

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

7KM4212-0BA00-3AA0

SETRON PAC4200 POWER METER

Used with the applicable PLC System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official manufacturer documentation

Overview of functions

CNC controls SINUMERIK 828

Safety functions/Commissioning

✓ Basic version ○ Option – Not available	Article No.	SINUMERIK 828D			
	Notes	BASIC SW 24x	SW 26x	SW 28x	SW 28xA
Safety functions					
SINUMERIK Safety Integrated Safety functions for personnel and machine protection:					
• Safe Torque Off (STO)		✓	✓	✓	✓
• Safe Brake Control (SBC)		✓	✓	✓	✓
• Safe Stop 1 (SS1)		✓	✓	✓	✓
• Safety Integrated, extended functions for one CNC axis: - Safe Operating Stop (SOS) - Safe Stop 2 (SS2) - Safely Limited Speed (SLS) - Safe Speed Monitor (SSM) - Safe Acceleration Monitor (SAM) - Safe Direction (SDI) - Safely Limited Position (SLP) - Safe Brake Management (SBM) - Safe Brake Control (SBC) - Safe Brake Test (SBT)	6FC5800-0AC50-0YB0	○	○	○	○
• SINAMICS S120 Terminal Module Cabinet TM54F to control SOS, SS2, SLS and SSM	6SL3055-0AA00-3BA0 Required for each PPU and NX.	○	○	○	○
Commissioning					
Commissioning software for the drive system integrated:					
• SINAMICS S120		✓	✓	✓	✓
Auto Servo Tuning AST Fully automatic speed and position controller optimization		✓	✓	✓	✓
Commissioning trace integrated Drive optimization without an additional oscilloscope		✓	✓	✓	✓
Standard commissioning via:					
• RS232C serial interface		–	–	–	–
• USB interface with storage medium, e.g. USB stick	Hard disk not possible. Read in/out INI file	✓	✓	✓	✓
• Network drive		✓	✓	✓	✓
• User CompactFlash card		✓	✓	✓	✓
• SINUMERIK Integrate for engineering Access MyMachine /P2P for PC/PG	6FC5860-7YC00-0YA0	○	○	○	○
STARTER commissioning tool for PC/PG for SINAMICS S120	On toolbox DVD-ROM.	○	○	○	○
SinuCom commissioning/service tools for SINUMERIK 840D sl		–	–	–	–

Overview of functions

CNC controls SINUMERIK 828

Diagnostic functions/Service and maintenance/SINUMERIK Ctrl-Energy

2

✓ Basic version ○ Option – Not available	Article No.	SINUMERIK 828D			
	Notes	BASIC SW 24x	SW 26x	SW 28x	SW 28xA
Diagnostic functions					
Alarms and messages		✓	✓	✓	✓
Action log can be activated for diagnostic purposes		✓	✓	✓	✓
PLC status		✓	✓	✓	✓
LAD display		✓	✓	✓	✓
PLC remote diagnostics via modem		✓	✓	✓	✓
PLC remote diagnostics via Ethernet		✓	✓	✓	✓
Integrated spindle monitor ISM	6FC5800-0AP55-0YB0				
• Turning		–	○	○	○
• Milling		–	○	○	○
• G-Tech Cylindrical/G-Tech Surface		–	–	–	–
Easy Message Machine status transfer using text messages (SMS) requires a SINAUT system with antenna and modem cable					
• SINAUT MD720-3 GSM/GPRS modem	6NH9720-3AA00	○	○	○	○
• SINAUT ANT 794-4MR antenna	6NH9860-1AA00	○	○	○	○
• Modem cable	6NH7701-5AN	○	○	○	○
Remote diagnostics and file transfer:					
• SINUMERIK Integrate for engineering Access MyMachine /P2P	6FC5800-0AP30-0YB0	○	○	○	○
	Connection of a modem router to X127.				
• SINUMERIK Integrate for engineering Access MyMachine /P2P for PC/PG – data transfer between PC/PG and CNCs	6FC5860-7YC00-0YA0	○	○	○	○
Service and maintenance					
Integrated service planner for monitoring service intervals		✓	✓	✓	✓
Easy Extend Simply extend optional machine components		✓	✓	✓	✓
SINUMERIK Ctrl-Energy					
Intelligent standby control of the machine Ctrl-E profiles		✓	✓	✓	✓
Measurement and evaluation of the consumption of the machine and the drive system Ctrl-E analysis					
• Transfer of manual values from the PLC		✓	✓	✓	✓
• SENTRON PAC3200 Power Monitoring Device for front panel mounting records 50 measured values	7KM2112-0BA00-3AA0	○	○	○	○
• SENTRON PAC4200 Power Monitoring Device for front panel mounting records 200 measured values	7KM4212-0BA00-3AA0	○	○	○	○
Flux reduction					
• Turning		✓	✓	✓	✓
• Milling		✓	✓	✓	✓
• G-Tech Cylindrical/G-Tech Surface		–	–	–	–
Reactive-current compensation	Only with SINAMICS S120 Active Line Module.	–	–	–	–

