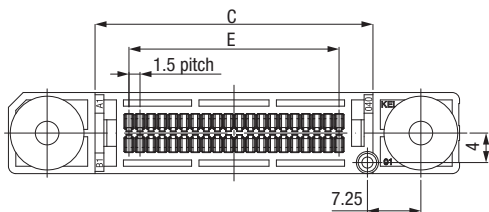
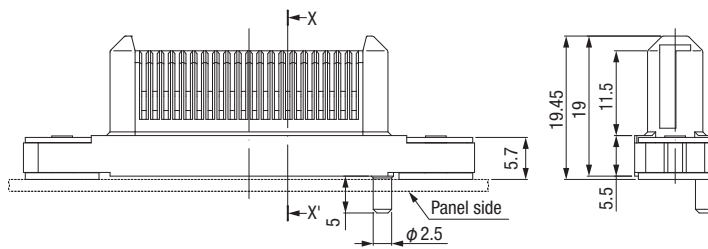
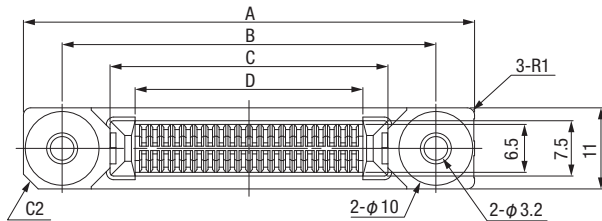
With the KEL original twin-leaf pinching 2 point contact structure, the flat plate type contact of plug connector is inserted into the contact of receptacle connector (A part of the figure shown on the right) for electrical contact.

The flat plate shaped contact of plug connector is tolerant of buckling compared to pin header type contact, and the stable contact force of the pinching structure of receptacle connector assures high reliability of electrical contact.

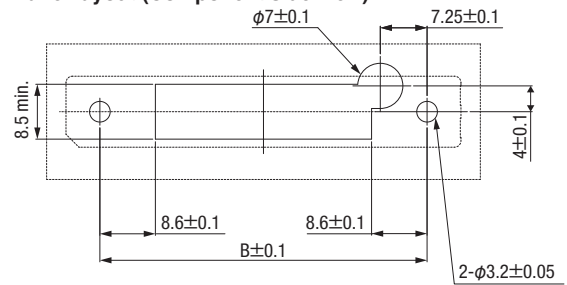


FAS01-□□□ (Receptacle, Cable side connector, Housing)

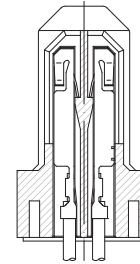
Unit : mm



Panel layout (Component side view)



X-X' Cross section (With the contact inserted)

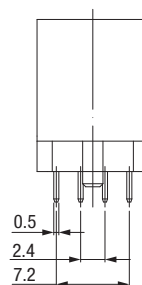
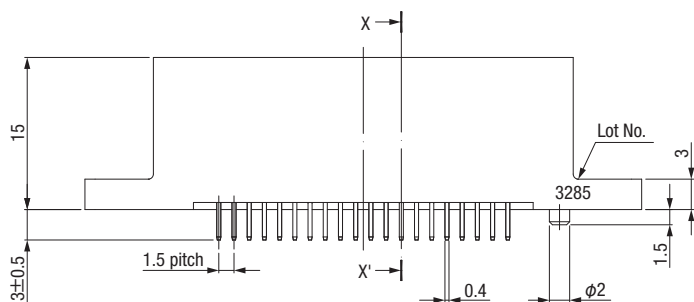
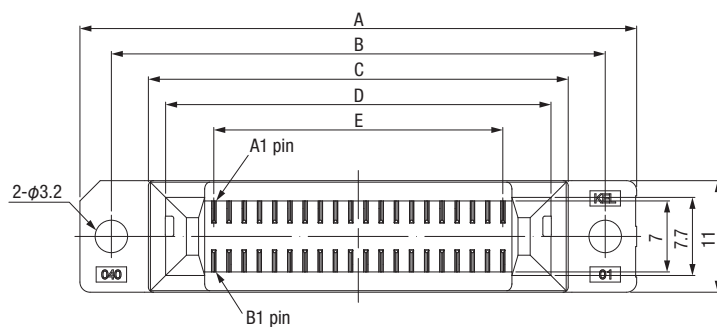
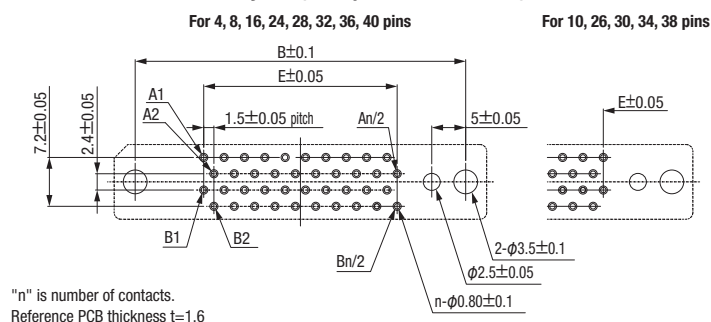
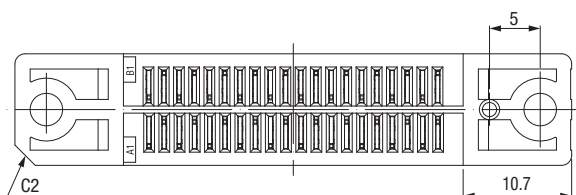
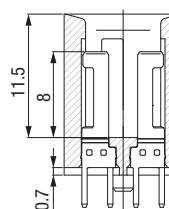


