



| APPLICATION | | REVISIONS | | | |
|-------------|---------|-----------|-----------------------------------|---------|-----------------|
| NEXT ASSY | USED ON | REV | DESCRIPTION | DATE | APPROVED |
| | | A | PRODUCTION RELEASE/SEE E.O. 38802 | 2-24-05 | <i>P. G. G.</i> |

MANUAL

- SHEET 0 - THIS SHEET
- SHEET 1 - FEATURES
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| | | | | | | | | | | | | | | | | | | |
|----------------------|-------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
| REV STATUS OF SHEETS | REV | A | A | A | A | A | A | A | A | A | | | | | | | | |
| | SHEET | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE : FRACTIONS DECIMALS ANGLES ± XX± ± XXX± DO NOT SCALE DRAWING | CONTRACT NO. | |  INDUSTRIAL ELECTRONIC ENGINEERS, INC. VAN NUYS, CALIFORNIA |
| | APPROVALS | DATE | |
| TREATMENT | DRAWN | D. MCCOY | 02-21-05 |
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| | SIZE | CAGE CODE | DWG NO. |
| | A | 05464 | PDK-UP03-INOPML |
| | SCALE - | PROJ NO. 468 | SHEET 0 OF 9 |





DISPLAYS
KEYBOARDS
INTEGRATED PANELS

INDUSTRIAL ELECTRONIC ENGINEERS, INC. 7740 Lemona Ave., Van Nuys, CA 91409-9234, U.S.A. • Tel 818-787-0311

PDK-UP03-XXX0XX* VF POS Pole Display Kit

INSTALLATION and OPERATING INSTRUCTIONS

Key Features:

- Vacuum Fluorescent (VF) display - 2 line x 20 character 9mm 5x7 dot matrix - with contrast enhancing filter, USB 1.1 interface, plugs in direct to USB port through IEE cable 90068-60.
- IEE's extensive command and control set.
- Eight selectable character fonts, block cursor, dimming control and selective blinking.
- Display module housed in a compact, impact resistant enclosure with four-position tilt-recline and 330° swivel adjustment. Pole and mounting base kit are included.
- Display certified to the requirements of UL, CE, and FCC Part 15, Class A.

(* Refer to Page 9 for exact configuration of your kit).

Table of Contents:

Page 2 provides General Specifications and an introduction to the Assembly and Installation of the pole display.

Page 3 provides an exploded view of your pole display assembly with part numbers, so you can identify and verify that you have all the parts ordered

Pages 4 and 5 provide instructions for assembling the display and attaching it using one of many mounting configurations.

Pages 6, 7 and 8 provide information on how to operate the display including provisions for self-test, software commands, character fonts and User Defined Character (UDC) loading.

Page 9 provides the kit numbering scheme that defines the exact contents as referenced by the number on the lid of the shipping box. **PDK-UP03-XXX** defines the characteristics of the display head (i.e. display type, software functionality, pole position, housing color and filter color) and cannot be revised.

PRODUCT SUPPORT

For information not found in these Instructions, please contact IEE's Sales Application Engineering Department:

Industrial Electronic Engineers, Inc.
7740 Lemona Avenue
Van Nuys, California 91409-9234 USA

Phone: (800) 422-0867 or (818) 787-0311
Fax: (818) 901-9046
E-mail: mail@ieeinc.com

PDK-UP03-INOPML
February 10, 2005

GENERAL SPECIFICATIONS

Interface:

| | | | |
|-------------------|------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| • Power: | Supply voltage Supply current @ 5 Vdc | 5.0 Vdc \pm 5% from USB Port 500 ma (max) | • Pin Assignments: (Host) USB |
| • Caution: | Start cycle | The display is not ready to accept data until 1.2 seconds after application of power | USB +5V 1 USB +5V USB- 2 USB- USB+ 3 USB+ GND 4 GND |
| • Signal: | USB 1.0 or 1.1 Input Levels | 12 MB Max 0 to +5V | |

Environmental:

- **Operating Temperature:** 0 to +70 °C (+32 to +158 °F)
- **Storage Temperature:** -20 to +70 °C (-4 to +158 °F)
- **Relative Humidity:** 0 to 95% (non-condensing)

ASSEMBLY and INSTALLATION

Overview

To achieve the greatest mounting and cabling flexibility available in a POS pole display system. This kit provides a USB cable with Type-A and Type-B connectors. Type-B is secured by using the tie in the display module. Type-A is routed through the pole from the bottom to the Host USB Port. This allows easy connect and disconnect of the display module.