Overview of functions

CNC controls SINUMERIK 828

Industrial software for CNC/Increase service productivity

✓ Basic version ○ Option – Not available	Article No.	SINUMERIK 828D				
	Notes	BASIC	SW 24x	SW 26x	SW 28x	SW 28xA
Industrial software for CNC						
SINUMERIK Integrate for production Complete software package on DVD-ROM	6FC5864-0YD00-0AA8	○	○	○	○	
Increase service productivity						
Diagnostic functions in case of machine faults, workflow services, remote control and remote monitoring of machine control systems SINUMERIK Integrate for production Access MyMachine:						
• Access MyMachine /Ethernet - Single Access						
- Machine Connect Single license for each machine, current software version	6FC5864-4AP00-0YB0	○	○	○	○	
- Machine Connect Upgrade license for each machine, current software version	6FC5864-4AP00-0YF0	○	○	○	○	
- Server Access Software update service/year per machine	6FC5864-4AP00-0YM0	○	○	○	○	
• Access MyMachine /Ethernet - Conferencing						
- Machine Connect Single license for each machine, current software version	6FC5864-4BP00-0YB0	○	○	○	○	
- Machine Connect Upgrade license for each machine, current software version	6FC5864-4BP00-0YF0	○	○	○	○	
- Server Access Software update service/year per machine	6FC5864-4BP00-0YM0	○	○	○	○	
• Access MyMachine /Ethernet - Remote STEP 7						
- Diagnostics of the PLC via Access MyMachine /Ethernet - Single Access or Access MyMachine /Ethernet - Conferencing						
- Edit with LADDER EDIT						
- Machine Connect Single license for each machine, current software version	6FC5864-4CP00-0YB0	○	○	○	○	
- Machine Connect Upgrade license for each machine, current software version	6FC5864-4CP00-0YF0	○	○	○	○	
- Server Access Software update service/year per machine	6FC5864-4CP00-0YM0	○	○	○	○	

CNC controls

Supplementary components

SITOP smart power supply

3

Overview

The 24 V power supply units from the SITOP range are optimized for industrial use and operate on the switched-mode principle. Due to the precisely regulated output voltage, the devices are even suitable for the connection of sensitive sensors. Different versions are available depending on the output current and field of application.

SITOP smart

SITOP smart does not require much space on the standard mounting rail and offers a high level of functionality.

Thanks to the extra power, 1.5 times the rated current for 5 seconds, large loads can also be switched on without any problems.

Benefits

- High efficiency
- Narrow width and easy installation
- Exact output voltage and low residual ripple
- Integrated short-circuit protection and safe electrical separation
- National and international approvals
- No release of silicone

Selection and ordering data

Description	Article No.
SITOP smart PSU100S 24 V DC/10 A, 1-phase Input voltage: 120 V/230 V AC (85 ... 132 V/170 ... 264 V AC)	6EP1334-2BA20
SITOP smart PSU100S 24 V DC/20 A, 1-phase Input voltage: 120 V/230 V AC (85 ... 132 V/176 ... 264 V AC)	6EP1336-2BA10
SITOP smart PSU300S 24 V DC, 3-phase Input voltage: 400 ... 500 V 3 AC (340 ... 550 V 3 AC)	
• 10 A	6EP1434-2BA10
• 20 A	6EP1436-2BA10