Packaging style

Tray

Product table / Dimensions

No. of contacts	Part number	A	B	C	D	E	No. of packaging
4	FAS01-004	34.2	23.7	10.7	3.9	1.5	130
6	FAS01-006	35.7	25.2	12.2	5.4	3.0	130
8	FAS01-008	37.2	26.7	13.7	6.9	4.5	117
10	FAS01-010	38.7	28.2	15.2	8.4	6.0	117
12	FAS01-012	40.2	29.7	16.7	9.9	7.5	104
14	FAS01-014	41.7	31.2	18.2	11.4	9.0	104
16	FAS01-016	43.2	32.7	19.7	12.9	10.5	104
18	FAS01-018	44.7	34.2	21.2	14.4	12.0	104
20	FAS01-020	46.2	35.7	22.7	15.9	13.5	91
22	FAS01-022	47.7	37.2	24.2	17.4	15.0	91
24	FAS01-024	49.2	38.7	25.7	18.9	16.5	91
26	FAS01-026	50.7	40.2	27.2	20.4	18.0	91
28	FAS01-028	52.2	41.7	28.7	21.9	19.5	78
30	FAS01-030	53.7	43.2	30.2	23.4	21.0	78
32	FAS01-032	55.2	44.7	31.7	24.9	22.5	78
34	FAS01-034	56.7	46.2	33.2	26.4	24.0	78
36	FAS01-036	58.2	47.7	34.7	27.9	25.5	78
38	FAS01-038	59.7	49.2	36.2	29.4	27.0	78
40	FAS01-040	61.2	50.7	37.7	30.9	28.5	65

▶ Printed Circuit Board layout (Component side view)

X-X' Cross section

Packaging style

Pipe

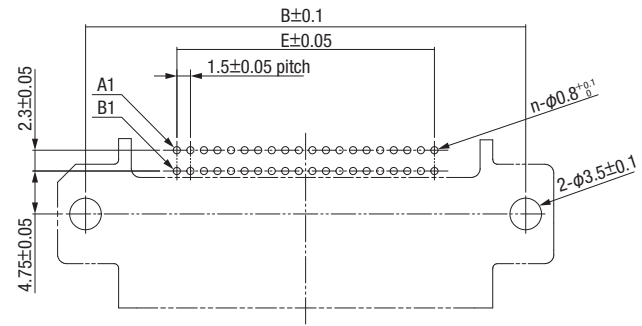
▶ Product table / Dimensions

No. of contacts	Part number	A	B	C	D	E	No. of packaging
4	FAS11-004	27.9	21.7	14.4	11.0	1.5	18
8	FAS11-008	30.9	24.7	17.4	14.0	4.5	16
10	FAS11-010	32.4	26.2	18.9	15.5	6.0	15
16	FAS11-016	36.9	30.7	23.4	20.0	10.5	13
24	FAS11-024	42.9	36.7	29.4	26.0	16.5	11
26	FAS11-026	44.4	38.2	30.9	27.5	18.0	11
28	FAS11-028	45.9	39.7	32.4	29.0	19.5	11
30	FAS11-030	47.4	41.2	33.9	30.5	21.0	10
32	FAS11-032	48.9	42.7	35.4	32.0	22.5	10
34	FAS11-034	50.4	44.2	36.9	33.5	24.0	10
36	FAS11-036	51.9	45.7	38.4	35.0	25.5	9
38	FAS11-038	53.4	47.2	39.9	36.5	27.0	9
40	FAS11-040	54.9	48.7	41.4	38.0	28.5	9

