# Electronic Components Industry Association Guideline 

# EDI Transaction Set 850 Purchase Order 

## X12 Version 4010

February 2012

ECIA's EDI Committee has reviewed this transaction set and made modifications that will benefit the electronics industry by simplifying the transaction focusing on industry specific needs.

## 850 Purchase Order

## Functional Group ID=PO

## Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Purchase Order Transaction Set (850) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for customary and established business and industry practice relative to the placement of purchase orders for goods and services. This transaction set should not be used to convey purchase order changes or purchase order acknowledgment information.

## Heading:

| Page <br> No. | Pos. <br> No. | Seg. <br> ID | Name | Base Status | User Status | Max.Use | Loop Repeat | Notes and Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 010 | ST | Transaction Set Header | M | M | 1 |  |  |
| 4 | 020 | BEG | Beginning Segment for Purchase Order | M | M | 1 |  |  |
| 5 | 040 | CUR | Currency | O |  | 1 |  |  |
| 6 | 070 | TAX | Tax Reference | O | Rec | >1 |  |  |
|  |  |  | LOOP ID - N1 |  |  |  | 200 |  |
| 7 | 310 | N1 | Name | O | Must Use | 1 |  |  |
| 8 | 320 | N2 | Additional Name Information | O |  | 2 |  |  |
| 9 | 330 | N3 | Address Information | O |  | 2 |  |  |
| 10 | 340 | N4 | Geographic Location | O |  | >1 |  |  |
| 11 | 350 | REF | Reference Identification | O |  | 12 |  |  |
| 12 | 360 | PER | Administrative Communications Contact | O |  | 1 |  |  |
| 13 | 370 | FOB | F.O.B. Related Instructions | O |  | 1 |  |  |
| 14 | 390 | TD5 | Carrier Details (Routing Sequence/Transit Time) | O | Rec | 12 |  |  |

## Detail:

| Page <br> No. | Pos. <br> No. | Seg. <br> ID | Name | Base Status | User Status | Max.Use | Loop Repeat | Notes and Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LOOP ID - PO1 |  |  |  | 100000 |  |
| 15 | 010 | PO1 | Baseline Item Data | M | M | 1 |  | n1 |
| 17 | 100 | REF | Reference Identification | O |  | >1 |  |  |
|  |  |  | LOOP ID - SCH |  |  |  | 200 |  |
| 18 | 295 | SCH | Line Item Schedule | O | Must Use | 1 |  | n2 |

## Summary:

| Page <br> No. | Pos. <br> No. | Seg. <br> ID | Name | Base Status | User Status | Max.Use | Loop Repeat | Notes and Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | LOOP ID - CTT |  |  |  | 1 |  |
| 19 | 010 | CTT | Transaction Totals | O | Must Use | 1 |  | n3 |
| 20 | 030 | SE | Transaction Set Trailer | M | M | 1 |  |  |


$21 \quad$| APPENDIX - Sample 850 |
| :--- |
| Transaction |

## Transaction Set Notes

1. PO102 is required.
2. The SCH segment is used to specify various quantities of items ordered that are to be scheduled. When this segment is used the unit of measurement code ( SCH 02 ) should always be identical to the unit of measurement code in the associated PO1 segment (PO103) and the sum of values of quantity ( SCH 01 ) should always equal the quantity ordered (PO102) in the PO1 segment.
3. The number of line items (CTT01) is the accumulation of the number of PO1 segments. If used, hash total (CTT02) is the sum of the value of quantities ordered (PO102) for each PO1 segment.