More information

You can find additional information in Catalog KT 10.1 or on the Internet at:

www.siemens.com/industrymall

www.siemens.com/sitop

Technical specifications

Article No.		6EP1334-2BA20	6EP1336-2BA10	6EP1434-2BA10 6EP1436-2BA10
Product brand name		SITOP smart	SITOP smart	SITOP smart
Product type designation		PSU100S stabilized power supply	PSU100S stabilized power supply	PSU300S stabilized power supply
Rated output voltage at DC	V	24	24	24
Total tolerance, static ±	%	3	3	3
Line frequency range	Hz	47 ... 63	47 ... 63	47 ... 63
Degree of protection		IP20	IP20	IP20
Humidity class according to EN 60721		Climate class 3K3, no condensation	Climate class 3K3, no condensation	Climate class 3K3, no condensation
Ambient temperature, during				
• storage	°C	-40 ... +85	-40 ... +85	-40 ... +85
• transport	°C	-40 ... +85	-40 ... +85	-40 ... +85
• operation	°C	-25 ... +70	0 ... 70	0 ... 70
Width	mm	70	115	90
Height	mm	125	145	145
Depth	mm	120	150	150
Net weight	kg	0,8	2,4	1,6
Certificate of suitability		CB, cCSAus, CE, cULus	CB, cCSAus, CE, cULus	CB, cCSAus, CE, cULus

Overview


SENTRON PAC3200 Power Monitoring Device



SENTRON PAC4200 Power Monitoring Device

The 7KM PAC Power Monitoring Devices ensure precise, reproducible and reliable measurement of energy values for infeed, outgoing feeders or individual loads. The measuring devices not only supply comprehensive information about your electrical installation and power distribution system, but also provide important measured values to help you assess the status of your system and the power quality. For further processing of the measured data, the devices can easily be integrated into higher-level automation and energy management systems.

The devices can be used for both single-phase and multi-phase measurements in 3- and 4-conductor power supply systems (TN, TT, IT).

Benefits

- Simple mounting and commissioning
- High IP65 degree of protection (front side, when installed) permits usage in extremely dusty and wet environments
- Intuitive operation using 4 function buttons and multilingual plain text displays
- Easy to adapt to different systems using integrated and optional
 - Digital inputs and outputs
 - Communication interfaces
- Global application
 - At least 8 languages
 - International approvals
 - Developed and tested in accordance with European and international standards
- Low mounting depth

Selection and ordering data

Description	Article No.
SENTRON PAC3200 Power Monitoring Device With screw terminals Records 50 measured values	7KM2112-0BA00-3AA0
SENTRON PAC4200 Power Monitoring Device With screw terminals Records 200 measured values	7KM4212-0BA00-3AA0

More information

More information is available in the Siemens Industry Mall or on the Internet at:

www.siemens.com/industrymall

www.siemens.com/lowvoltage/powermonitoring

CNC controls

Supplementary components

SENTRON PAC**Technical specifications**

Article No.		7KM2112-0BA00-3AA0	7KM4212-0BA00-3AA0
Product brand name		SENTRON	SENTRON
Product type designation		PAC3200	PAC4200
Product designation		Multimeter	Multimeter
Type of measured value detection		complete	complete
Measuring inputs for voltage for 3 AC, max.	V	690/400	690/400
Wide-range power supply			
• For AC	V	95 ... 240	95 ... 240
• For DC	V	110 ... 340	110 ... 340
Measurable line frequency	Hz	45 ... 65	45 ... 65
Protection class when installed		II	II
Degree of pollution		2	2
Degree of protection			
- front		IP65	IP65
- rear		IP20	IP20
Relative humidity at 25 °C, during operation	%	5 ... 95	5 ... 95
Ambient temperature, during			
• storage	°C	-25 ... +70	-25 ... +70
• transport	°C	-25 ... +70	-25 ... +70
• operation	°C	-10 ... +55	-10 ... +55
Width	mm	96	96
Height	mm	96	96
Depth	mm	56	82
Installation depth	mm	51	77
Net weight	kg	0.54	0.46
Certificate of suitability		CB, CE, C-TICK, EAC, UL	CB, CE, C-TICK, EAC, UL