Pages 3, 4 and 5 provide information on the assembly and installation/attachment of the pole display. Details are provided for attaching the pole to a variety of bases, kits, surfaces and organizers.

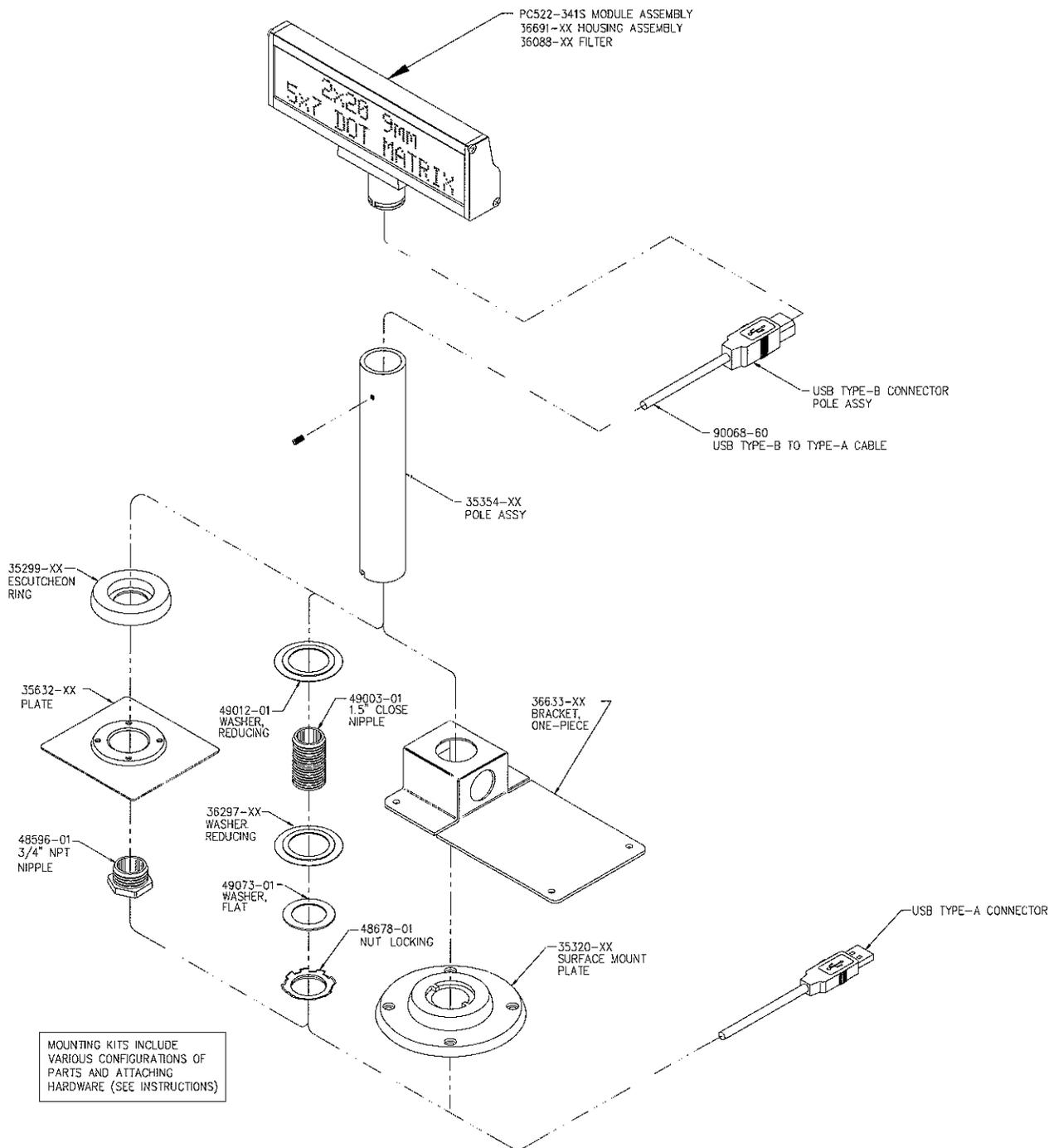
Installation Instructions:

