What is an EDI 850?



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The EDI 850 is the purchase order document for the ANSI X12 transaction set using EDI technology. This is the standard format for an electronic purchase order when using the EDI format. EDI stands for the Electronic Data Interchange. This document is used to place an order for goods or services. The transaction set includes:

- The requested items and their respective prices
- Quantities ordered
- Billing information
- Ship to information
- Any shipping instructions
- Carrier details

The information is organized into elements and segments as specified in the EDI 850 transaction set. It is critical to adhere to the EDI 850 specifications as the purchase order document will be sent, received, and interpreted by a computer. Not adhering to these specifications per the accepted standards will create issues with transmission and receipt – possibly causing errors or preventing the document from ever arriving with the supplier.

The various data elements and segments found in an 850 purchase order include:

- ISA is the interchange control header. It marks the beginning of one or more functional groups and control segments.
- ISA01 – Authorization Information Qualifier. Code 00 indicates that no authorization information present in I02.
- ISA02 – Authorization Information
- ISA03 – Security Information Qualifier. Code 00 indicates that no security information present in I01.
- ISA04 – Security Information
- ISA05 – Interchange ID Qualifier
- ISA06 – Interchange Sender ID.
- ISA07 – Interchange ID Qualifier
- ISA08 – Interchange Receiver ID
- ISA09 – Interchange Date
- ISA10 – Interchange Time
- ISA11 – Interchange Control Standards Identifier. 'U' indicates that U.S. EDI Community of ASC X12, TDCC, and UCS is responsible for the control standard used by the message.
- ISA12 – Interchange Control Version Number. Code '0400' specifies the standard issued as ANSI X12.5-1997.
- ISA13 – Interchange Control Number
- ISA14 – Acknowledgement Requested. Code '0' indicates that no acknowledgment has been requested.
- ISA15 – Usage Indicator. Code 'P' indicates that the interchange envelope contains production data.
- ISA16 – Component Element Separator

GS represents the functional group header. It marks the start of a functional group and provides control information.

- GS01 – Functional Code Identifier. The code 'PO' indicates purchase order.
- GS02 – Application Sender's Code
- GS03 – Application Receiver's Code
- GS04 – Date
- GS05 – Time
- GS06 – Group Control Number

- GS07 – Responsible Agency Code is X which represents Accredited Standards Committee X12
- GS08 – Version/Release/Industry Identifier Code. The code 004010 indicates that the draft standards approved for publication by ASC X12 Procedures Review Board through October 1997.

ST (transaction set header) marks the beginning of the transaction set and is used to set a control number. For instance: ST*850*05210 indicates a purchase order with a control number of 05210. 850 denotes the purchase order transaction set.

BEG starts the beginning of the purchase order transaction. It marks the beginning of that transactions set and provides identifying dates and numbers. 00 indicates a new purchase order, and SA indicates it is a standalone order. It will also include the purchase order number and the date of issuance.

N9 represents the reference identification. 'PO' indicates purchase order. It also includes the purchase order number.

DTM stands for date/time qualifier. This is used to specify the pertinent dates and times, including the transaction creation date and time.

MSG represents message text to contain instructions for shipping and any other special instructions.

N1 represents multiple data elements, including entity identifier codes, names, identification code qualifiers and identification codes.

N3 represents address information for the organization.

N4 is the geographic location and includes the city, state, and zip code.

PER is the administrative contact.

PO1 represents purchase order item data, including line number, quantity ordered, unit of measure, and price. IN stands for item number. VC stands for vendor catalog number. SN stands for serial number.

The PID segment includes the product's description.

The REF segment is reference identification to specify identifying information.

SDQ refers to destination quantity and is used to specify details as to the destination and quantity.

CTT (transaction totals) shows the number of line items and the number of units ordered.

SE (transaction set trailer) details the number of segments in the order and the transaction set control number.

GE indicates the end of a functional group and provides control information.