SINAMICS S120 drive system



4/2	SINAMICS S120 Combi
4/2	Power Modules
4/8	External fan module, Reinforcement plates
4/9	Line reactors
4/10	Line filters
4/11	SINAMICS S120
4/11	<u>Booksize compact format</u>
	<u>Motor Modules</u>
4/12	Single Motor Modules
4/13	Double Motor Modules
4/14	<u>Booksize format</u>
	<u>Line Modules</u>
4/14	Smart Line Modules
4/17	Line reactors
4/18	Line filters
4/19	Recommended line-side components
4/20	Active Line Modules
4/25	Active Interface Modules
4/27	Basic Line Filters
4/28	Recommended line-side components
4/29	Basic Line Modules
4/33	Line reactors
4/34	Line filters
4/35	Recommended line-side components
4/36	<u>Booksize format</u>
	<u>Motor Modules</u>
4/36	Single Motor Modules
4/41	Double Motor Modules
4/44	Series motor reactors
4/45	<u>Booksize format</u>
	<u>DC link components</u>
4/45	Braking Module
4/46	Braking resistors
4/47	Capacitor Module
4/48	Control Supply Module
4/49	DC link rectifier adapter
4/49	DC link adapter
4/50	<u>Supplementary system components</u>
4/50	DMC20 DRIVE-CLiQ Hub Module
4/51	DME20 DRIVE-CLiQ Hub Module
4/52	TM54F Terminal Module
4/54	Encoder system connection
4/54	SMC20 Sensor Module Cabinet-Mounted
4/55	SMC30 Sensor Module Cabinet-Mounted
4/56	SMC40 Sensor Module Cabinet-Mounted
4/57	SME125 Sensor Module External
4/58	Drive Based Safety Integrated