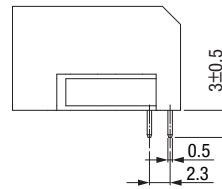
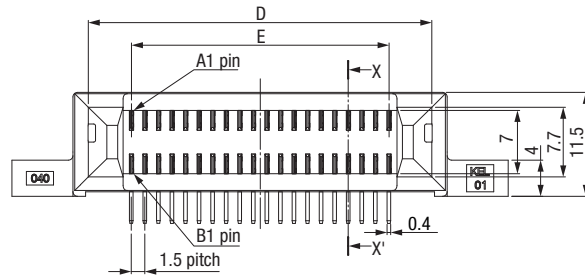
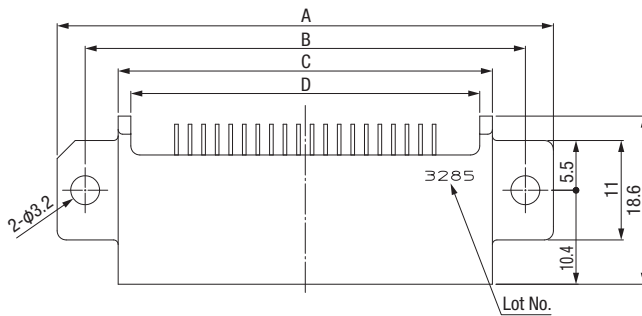
FAS11-□□□L (Plug, PCB side connector, Right angle)

Unit : mm

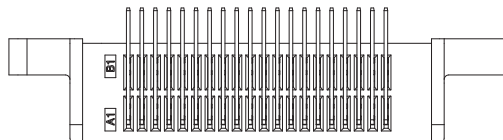
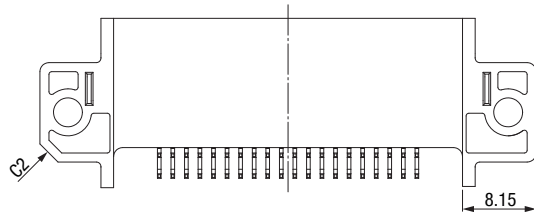
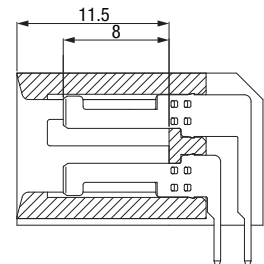
Printed Circuit Board layout (Component side view)