|  | Segment: | ST Transaction Set Header |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Position: | 010 |  |  |
|  | Loop: |  |  |  |
|  | Level: | Heading |  |  |
|  | Usage: | Mandatory |  |  |
|  | Max Use: | 1 |  |  |
|  | Purpose: | To indicate the start of a transaction set and to assign a control number |  |  |
| Syntax Notes: |  |  |  |  |
|  |  | 1 The transaction set identifier (ST01) is interchange partners to select the appro selects the Invoice Transaction Set). | saction set def | $\text { ion (e.g., } 810$ |
| Comments: |  |  |  |  |
| Data Element Summary |  |  |  |  |
| Ref. | Data |  | Base <br> Attributes | User |
| Des. | Element | Name |  | Attributes |
| ST01 | 143 | Transaction Set Identifier Code $\begin{array}{lll} \hline \text { M } \quad \text { ID 3/3 } & \bar{M} \end{array}$ <br> Code uniquely identifying a Transaction Set |  |  |
|  |  |  |  |  |  |
|  |  | 850 Purchase Order |  |  |
| ST02 | 329 | Transaction Set Control Number | M AN 4/9 | M |
|  |  | Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set |  |  |
|  |  | Sequence number assigned by sender |  |  |

```
Segment: BEG Beginning Segment for Purchase Order
Position:
020
                    Loop:
                            Level:
                            Usage:
Max Use:
Purpose: To indicate the beginning of the Purchase Order Transaction Set and transmit identifying
numbers and dates
Syntax Notes:
Semantic Notes:
Comments:
Notes:
1 BEG05 is the date assigned by the purchaser to purchase order.
BEG05 is the date assigned by the purchaser to purchase order.
```



Segment:
Position:
Loop:
Level:
Usage:
Max Use:
Purpose: Syntax Notes:

## CUR currency

040
Heading
Optional
1
To specify the currency (dollars, pounds, francs, etc.) used in a transaction
1 If CUR08 is present, then CUR07 is required.
2 If CUR09 is present, then CUR07 is required.
3 If CUR11 is present, then CUR10 is required.
4 If CUR12 is present, then CUR10 is required.
5 If CUR14 is present, then CUR13 is required.
6 If CUR15 is present, then CUR13 is required.
7 If CUR17 is present, then CUR16 is required.
8 If CUR18 is present, then CUR16 is required.
9 If CUR20 is present, then CUR19 is required.
10 If CUR21 is present, then CUR19 is required.
11 If CUR10 is present, then at least one of CUR11 or CUR12 is required.
12 If CUR13 is present, then at least one of CUR14 or CUR15 is required.
13 If CUR16 is present, then at least one of CUR17 or CUR18 is required.
14 If CUR19 is present, then at least one of CUR20 or CUR21 is required.

## Data Element Summary

Ref. Data
Des. Element Name

Code (Standard ISO) for country in whose currency the charges are specified

| Segment: <br> Position: <br> Loop: <br> Level: | Heading |
| ---: | :--- |
| Usage: | Optional (Recommended) |
| Max Use: | $>1$ |
| Purpose: | To provide data required for proper notification/determination of applicable taxes |
| applying to the transaction or business described in the transaction |  |

## Data Element Summary

| Ref. | Data |  | Base | User |
| :---: | :---: | :---: | :---: | :---: |
| Des. | Element | Name | Attributes | Attributes |
| TAX01 | 325 | Tax Identification Number | X AN 1/20 | Rec |

Number assigned to a purchaser (buyer, orderer) by a taxing jurisdiction (state, county, etc.); often called a tax exemption number or certificate number
Tax Resale Number.
TAX12 01 or 02 Exempt (01) - Non Exempt (02)


| Segment: N2 Additional Name Information |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Position: | 320 |  |  |
|  | Loop: | N1 Optional (Must Use) |  |  |
|  | Level: | Heading |  |  |
|  | Usage: | Optional |  |  |
|  | Max Use: | 2 |  |  |
|  | Purpose: | To specify additional names or those longer than 35 characters in length |  |  |
|  | tax Notes: |  |  |  |
| Semantic Notes: |  |  |  |  |
| Comments: |  |  |  |  |
|  | Notes: | This segment is only provided when the order is a supplier dropship order |  |  |
| Data Element Summary |  |  |  |  |
| Ref. | Data |  | Base | User |
| Des. | Element | Name | Attributes | Attributes |
| N201 | 93 | Name | M AN 1/60 | M |
| Free-form name |  |  |  |  |
| N202 | 93 | Name O AN 1/60 |  |  |
| Free-form name |  |  |  |  |