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Article number index

Type	Page	Type	Page	Type	Page
6FC5398-...		6FC5834-GY40-...		6FX.002-5D...	
6FC5398-0AC10-1YA2.....	8/3	6FC5834-1GY40-4YA0.....	2/2, 3/11	6FX.002-5DF10-.....	7/11
6FC5398-1BP40-5RA3.....	8/5	6FC5834-2GY40-4YA0.....	2/2, 3/11	6FX.002-5DF14-.....	7/11
6FC5398-2BP40-5RA3.....	8/5	6FC5834-3GY40-4YA0.....	2/2, 3/11	6FX.002-5DG10-.....	7/11
6FC5398-4BP40-5RA3.....	8/5	6FC5835-GY40-...		6FX.002-5DG12-.....	7/11
6FC5398-5BP40-5.A3.....	8/6	6FC5835-1GY40-4YA0.....	2/2, 3/5	6FX.002-5DG22-.....	7/11
6FC5398-6AP40-5.A3.....	8/5	6FC5835-2GY40-4YA0.....	2/2, 3/5	6FX.002-5DG32-.....	7/11
6FC5398-6AP40-5XC3.....	8/5	6FC5835-3GY40-4YA0.....	2/2, 3/5	6FX.002-5DN01-.....	7/11
6FC5398-6AP40-5XE3.....	8/5	6FC5836-GY40-...		6FX.002-5DN11-.....	7/11
6FC5398-7BP40-5.A3.....	8/6	6FC5836-1GY40-4YA0.....	2/2, 3/11	6FX.002-5DN20-.....	7/11
6FC5398-7CP40-5.A3.....	8/4	6FC5836-2GY40-4YA0.....	2/2, 3/11	6FX.002-5DN21-.....	7/11
6FC5398-7CP40-5XC3.....	8/4	6FC5836-3GY40-4YA0.....	2/2, 3/11	6FX.002-5DN31-.....	7/11
6FC5398-7CP40-5XE3.....	8/4	6FC5860-...		6FX.008-1B...	
6FC5398-8BP40-5.A3.....	8/4	6FC5860-0YC40-0YA8.....	2/21, 3/5, 3/11	6FX.008-1BA11-.....	7/11
6FC5398-8CP40-5.A3.....	8/4	6FC5860-7YC00-0YA0.....	2/24, 2/25, 3/5, 3/11	6FX.008-1BA21-.....	7/11
6FC5398-8CP40-5XC3.....	8/4	6FC5864-...		6FX.008-1BB11-.....	7/11
6FC5398-8CP40-5XE3.....	8/4	6FC5864-0YD00-0AA8.....	2/26	6FX.008-1BB21-.....	7/11
6FC5800-0AC.0-...		6FC5864-4AP00-0Y.0.....	2/26	6FX2001-2...	
6FC5800-0AC00-0YB0.....	2/3, 2/27	6FC5864-4BP00-0Y.0.....	2/26	6FX2001-2C.....	6/3
6FC5800-0AC20-0YB0.....	2/3, 2/27	6FC5864-4CP00-0Y.0.....	2/26	6FX2001-2D.....	6/3
6FC5800-0AC30-0YB0.....	2/3, 2/27	6FC5870-...		6FX2001-2E.....	6/3
6FC5800-0AC50-0YB0.....	2/24, 2/28	6FC5870-0CC41-0YA0.....	8/9	6FX2001-2F.....	6/3
6FC5800-0AD40-...		6FC5870-0YC41-1YA0.....	8/9	6FX2001-2G.....	6/3
6FC5800-0AD40-0YB0.....	2/22, 2/28	6FC5870-1SC41-0YA0.....	8/9	6FX2001-2H.....	6/3
6FC5800-0AM...		6FC5870-1TC41-0YA0.....	8/9	6FX2001-2M.....	6/3
6FC5800-0AM01-0YB0.....	2/6, 2/27	6FC5870-1YC41-1YA0.....	8/9	6FX2001-2N.....	6/3
6FC5800-0AM06-0YB0.....	2/6, 2/27	6FC5870-2TC41-0YA0.....	8/9	6FX2001-2P.....	6/3
6FC5800-0AM08-0YB0.....	2/9, 2/30	6FC5870-4YC41-1YA0.....	8/9	6FX2001-2Q.....	6/3
6FC5800-0AM27-0YB0.....	2/8, 2/27	6FC5870-4YC41-1YCO.....	8/9	6FX2001-2R.....	6/3
6FC5800-0AM28-0YB0.....	2/8, 2/27	6FC5870-8YC41-1YA0.....	8/9	6FX2001-2S.....	6/3
6FC5800-0AM34-0YB0.....	2/8, 2/27	6FC5870-8YC41-1YCO.....	8/9	6FX2001-3...	
6FC5800-0AM54-0YB0.....	2/22, 2/28	6FC8520-0RX00-...		6FX2001-3C.....	6/3
6FC5800-0AM55-0YB0.....	2/22, 2/28	6FC8520-0RX00-AA2.....	8/2	6FX2001-3E.....	6/3
6FC5800-0AM60-0YB0.....	2/21, 2/28	6FC9320-5D...		6FX2001-3G.....	6/3
6FC5800-0AM72-0YB0.....	2/7, 2/27	6FC9320-5DB01.....	2/20, 3/17	6FX2001-5...	
6FC5800-0AM73-0YB0.....	2/8, 2/28	6FC9320-5DC01.....	2/20, 3/17	6FX2001-5F.....	6/5
6FC5800-0AM75-0YB0.....	2/7, 2/28	6FC9320-5DE02.....	2/20, 3/17	6FX2001-5Q.....	6/5