Perform these electrical installation steps after, or as a part of the attachment instructions appropriate for the specific mechanical installation:

1. With system power on, connect the USB Type-A connector to the appropriate port on the host system.
2. Your Windows program will detect new hardware and search for a driver.
3. Insert the supplied diskette into your machine and click the "Have Disk" button. (or you can download the drivers from the IEE website).
4. After the driver loads, a blinking cursor should appear in the left-most position on the top line. The POS display is now ready for operation using the commands and codes provided on pages 6, 7 and 8.

EXPLODED ASSEMBLY VIEW and PARTS REFERENCE

PDK-UP03-XXX0XX
 POS POLE DISPLAY DISTRIBUTOR KIT
 TYPE 3C POD USBA INTERFACE



ASSEMBLY INSTRUCTIONS

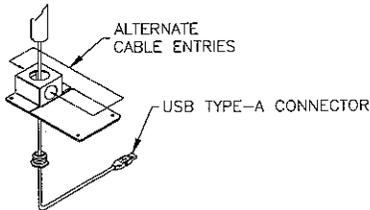
Mounting kits:

- **35360-0X SURFACE MOUNTING KIT (standard)**
 - (1) 35320-XX SURFACE MOUNT PLATE
 - (1) 48596-01 CONDUIT NIPPLE
- **35697-0X BASE KIT, HEAVY METAL**
 - (1) 35632-XX PLATE, MULTI-PURPOSE
 - (1) 35299-XX ESCUTCHEON RING
 - (1) 48596-01 CONDUIT NIPPLE
- **36231-0X ICD POLE KIT**
 - (1) 36297-XX WASHER, REDUCING
 - (1) 49003-01 CLOSE NIPPLE
 - (1) 49012-01 WASHER, REDUCING
 - (1) 48678-01 LOCKNUT
- **36634-0X MOUNTING KIT, SHEET METAL BASE**
 - (1) 36633-XX BASE, SHEET METAL
 - (1) 48596-01 CONDUIT NIPPLE
 - (4) 48765-10 #8-18 PAN HEAD SCREW , THD FORMING
- **36631-99 APG BRACKET KIT**
 - (1) 36630-99 BRACKET, POLE
 - (1) 48596-01 CONDUIT NIPPLE
 - (2) 48989-02 #8-32 PAN HD. SCREW LOCKWASHER
 - (2) 43311-04 #8-32 NUT, HEX
- **36632-0X MS CASH KIT**
 - (1) 36297-XX WASHER, REDUCING
 - (1) 49073-01 WASHER, FLAT
 - (1) 48596-01 CONDUIT NIPPLE

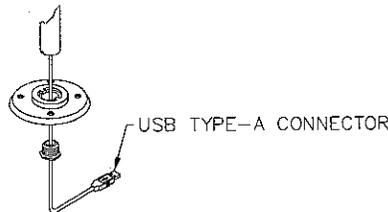
Surface Mount and Freestanding Configurations:

Mounting Kit, Sheet Metal

Thread the TYPE-A connector through a hole in the mounting surface or one of the two side openings in the bracket and then through the conduit nipple. Thread the connector through the bracket top hole and into the threaded end of the pole, continue to feed the cables in until the connector emerges from the pole, and pull out some slack. Holding the conduit nipple in place screw the pole down snugly onto the bracket. The sheet metal base can be freestanding, mounted with 48765-10 screws or slid under the cash register etc