| Segment: N3 Address Information |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Position: | 330 |  |  |
|  | Loop: | N1 Optional (Must Use) |  |  |
|  | Level: | Heading |  |  |
|  | Usage: | Optional |  |  |
|  | Max Use: | 2 |  |  |
|  | Purpose: | To specify the location of the named party |  |  |
| Syntax Notes: |  |  |  |  |
| Semantic Notes: |  |  |  |  |
| Comments: |  |  |  |  |
|  | Notes: | This segment is only provided when the order is a supplier dropship order |  |  |
| Data Element Summary |  |  |  |  |
| Ref. | Data |  | Base | User |
| $\underline{\text { Des. }}$ | $\frac{\text { Element }}{166}$ | Address Information | $\frac{\text { Attridutes }}{\mathbf{M} \quad \text { AN 1/55 }}$ | $\frac{\text { Attributes }}{M}$ |
| Address information |  |  |  |  |
| N302 | 166 | Address Information O AN 1/55 |  |  |
| Address information |  |  |  |  |



| Segment: REF Reference Identification |  |  |  |
| :---: | :---: | :---: | :---: |
| Position: 350 |  |  |  |
| Loop: | N1 Optional (Must Use) |  |  |
| Level: | Heading |  |  |
| Usage: | Optional |  |  |
| Max Use: | 12 |  |  |
| Purpose: | To specify identifying information |  |  |
| Syntax Notes: | 1 At least one of REF02 or REF03 is required. |  |  |
|  | 2 If either C04003 or C04004 is present, then the other is required |  |  |
|  | 3 If either C04005 or C04006 is present, then the other is require |  |  |
| Semantic Notes: Comments: <br> Notes: | 1 REF04 contains data relating to the value cited in REF02. |  |  |
|  | This segment provided when Price Quote number or Customer Order number applies for/to the order. |  |  |
| Data Element Summary |  |  |  |
| Ref. Data | Name | Base <br> Attributes | User <br> Attributes |
| REF01 128 | Reference Identification Qualifier | M ID 2/3 | M |
| Code qualifying the Reference Identification |  |  |  |
|  | PR Price Quote Number |  |  |
| REF02 127 | Reference Identification $\quad$ X AN 1/30 |  |  |
|  | Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier |  |  |

Note: Other codes may be used in REF01 (element 128) besides that listed above. But, the codes must be mutually agreed upon before they are used.


| Segment: | $\mathbf{F O B}$ F.O.B. Related Instructions |
| ---: | :--- |
| Position: | 370 |
| Loop: | N1 Optional |
| Level: | Heading |
| Usage: | Optional |
| Max Use: | 1 |
| Purpose: | To specify transportation instructions relating to shipment |
| Syntax Notes: | $\mathbf{1}$ If FOB03 is present, then FOB02 is required. |
|  | $\mathbf{2}$ If FOB04 is present, then FOB05 is required. |
|  | $\mathbf{3}$ If FOB07 is present, then FOB06 is required. |
| Semantic Notes: | $\mathbf{4}$ If FOB08 is present, then FOB09 is required. |
|  | $\mathbf{2}$ FOB01 indicates which party will pay the carrier. |
|  | $\mathbf{3}$ FOB02 is the code specifying transportation responsibility location. |
|  | $\mathbf{4}$ FOB08 is the code specifying the title passage location. |
|  |  |
| Comments: | be different than the location specified in FOB02/FOB03 and FOB06/FOB07. |
| Usage Notes: | This segment may be used or omitted |

## Data Element Summary

| Ref. <br> Des. | Data <br> Element | Name | Base <br> FOB01 | $\mathbf{1 4 6}$ | Shipment Method of Payment <br> Code identifying payment terms for transportation charges |
| :--- | :---: | :--- | :--- | :--- | :--- |
| FOB02 |  |  |  |  |  |


|  | Code specifying where responsibility for risk of loss passes |
| :--- | :--- |
| FOB09 352 | Not used <br> Description <br> A free-form description to clarify the related data elements and their content <br> Not used |


| Segment: | TDS Carrier Details (Routing Sequence/Transit Time) |
| ---: | :--- |
| Position: | 390 |
| Loop: | N1 Optional (Must Use) |
| Level: | Heading |
| Usage: | Optional (Recommended) |
| Max Use: | 12 |
| Purpose: | To specify the carrier and sequence of routing and provide transit time information |
| Syntax Notes: | $\mathbf{1}$ At least one of TD502 TD504 TD505 TD506 or TD512 is required. |
|  | $\mathbf{2}$ If TD502 is present, then TD503 is required. |
|  | $\mathbf{3}$ If TD507 is present, then TD508 is required. |
|  | $\mathbf{4}$ If TD510 is present, then TD511 is required. |
|  | $\mathbf{5}$ If TD513 is present, then TD512 is required. |
|  | $\mathbf{6}$ If TD514 is present, then TD513 is required. |
| Semantic Notes: | $\mathbf{7}$ If TD515 is present, then TD512 is required. |
| TD515 is the country where the service is to be performed. |  |
| Comments: | $\mathbf{1}$ When specifying a routing sequence to be used for the shipment movement in lieu of |
|  |  |
|  | specifying each carrier within the movement, use TD502 to identify the party |
|  | responsible for defining the routing sequence, and use TD503 to identify the actual |
|  | routing sequence, specified by the party identified in TD502. |