6FC5800-0AM78-0YB0.....	2/18, 2/29	6FC9320-5DF01.....	2/20, 3/17	6FX2001-5V.....	6/5
6FC5800-0AP...		6FC9320-5DM00.....	2/20, 3/17	6FX2001-5W.....	6/5
6FC5800-0AP01-0YB0.....	2/19, 2/29	6FC9320-5DN00.....	3/17	6FX2001-7K...	
6FC5800-0AP05-0YB0.....	2/13, 2/29	6FC9341-...		6FX2001-7KF06.....	6/6
6FC5800-0AP13-0YB0.....	2/14, 2/29	6FC9341-1AQ.....	2/20, 3/17	6FX2001-7KF10.....	6/6
6FC5800-0AP16-0YB0.....	2/10, 2/11, 2/13, 2/15, 2/16, 2/21, 2/29	6FX.002-2...		6FX2001-7KP01.....	6/6
6FC5800-0AP17-0YB0.....	2/13, 2/29	6FX.002-2AD04-.....	7/16	6FX2001-7KS06.....	6/6
6FC5800-0AP18-0YB0.....	2/9, 2/30	6FX.002-2AH00-.....	7/16	6FX2001-7KS10.....	6/6
6FC5800-0AP22-0YB0.....	2/15, 2/29	6FX.002-2AH04-.....	7/16	6FX2002-1DC...	
6FC5800-0AP25-0YB0.....	2/15, 2/29	6FX.002-2CA31-.....	7/16	6FX2002-1DC00-.....	7/15
6FC5800-0AP28-0YB0.....	2/9, 2/29	6FX.002-2CA34-.....	7/16	6FX2002-1DC00-1.0.....	3/11, 3/19
6FC5800-0AP30-0YB0.....	2/25, 2/30	6FX.002-2CB54-.....	7/16	6FX2003-0S...	
6FC5800-0AP54-0YB0.....	2/14, 2/28	6FX.002-2CC11-.....	7/16	6FX2003-0SA12.....	6/6
6FC5800-0AP55-0YB0.....	2/25, 2/28	6FX.002-2CD24-.....	7/16	6FX2003-0SA17.....	4/57
6FC5800-0AP56-0YB0.....	2/14, 2/30	6FX.002-2CG00-.....	7/16	6FX2003-OSU07.....	4/47
6FC5800-0AP58-0YB0.....	2/14, 2/29	6FX.002-2CH00-.....	7/16	6FX2003-OSU12.....	6/6
6FC5800-0AP64-0YB0.....	2/10, 2/28	6FX.002-2CR00-.....	7/16	6FX2006-1BG...	
6FC5800-0AP67-0YB0.....	2/19, 2/30	6FX.002-2EQ10-.....	7/16	6FX2006-1BG03.....	2/20, 3/15
6FC5800-0AP75-0YB0.....	2/3, 2/30	6FX.002-2EQ14-.....	7/16	6FX2006-1BG20.....	2/20, 3/15
6FC5800-0AP76-0YB0.....	2/3, 2/28	6FX.002-5C...		6FX2006-1BG56.....	3/15
6FC5800-0AP77-0YB0.....	2/3, 2/30	6FX.002-5CE02-.....	7/12	6FX2006-1BG70.....	2/20, 3/15, 3/17
6FC5800-0AS...		6FX.002-5CE04-.....	7/12	6FX2007-1AD..	
6FC5800-0AS05-0YB0.....	2/14, 2/28	6FX.002-5CE06-.....	7/12	6FX2007-1AD03.....	2/20, 3/15
6FC5800-0AS06-0YB0.....	2/22, 2/28	6FX.002-5CF10-.....	7/11	6FX2007-1AD13.....	2/20, 3/15
6FC5800-0AS07-0YB0.....	2/7, 2/9, 2/30	6FX.002-5CF14-.....	7/11	6FX5002-2...	
6FC5800-0AS16-0YB0.....	2/7, 2/30	6FX.002-5CG10-.....	7/11	6FX5002-2CA12-.....	7/16
6FC5800-0AS17-0YB0.....	2/9, 2/30	6FX.002-5CG12-.....	7/11	6FX5002-2DC10-.....	7/15
6FC5800-0AS35-0YB0.....	2/14, 2/22, 2/29	6FX.002-5CG22-.....	7/11	6FX8002-...	
6FC5800-0AS50-0YB0.....	2/8, 2/27	6FX.002-5CG32-.....	7/11	6FX8002-2CA80-.....	7/16
6FC5800-0AS51-0YB0.....	2/7, 2/27	6FX.002-5CN01-.....	7/11	6FX8002-2DC10-.....	7/15
6FC5800-0AS52-0YB0.....	2/7, 2/28	6FX.002-5CN11-.....	7/11	6FX8002-5CP10-.....	7/12
6FC5800-0AS53-0YB0.....	2/10, 2/28	6FX.002-5CN21-.....	7/11	6FX8002-5CP11-.....	7/12
6FC5800-0AS54-0YB0.....	2/8, 2/27	6FX.002-5CN31-.....	7/11	6FX8002-5CR10-.....	7/12
6FC5830-0CY40-...		6FX8002-1BB...		6FX8002-5CR11-.....	7/12
6FC5830-0CY40-0YA8.....	3/5, 3/11	6FX8002-1BB21-.....	7/12	6FX8008-1BB...	
6FC5833-GY40-...		6FX8008-1BB31-.....	7/12	6FX8008-1BB41-.....	7/12
6FC5833-1GY40-4YA0.....	2/2, 3/11				
6FC5833-2GY40-4YA0.....	2/2, 3/11				