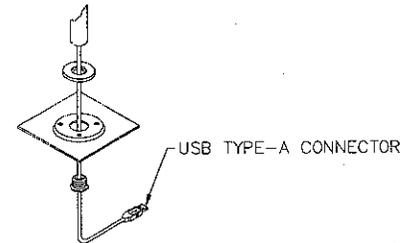
Surface Mount Plate



Thread the TYPE-A connector through a hole in the mounting surface and conduit nipple, or breakout one of the tabs in the surface mount plate (use wide, square jaw pliers) and route the cable through the conduit nipple. Thread the cable through the surface mount plate and pole. Holding the pole in the plate, tighten the conduit nipple into the pole. Attach the mounting plate to the surface, being careful to route the cables through the breakout tab if applicable

Base Kit, Heavy Metal

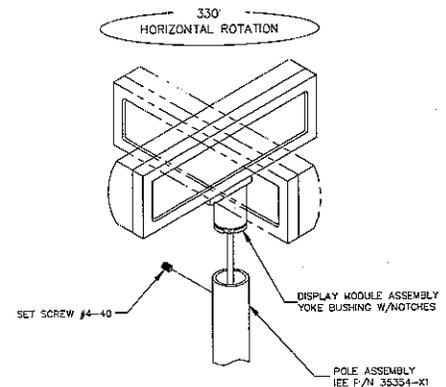
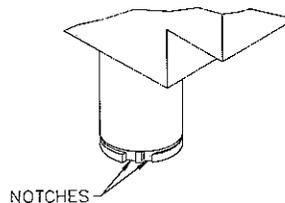
Thread the TYPE-A connector through a hole in the mounting surface and conduit nipple or just through the conduit nipple. Thread the cable through the base, escutcheon ring and pole. Pull some cable slack through, push the nipple into the recess in the base, put the pole in place in the escutcheon ring and tighten it onto the nipple threads until snug



Display Module and Pole Assembly:

The display module is attached to the pole assembly by mating the TYPE-B connectors, inserting the display yoke into the pole at the end closest to the set screw, and then rotating the display.

1. Push the cable slack back into the pole.
2. Insert the display module partially into the pole and align the set screw with one of the two notches on the yoke bushing.
3. Push the yoke bushing completely into the pole, then rotate the module on the pole as desired.



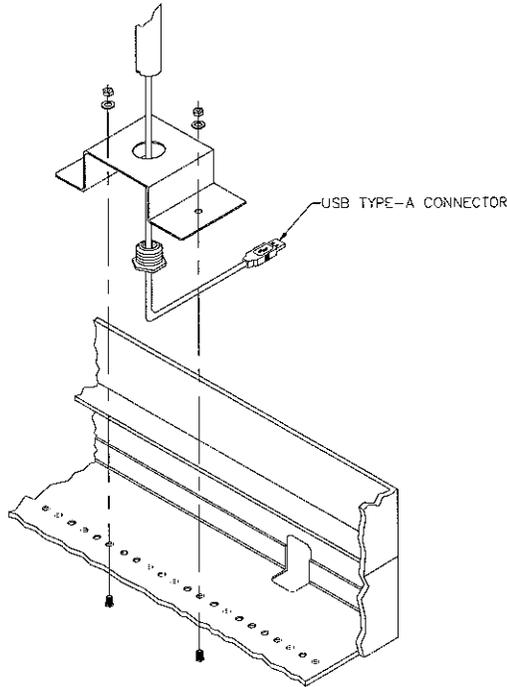
TO REMOVE THE MODULE:

Rotate the module in either direction until the set screw touches the stop on the yoke, then pull the module straight out from the pole and the module can be disconnected by unplugging the Type-A connectors from the Host USB port.

CASH DRAWER MOUNTING CONFIGURATIONS

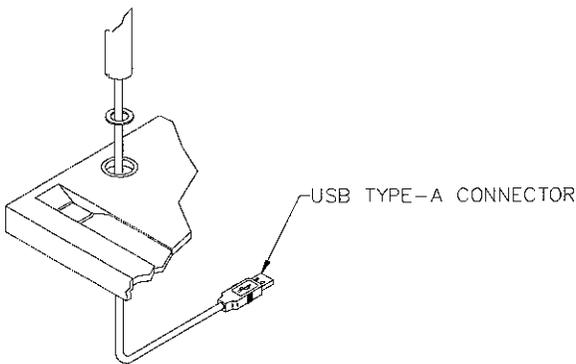
• APG CASH DRAWER

Thread the TYPE-A connector through the conduit nipple, bracket and pole, pulling out some slack. Hold the nipple in place and tighten the pole down onto the bracket. Mount the assembly (through the partner) in the selected position along the row of mounting holes at the rear of the drawer using the hardware as shown.