## Data Element Summary

| Ref. <br> Des. | Data <br> Element | NameBase <br> Attributes | User Attributes |
| :---: | :---: | :---: | :---: |
| TD501 | 133 | Routing Sequence Code O ID 1/2 |  |
|  |  | Code describing the relationship of a carrier to a specific shipment move |  |
|  |  | O Origin Carrier (Air, Motor, or Ocean) |  |
| TD502 | 66 | Identification Code Qualifier $\quad$ X ID 1/2 |  |
|  |  | Code designating the system/method of code structure used for Identifi | n Code (67) |
|  |  | 2 Standard Carrier Abbreviation Code (SCAC) <br> 92 Assigned by Buyer or Buyer's Agent |  |
| TD503 | 67 | Identification Code $\quad X \quad$ AN 2/80 |  |
|  |  | Code identifying a party or other code |  |
|  |  | Carrier Code |  |
| TD504 | 91 | Air Identification |  |
|  |  | Code specifying the method or type of transportation for the shipment |  |
|  |  | A Air Code |  |

```
            Segment:
            PO1 Baseline tlem Data
            Position:
            010
            PO1 Mandatory
            L
        Level:
        Usage:
    Max Use:
            Purpose:
Syntax Notes:
    Detail
                                Mandatory
                1
                To specify basic and most frequently used line item data
1 If PO103 is present, then PO102 is required.
2 \text { If PO105 is present, then PO104 is required.}
3 \text { If either PO106 or PO107 is present, then the other is required.}
4 \text { If either PO108 or PO109 is present, then the other is required.}
5 \text { If either PO110 or PO111 is present, then the other is required.}
6 \text { If either PO112 or PO113 is present, then the other is required.}
7 \text { If either PO114 or PO115 is present, then the other is required.}
8 \text { If either PO116 or PO117 is present, then the other is required.}
9 \text { If either PO118 or PO119 is present, then the other is required.}
10 If either PO120 or PO121 is present, then the other is required.
11 If either PO122 or PO123 is present, then the other is required
12 If either PO124 or PO125 is present, then the other is required.
```


## Semantic Notes:

```
    Comments:
    1 See the Data Element Dictionary for a complete list of IDs.
    2 PO101 is the line item identification.
    3 PO106 through PO125 provides for ten different product/service IDs per each item.
        For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.
```


## Data Element Summary





Note: Other codes may be used in REF01 (element 128) besides those listed above. But, the codes must be mutually agreed upon before they are used.

| Segment: | SCH Line Item Schedule |
| ---: | :--- |
| Position: | 295 |
| Loop: | SCH Optional (Must Use) |
| Level: | Detail |
| Usage: | Optional (Must Use) |
| Max Use: | 1 |
| Purpose: | To specify the data for scheduling a specific line-item |
| Syntax Notes: | $\mathbf{1}$ If SCH03 is present, then SCH04 is required. |
|  | $\mathbf{2}$ If SCH08 is present, then at least one of SCH09 or SCH10 is required. |
|  | $\mathbf{3}$ If SCH09 is present, then SCH08 is required. |
| 4 If SCH10 is present, then SCH08 is required. |  |
| Semantic Notes: | $\mathbf{1}$ SCH12 is the schedule identification. |
| Comments: | $\mathbf{1}$ SCH05 specifies the interpretation to be used for SCH06 and SCH07. |
| Usage Notes: | Required |