IEA represents the interchange control trailer, which specifies the number of functional groups involved in the interchange and the control numbers assigned by the sender.

The 850 is the EDI format version of the tangible purchase order in the company purchasing system. During the EDI communication process, the buyer prepares the order and gets it approved. After approval, the EDI translation process occurs to covert the purchase order to the language the computer understands, before sending it to the supplier.

> *The EDI 850 Purchase Order is similar to the paper purchase order document. The difference is the computer handles all of the transmission to streamline supply chain operations and there is no need to receive orders via email or fax and rekey the information into multiple systems. This reduces error and frees up resources.*

How EDI Transmission Works

Both the buyer and supplier must be using the same EDI system for the transmission to occur successfully. This is why it’s important to know what system you’re using and to select vendors that use the same one.

The buyer’s computer system sends the EDI 850 directly to their trading partner over the internet with file transfer protocol (FTP) or by using a Value-Added Network, or VAN. The VAN serves as the intermediary between the trading partner to facilitate communication. The buyer’s VAN connects with the supplier’s VAN to start the transmission. The VAN makes sure the EDI 850 is sent and

received. The document is kept secure throughout the transmission process with a variety of security features, such as passwords, encryption, and user IDs. The EDI 850 remains authentic through a series of checking procedures and editing throughout the security process.

Transmission is a critical step and significant mistakes may occur when improper communications methods are used.

Exchanging an EDI 850 Purchase Order Workflow

When a buyer sends the EDI purchase order to the supplier, it is an indication the buyer wishes to purchase the listed goods and services from the supplier. When the supplier receives the purchase order, they will validate the document against EDI 850 specifications and respond with their own EDI document, the 855 Purchase Order Acknowledgement.

If the purchaser needs to make a change to the purchase order after it was sent and received by the vendor, but before the order has been filled, they can create and send and EDI 860: Purchase Order Change Request – Buyer Initiated. Things included here may be:

- Additional items
- Change of items
- Change of dates
- Change of quantity
- Price change
- Reschedule

Once the buyer acknowledges the purchase order change, they will send an EDI 865 Purchase Order Acknowledgment with Change in response. This will alert the buyer to the fact that the seller that they accept or reject the buyer's changes. If the seller needs to, they may also use the 865 to request changes to the original PO, with a different code than the one that is used to acknowledge the order.

When the EDI 850 is received by the vendor, it is translated to a usable format. EDI translation software serves as the interface between the document and the computer's infrastructure. The translation software will take the EDI document

and translate it into a usable format for the computer system. Then a mapper is used to change the file, formerly the EDI document, into a format that is compatible with the vendor's enterprise resource planning (ERP) system. At this point, the EDI 850 is no longer an EDI document, and is now a usable purchase order (just like the one the buyer started with before translating into EDI format) that the company can process according to their workflow.

The Purchase Order Acknowledgement alerts the buyer that the seller has confirmed receipt of the purchase order. This document removes the need for the buyer to call, email, or fax the seller to make sure the order was received.

In the event the original purchase order was not accepted as is, such as in the case of items being out of stock, and the supplier made changes to it, the Purchase Order Acknowledgement includes those changes. The EDI 855 document includes:

- Purchase order number
- Expected ship date
- Expected delivery date
- Vendor number
- Item numbers or part numbers
- Item description
- Unit prices

Once the order has been prepared, the supplier's system will create and send an EDI 856 Advance Ship Notice document.

This document includes:

- Shipment level information such as the carrier information and the tracking number
- Order level information such as purchase order numbers
- Item level information, such as items and quantities
- Pack level information such as barcodes on item packaging

The buyer will receive the items and check the order to make sure everything is there as it should be.

The supplier will send an EDI 810 invoice, which includes:

- Items ordered and their cost
- Quantities ordered
- Payment terms
- Any discounts offered
- Billing and shipping details

The EDI 810 Invoice is converted to an invoice the buyer's purchase order management and accounting system can use, to allow accounts payable department can to payment to the supplier.

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