

# Purchase Order

Transaction Set (850)

(Inbound to TI)

**ANSI X12 Version Format: 3020**

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## How To Use This Documentation

This document was created to aid in your implementation of the ANSI 3020 standard for purchase orders. This documentation contains those segments and elements required to successfully process your purchase order for Texas Instruments.

A complete description of the purchase order segments are outlined in the ANSI 3020 Standards Manual. If you require/need to send additional segments not listed in this documentation you must reach an agreement with Texas Instruments before sending those segments.

### Data Element Attributes

- M = Mandatory (must be transmitted)
- X = Conditional (presence of this field is dependent on the value or presence of other data elements within the segment)
- O = Optional (the appearance of the element is either at the option of the sending party or based on agreement between the trading partners)

### Data Element Types

- AN = Alphanumeric
- NN = Numeric
  - 1st N signifies numeric
  - 2nd N signifies the number of decimal places to the right of a fixed, implied decimal point (the decimal point is not transmitted for this data element type)
- R = Numeric Decimal (decimal point required to be transmitted when fractional values are present)
- ID = Field contains a code value (codes are contained within predetermined lists maintained by the standards committee and are found in the appendix of ANSI manuals)
- DT = Date formatted in YYMMDD, where
  - YY = Last 2 digits of the year (00-99)
  - MM= Numeric month (01-12)
  - DD = Numeric day (01-31)
- TM = Time formatted in HHMM, where
  - HH = Military hour (00-23)
  - MM= Minute (00-59)

### Data Element Length

- The number to the left of the "/" specifies the minimum length of the field as required by the standard.
- The number to the right of the "/" specifies the maximum length of the field as required by the standard.
- When the minimum and maximum lengths are the same, this signifies the field has a fixed length.
- The minimum and maximum lengths do not include the decimal point (when data element is R).

## Purchase Order Transaction Set (850) - Inbound

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The purchase order transaction set provides for customary and established business and industry practice relative to the placement of purchase orders for goods and services.

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SEG. ID	NAME	REQ.DES.	MAX USE	LOOP REPEAT
ISA	Interchange Control Header	M	1	
GS	Functional Group Header	M	1	
ST	Transaction Set Header	M	1	
BEG	Beginning Segment (Purchase Order)	M	1	
PER	Administrative Communications Contact	O	3	
TAX	Sales Tax Reference	O	3	
<b>LOOP ID - N9</b>				
N9	Reference Number	O	1	1,000
<b>LOOP ID - N1</b>				
N1	Name	O	1	200
TD5	Carrier Details	O	12	
<b>LOOP ID - PO1</b>				
PO1	Purchase Order Baseline Item Data	M	1	100,000
PO4	Item Physical Details	O	1	
SCH	Line Item Schedule	O	200	
CTT	Transaction Totals	M	1	
SE	Transaction Set Trailer	M	1	
GE	Functional Group Trailer	M	1	
IEA	Interchange Control Trailer	M	1	

## ISA - Interchange Control Header

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**Status:** Mandatory

**Purpose:** To start and identify an interchange of one or more functional groups and interchange related control segments.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
ISA01	I01	Authorization Information Qualifier	M	ID	2/2	00 - No Authorization Information Present 01 - UCS Communications ID
ISA02	I02	Authorization Information	M	AN	10/10	Supplied by TI if using direct dial service
ISA03	I03	Security Information Qualifier	M	ID	2/2	00 - No Security Information Present 01 - Password
ISA04	I04	Security Information	M	AN	10/10	Supplied by TI if using direct dial service
ISA05	I05	Interchange ID Qualifier	M	ID	2/2	TI accepts all; TI uses 01 - DUNS (Dun & Bradstreet)
ISA06	I06	Interchange Sender ID	M	ID	15/15	Defined by Sender
ISA07	I05	Interchange ID Qualifier	M	ID	2/2	TI accepts all; TI uses 01 - DUNS (Dun & Bradstreet)
ISA08	I07	Interchange Receiver ID	M	ID	15/15	Defined by Receiver
ISA09	I08	Interchange Date	M	DT	6/6	Current Date: YYMMDD
ISA10	I09	Interchange Time	M	TM	4/4	Current Time: HHMM
ISA11	I10	Interchange Standards ID	M	ID	1/1	U - American National Standards Committee X12
ISA12	I11	Interchange Version ID	M	ID	5/5	This version number covers X12 control segments only. Positions 1-3 = major version number; positions 4-5 = release level of the version.