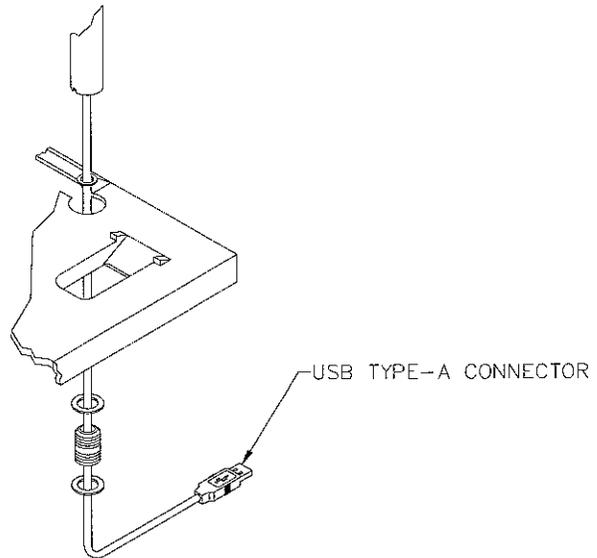
• MMF CASH DRAWER

Loosen the U-clamp nuts on the pole mounting bracket in the POS platform system. Thread the TYPE-A connector through the POS platform, eccentric washer and pole. Seat the pole in the bracket to full depth and tighten the U-clamp nuts to secure the assembly in place.



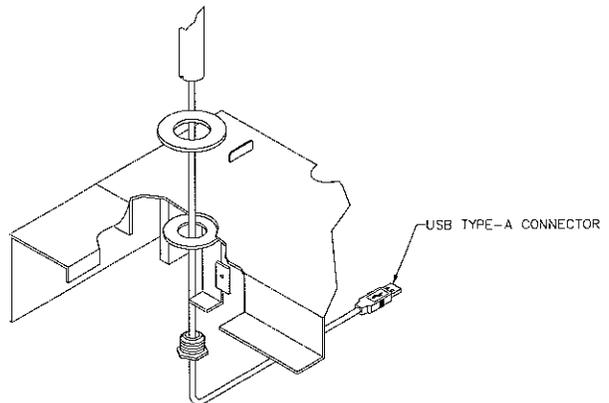
• INDIANA CASH DRAWER

Remove the mounting bracket on the underside of the shoe. Tighten the close nipple into the pole. Thread the TYPE-A connector through the locknut, metal washer, shoe, painted washer and pole. Put the pole on the painted washer and tighten it in place with the locknut.



• MS CASH DRAWER

Remove the clamp assembly from the mounting bracket on the underside of the POS deck. Thread the TYPE-A connector through conduit nipple, small washer, POS deck, painted washer and pole, pulling out some slack. Slide the small washer under the edges of the spotwelded bracket at the underside surface of the POS deck. Hold the nipple in place through the washer and tighten the pole onto the nipple, over the painted washer, to secure the pole in place.



CHARACTER FONTS

The ASCII CHARACTER SET is located in standard ASCII locations from 20 (HEX) to 7F (HEX).

The alternate character set is loaded into ASCII locations from 80 (HEX) to F7 (HEX).

ASCII CHARACTER SET - always available from non-volatile memory.

EUROPEAN CHARACTER SET (Default setting) - loaded into RAM* at Power-up or Reset, can be re-loaded with command sequence 1B-74-01 (HEX).

KATAKANA CHARACTER SET - can be loaded into RAM* with command sequence 1B-74-02 (HEX).

CYRILLIC CHARACTER SET - can be loaded into RAM* with command sequence 1B-74-03 (HEX).

HEBREW CHARACTER SET - can be loaded into RAM* with command sequence 1B-74-04 (HEX).