"n" is number of contacts.
Reference PCB thickness $t=1.6$



X-X' Cross section

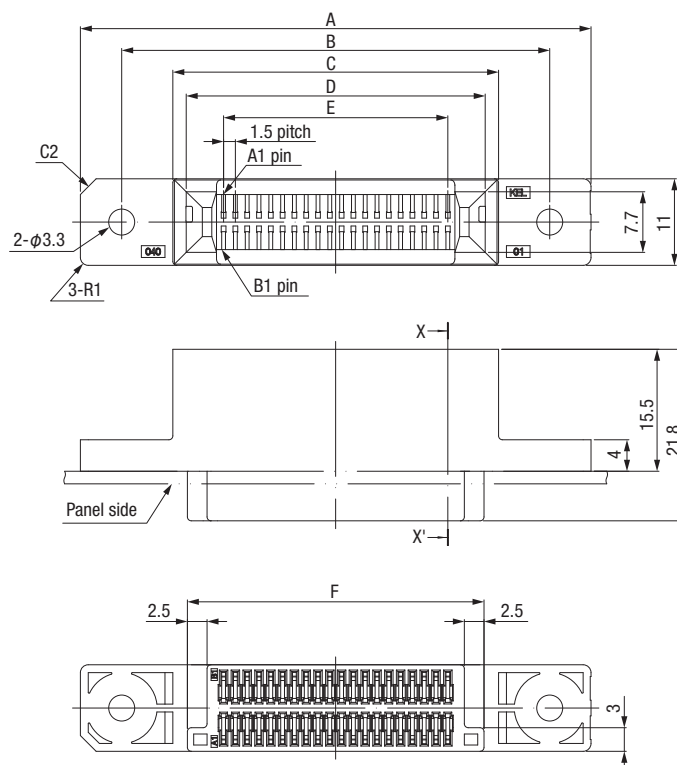
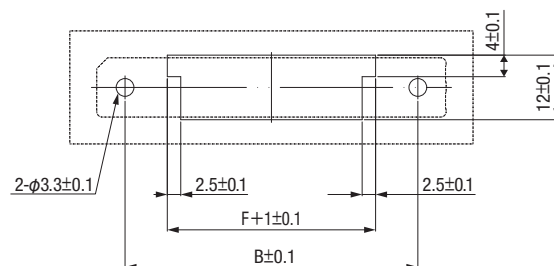
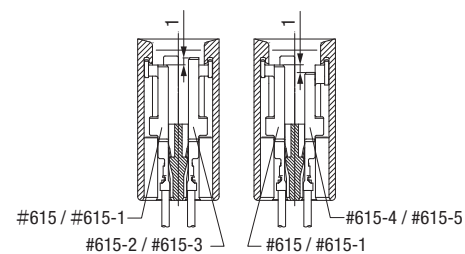


Packaging style

Pipe

Product table / Dimensions

No. of contacts	Part number	A	B	C	D	E	No. of packaging
4	FAS11-004L	27.9	21.7	14.4	11.0	1.5	18
16	FAS11-016L	36.9	30.7	23.4	20.0	10.5	13
22	FAS11-022L	41.4	35.2	27.9	24.5	15.0	12
26	FAS11-026L	44.4	38.2	30.9	27.5	18.0	11
28	FAS11-028L	45.9	39.7	32.4	29.0	19.5	11
30	FAS11-030L	47.4	41.2	33.9	30.5	21.0	10
32	FAS11-032L	48.9	42.7	35.4	32.0	22.5	10
40	FAS11-040L	54.9	48.7	41.4	38.0	28.5	9


▶ Panel layout (Component side view)

**X-X' Cross section
(With the contact inserted)**


Packaging style

Tray

▶ Product table / Dimensions

No. of contacts	Part number	A	B	C	D	E	F	No. of packaging
4	FAS12-004	37.9	27.4	14.4	11.0	1.5	10.7	117
6	FAS12-006	39.4	28.9	15.9	12.5	3.0	12.2	117
8	FAS12-008	40.9	30.4	17.4	14.0	4.5	13.7	104
10	FAS12-010	42.4	31.9	18.9	15.5	6.0	15.2	104
12	FAS12-012	43.9	33.4	20.4	17.0	7.5	16.7	104
14	FAS12-014	45.4	34.9	21.9	18.5	9.0	18.2	91
16	FAS12-016	46.9	36.4	23.4	20.0	10.5	19.7	91
18	FAS12-018	48.4	37.9	24.9	21.5	12.0	21.2	91
20	FAS12-020	49.9	39.4	26.4	23.0	13.5	22.7	91
22	FAS12-022	51.4	40.9	27.9	24.5	15.0	24.2	78
24	FAS12-024	52.9	42.4	29.4	26.0	16.5	25.7	78
26	FAS12-026	54.4	43.9	30.9	27.5	18.0	27.2	78
28	FAS12-028	55.9	45.4	32.4	29.0	19.5	28.7	78
30	FAS12-030	57.4	46.9	33.9	30.5	21.0	30.2	78
32	FAS12-032	58.9	48.4	35.4	32.0	22.5	31.7	78
34	FAS12-034	60.4	49.9	36.9	33.5	24.0	33.2	65
36	FAS12-036	61.9	51.4	38.4	35.0	25.5	34.7	65
38	FAS12-038	63.4	52.9	39.9	36.5	27.0	36.2	65
40	FAS12-040	64.9	54.4	41.4	38.0	28.5	37.7	65