## ISA - Interchange Control Header (continued)

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
ISA13	I12	Interchange Control Number	M	N0	9/9	This number is assigned by sender; together with sender ID, it uniquely identifies interchange data to receiver. It is suggested that sender, receiver, and all third parties be able to maintain an audit trail of interchanges using this number.
ISA14	I13	Acknowledgment Requested	M	ID	1/1	0 - No Acknowledgment Requested 1 - Interchange Acknowledgment Requested
ISA15	I14	Test Indicator	M	ID	1/1	T - Test Data P - Production Data
ISA16	I15	Sub Element Separator	M	AN	1/1	Defined by Sender

## GS - Functional Group Header

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**Status:** Mandatory

**Purpose:** To start and identify a functional group of related transaction sets and provide control and application identification information.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
GS01	479	Functional ID Code	M	ID	2/2	Code identifying a group of application related transaction sets
GS02	142	Application Sender's Code	M	ID	2/12	Defined by Sender
GS03	124	Application Receiver's Code	M	ID	2/12	Defined by Receiver
GS04	29	Data Interchange Date	M	DT	6/6	Date sender generated a functional group of transaction sets. Format: YYMMDD
GS05	30	Data Interchange Time	M	TM	4/4	Time expressed in 24-hour clock time when the sender generated a functional group of transaction sets (local time at sender's location). Format: HHMM
GS06	28	Data Interchange Control Number	M	N0	1/9	Sequentially assigned by sender
GS07	455	Responsible Agency Code	M	ID	1/2	X - Accredited Standards Committee X12
GS08	480	Version/Release/ Industry ID Code	M	ID	1/12	Code indicating the version, release, and industry ID of the EDI standard being used. Positions 1 - 3 = major version number; positions 4 - 6 = release number.

## ST - Transaction Set Header

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**Status:** Mandatory

**Purpose:** The first segment of each transaction set, containing the transaction set identifier and control numbers.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
ST01	143	Transaction Set ID Code	M	ID	3/3	850 - Purchase Order
ST02	329	Transaction Set Control Number	M	AN	4/9	The control number is assigned by the sender. It should be sequentially assigned within each functional group to aid in error recovery and research. The control number in the SE segment (SE02) must be identical to the control number in the ST segment for each transmission.

## **BEG - Beginning Segment (Purchase Order)**

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**Status:** Mandatory

**Purpose:** To indicate the beginning of the purchase order transaction set and transmit identifying number and dates.

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<b>Field #</b>	<b>Element</b>	<b>Field Name</b>	<b>Req.</b>	<b>Type</b>	<b>Size</b>	<b>TI Usage</b>
BEG01	353	Transaction Set Purpose Code	M	ID	2/2	00 - Original 06 - Confirmation
BEG02	92	Purchase Order Type Code	M	ID	2/2	SA - Stand-alone Order
BEG03	324	Purchase Order Number	M	AN	1/22	Purchase Order Number
BEG04	328	Release Number	O	AN	1/30	Not Used
BEG05	323	Purchase Order Date	M	DT	6/6	Purchase Order Date (YMMMDD)
BEG06	367	Contract Number	O	AN	1/30	Not Used
BEG07	587	Acknowledgment Type	O	ID	2/2	Not Used
BEG08	1019	Invoice Type Code	O	ID	3/3	Not Used

## PER - Administrative Communications Contact

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**Status:** Optional

**Purpose:** To identify a person or office to whom administrative communications should be directed.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
PER01	366	Contact Function Code	M	ID	2/2	BD - Buyer Name
PER02	93	Name	O	AN	1/35	Name
PER03	365	Communication Number Qualifier	X	ID	2/2	TE - Telephone
PER04	364	Communication Number	X	AN	7/25	Telephone Number

## TAX - Sales Tax Reference

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**Status:** Optional

**Purpose:** To provide data required for proper notification/determination of applicable sales and related taxes applying to the transaction.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
TAX01	325	Tax ID Number	X	AN	1/20	Tax ID Number

**NOTE:** TAX02 through TAX12 are not used.

## N9 - Reference Number

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**Status:** Optional

**Purpose:** To transmit identifying numbers and descriptive information as specified by the reference number qualifier.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
N901	128	Reference Number Qualifier	M	ID	2/2	CJ - Clause Number GC - Government Contract Number GP - -Government Priority Number MU - Military Specification Number PR - Price Quote Number
N902	127	Reference Number	X	AN	1/30	Number Qualified in N901
N903	369	Free-form Description	X	AN	1/45	Not Used
N904	373	Date	O	DT	6/6	Not Used
N905	337	Time	O	TM	4/6	Not Used

**NOTE:** If N901 = GC, then N902 should contain a contract number up to 30-characters.  
If N901 = GP, then N902 should contain a priority rating up to 4-characters.