ISO 8859-1 CHARACTER SET - can be loaded into RAM* with command sequence 1B-74-05 (HEX).

ISO 8859-2 CHARACTER SET - can be loaded into RAM* with command sequence 1B-74-06 (HEX).

GREEK CHARACTER SET - can be loaded into RAM* with command sequence 1B-74-07 (HEX).

* Pre-designated alterable character set location.

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| N/A |
| 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |
| N/A |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 1A | 1B | 1C | 1D | 1E | 1F |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 2A | 2B | 2C | 2D | 2E | 2F |
| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 3A | 3B | 3C | 3D | 3E | 3F |
| 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 4A | 4B | 4C | 4D | 4E | 4F |
| 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 5A | 5B | 5C | 5D | 5E | 5F |
| 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 6A | 6B | 6C | 6D | 6E | 6F |
| 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 7A | 7B | 7C | 7D | 7E | 7F |

STANDARD ASCII CHARACTER SET

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 9A | 9B | 9C | 9D | 9E | 9F |
| AO | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | AA | AB | AC | AD | AE | AF |
| BO | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | BA | BB | BC | BD | BE | BF |
| CO | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | CA | CB | CC | CD | CE | CF |
| DO | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | DA | DB | DC | DD | DE | DF | |
| EO | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | EA | EB | EC | ED | EE | EF |
| FO | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | FA | FB | FC | FD | FE | FF | |

GENERAL EUROPEAN CHARACTER SET
(Default Setting)

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 9A | 9B | 9C | 9D | 9E | 9F |
| AO | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | AA | AB | AC | AD | AE | AF |
| BO | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | BA | BB | BC | BD | BE | BF |
| CO | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | CA | CB | CC | CD | CE | CF |
| DO | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | DA | DB | DC | DD | DE | DF | |
| EO | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | EA | EB | EC | ED | EE | EF |
| FO | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | FA | FB | FC | FD | FE | FF | |

KATAKANA CHARACTER SET

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 8A | 8B | 8C | 8D | 8E | 8F |
| 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 9A | 9B | 9C | 9D | 9E | 9F |
| AO | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | AA | AB | AC | AD | AE | AF |
| BO | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | BA | BB | BC | BD | BE | BF |
| CO | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | CA | CB | CC | CD | CE | CF |
| DO | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | DA | DB | DC | DD | DE | DF | |
| EO | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | EA | EB | EC | ED | EE | EF |
| FO | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | FA | FB | FC | FD | FE | FF | |

CYRILLIC CHARACTER SET

KIT NUMBERING SCHEME

PDK-[UP03]- X₁ X₂ X₃ 0₄ X₅ X₆

POLE POSITION

- 0 = CENTER/NO OPTION
- C = CENTER
- L = LEFT SIDE
- R = RIGHT SIDE

HOUSING COLOR

- W = WHITE (IEE IVORY GRAY)
- B = JET BLACK

FILTER COLOR

- A = AMBER
- B = BLUE
- G = GREEN
- N = NEUTRAL GRAY
(DISPLAY APPEARS AQUA)

POLE LENGTH

- 0 = NOT PROVIDED
- B = MINIMUM LENGTH (2 IN.)
- S = SHORT (6 IN.)
- D = MEDIUM SHORT (10 IN.)
- M = MEDIUM (12 IN.)
- L = LONG (18 IN.)
- X = EXTRA LONG (22 IN.)

MOUNTING KIT

- 0 = NOT SUPPLIED
- 1 = MNTG KIT, UNIVERSAL
- 2 = MNTG KIT, HARD
- 3 = MNTG KIT, SHEET METAL
- 4 = BASE KIT, PASS THRU
- 5 = BASE KIT, HEAVY METAL
- 6 = SURFACE MOUNT KIT
- A = MNTG KIT, APG BRACKET
- I = MNTG KIT, ICD POLE
- C = MNTG KIT, MS CASH

POWER SUPPLY

- 0 = NOT SUPPLIED

NOTE: THE SUB-SET PDK -[UP03] -X₁X₂X₃ DEFINES THE DISPLAY ASSEMBLY IN THIS PDK KIT.