## Data Element Summary

| Ref. <br> Des. | Data <br> Element | Name | Base Attributes | User Attributes |
| :---: | :---: | :---: | :---: | :---: |
| S $\overline{\mathrm{CH}} 1$ | 380 | Quantity | M R 1/15 | M |
|  |  | Numeric value of quantity |  |  |
| SCH02 | 355 | Unit or Basis for Measurement Code | M ID 2/2 | M |
|  |  | Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken |  |  |
|  |  | EA Each |  |  |
|  |  | IN Inch |  |  |
|  |  | FT Foot |  |  |
|  |  | CM Centimete |  |  |
|  |  | MR Meter |  |  |
| SCH05 | 374 | Date/Time Qualifier | M ID 3/3 | M |
|  |  | Code specifying type of date or time, or both date and time |  |  |
|  |  | 002 Delivery Requested <br> 010 Requested Ship <br> 037 Ship Not Before |  |  |
| SCH06 | 373 | Date | M DT 8/8 | M |
|  |  | Date expressed as CCYYMMDD |  |  |

Segment: CTT Transaction Totals

```Position:010
```

Loop: CTT Optional (Must Use) ,
Level:

```Summary
Optional (Must Use)
            Usage:
Max Use:
            Purpose:
Syntax Notes: }1\mathrm{ If either CTT03 or CTT04 is present, then the other is required.
To transmit a hash total for a specific element in the transaction set
2 If either CTT05 or CTT06 is present, then the other is required.
```


## Semantic Notes:

```
Comments:
1 This segment is intended to provide hash totals to validate transaction completeness and correctness.
Usage Notes: Required
```


## Data Element Summary

| Ref. <br> Des. | Data <br> Element |
| :---: | :---: |
| CTT01 | 354 |


| Name | Base <br> Attributes | User <br> Attributes |
| :--- | :--- | :--- |
| Number of Line Items | M N0 1/6 | M |

Total number of line items in the transaction set

## Total of PO1 segments.

## Hash Total

O R 1/10
Sum of values of the specified data element. All values in the data element will be summed without regard to decimal points (explicit or implicit) or signs. Truncation will occur on the left most digits if the sum is greater than the maximum size of the hash total of the data element. Example: -. 0018 First occurrence of value being hashed. . 18 Second occurrence of value being hashed. 1.8 Third occurrence of value being hashed. 18.01 Fourth occurrence of value being hashed. --------- 1855 Hash total prior to truncation. 855 Hash total after truncation to three-digit field.

## Sum of quantities in field PO102.

```
            Segment: NE Transaction Set Trailer
            Position:
                0 3 0
            Loop:
            Level:
                Summary
            Usage: Mandatory
            Max Use: 1
            Purpose: To indicate the end of the transaction set and provide the count of the transmitted
                                    segments (including the beginning (ST) and ending (SE) segments)
        Syntax Notes:
Semantic Notes:
                    Comments:
                            1 SE is the last segment of each transaction set.
```


## Data Element Summary

| Ref. <br> Des. | Data <br> Element | Base | User <br> Attributes | $\frac{\text { Attributes }}{\text { Name }}$ |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{S E 0 1}$ | $\mathbf{9 6}$ | Number of Included Segments | M | N0 1/10 |

SE02
Total number of segments included in a transaction set including ST and SE segments

Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set
The number provided here must match the transaction set control number (ST02) in the transaction set header segment.

## APPENDIX

## Sample 850 Transaction Set

ISA~00~ $\sim 00 \sim \sim \sim 01 \sim$ DISTY $\sim$ ZZ $\sim$ SUPPLIER $\sim 060717 \sim 1526 \sim U \sim 00401 \sim 000005398 \sim 0 \sim T \sim 1$
GS~PO~DISTY~ SUPPLIER ~20060717~1526~4891~X~004010
ST~850~48910001
BEG~00~DS~P7962206580~~20060717
N1~ST~ABC COMPANY
N2~PO \#2640
N3~304 MAPLE ST
N4~ANYTOWN~AZ~867530901~US
N1~BY~AVNET
N1~EN~ABC COMPANY
N2~ACCOUNTS PAYABLE
N3~304 MAPLE ST
N4~ANYTOWN~AZ~867530901~US
PER~IC~CASS~TE~5554111212
PER~IC~CASS~EM~N/A
TD5~O~92~UPG
PO1~1~2~EA~14.25~PE~VP~636121
SCH~2~EA~~~010~20060717
CTT~1~2
AMT~TT~28.5
SE~22~48910001
GE~1~4891
IEA~1~000005398