## N1 - Name

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**Status:** Optional

**Purpose:** To identify a party by type of organization, name and code.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
N101	98	Entity ID Code	M	ID	2/2	BY - Buying Party SO - Sold To ST - Ship To
N102	93	Name	C	AN	1/35	Buyer's Name
N103	66	ID Code Qualifier	C	ID	1/2	01 - Dun & Bradstreet 91 - TI Customer's ID Number 92 - Sender's Internal Customer ID Number
N104	67	ID Code	C	ID	2/17	Number qualified by N103

## **TD5 - Carrier Details (Routing Sequence/Transit Time)**

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**Status:** Optional

**Purpose:** To specify the carrier, sequence of routing and to provide transit time information.

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<b>Field #</b>	<b>Element</b>	<b>Field Name</b>	<b>Req.</b>	<b>Type</b>	<b>Size</b>	<b>TI Usage</b>
TD501	133	Routing Sequence Code	O	ID	1/2	Not Used
TD502	66	ID Code Qualifier	X	ID	1/2	Not Used
TD503	67	ID Code	X	AN	2/17	Not Used
TD504	91	Transportation Method/Type Code	X	ID	1/2	Not Used
TD505	387	Routing	X	AN	1/35	Carrier Code

**NOTE:** If you are an OEM customer, then TD505 should contain the customer's carrier code.  
If you are a distributor, then TD505 should contain TI's carrier code.

TD506 through TD511 are not used.

## PO1 - Purchase Order Baseline Item Data

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**Status:** Mandatory

**Purpose:** To specify basic and most frequently used purchase order line item data.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
PO101	350	Assigned Identification	O	AN	1/11	Purchase Order Line Number
PO102	330	Quantity Ordered	M	R	1/9	Quantity Ordered
PO103	355	Unit of Measure Code	M	ID	2/2	Basic Unit of Measurement: EA - Each PC - Piece
PO104	212	Unit Price	X	R	1/14	Unit Price
PO105	639	Basis Unit Price Code	O	ID	2/2	CT - Contract
PO106	235	Product/Service ID Qualifier	O	ID	2/2	BP - Buyer's Part Number PN - Part Number
PO107	234	Product/Service ID	X	AN	1/30	Customer Part Number
PO108	235	Product/Service ID Qualifier	O	ID	2/2	EC - Engineering Change Level
PO109	234	Product/Service ID	X	AN	1/30	Customer Part Number Revision
PO110	235	Product/Service ID Qualifier	O	ID	2/2	VP - Vendor's Part Number
PO111	234	Product/Service ID	X	AN	1/30	TI Part Number

**NOTE:** PO112 through PO125 are not used.

## PO4 - Item Physical Details

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**Status:** Optional

**Purpose:** To specify the physical qualities, packaging, weights and dimensions relating to the item.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
PO401	356	Pack	O	N0	1/6	Not Used
PO402	357	Size	O	R	1/8	Not Used
PO403	355	Unit of Measure Code	X	ID	2/2	Not Used
PO404	103	Packaging Code	X	AN	5/5	REL90 - Reel/Standard

**NOTE:** PO405 through PO413 are not used.

## SCH - Line Item Schedule

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**Status:** Optional

**Purpose:** To specify the data for scheduling a specific line item.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
SCH01	380	Quantity	M	R	1/15	Scheduled Quantity
SCH02	355	Unit of Measure Code	M	ID	2/2	Unit of Measure EA - Each
SCH03	98	Entity ID Code	O	ID	2/2	Not Used
SCH04	93	Name	X	AN	1/35	Not Used
SCH05	374	Date/Time Qualifier	M	ID	3/3	002 - Requested Delivery Date
SCH06	373	Date	M	DT	6/6	Contract Schedule Date (YYMMDD)

**NOTE:** SCH07 through SCH11 are not used.

## CTT - Transaction Totals

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**Status:** Mandatory

**Purpose:** To transmit a hash total for a specific element in the transaction set.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
CTT01	354	Number of Line Items	M	N0	1/6	Number of line item segments in this transaction set

**NOTE:** CTT02 through CTT07 are not used.

## SE - Transaction Set Trailer

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**Status:** Mandatory

**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.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
SE01	96	Number of Included Segments	M	N0	1/6	The total number of all segments in the transaction set, including the ST and SE segments.
SE02	329	Transaction Set Control Number	M	AN	4/9	The control number is assigned by the sender. It should be sequentially assigned within each functional group to aid in error recovery and research. The control number in the SE segment must be identical to the control number in the ST segment (ST02) for each transaction.

## GE - Functional Group Trailer

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**Status:** Mandatory

**Purpose:** To indicate the end of a functional group and to provide control information.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
GE01	97	Number of Included Transaction Sets	M	N0	1/6	The total number of transaction sets included.
GE02	28	Data Interchange Control Number	M	N0	1/9	The data interchange control number must match the same data element (GS06) in the functional group header segment.

## IEA - Interchange Control Trailer

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**Status:** Mandatory

**Purpose:** To define the end of an interchange of one or more functional groups and interchange related control segments.

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Field #	Element	Field Name	Req.	Type	Size	TI Usage
IEA01	I16	Number of Included Groups	M	N0	1/5	A count of the number of functional groups included in a transmission.
IEA02	I12	Interchange Control Number	M	N0	9/9	This number is assigned by sender; together with sender ID, it uniquely identifies interchange data to receiver. It is suggested that sender, receiver, and all third parties be able to maintain an audit trail of interchanges using this number.