

Status: Design
Date: 31-08-2017

ID: DOC-1000123 Revision: A-0
Description: Format Standard, QR Code, Ephesus/Eaton



Eaton/Ephesus QR Code Format Standard

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10/19/2017

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Revision History:

Revision	Revised By	Date	Change Description
A-0	Russ Dickerson	10/19/2017	Initial draft

Design

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1.1 Overview

This document shall be considered THE overriding document for formatting the data in QR codes on Eaton/Ephesus products. This document does not dictate that every product have a label, this document only dictates the data in the QR code if there is a QR code label on an Eaton/Ephesus product.

The purpose of this document is to ensure that all Eaton/Ephesus products use their standardized QR code format. Synapse Manufacturing uses a QR code reader to scan all of our products and thus needs all of our products to be designed in an agreed upon format. Software groups need to be aware of the QR code formats to ensure that QR code readers can properly commission our products. Product engineers need to make sure that their product labels fit within the standards in this document for these purposes. Please note that the size of the label itself, the medium that the QR code is printed on, and any other label information is not covered in this document. The Eaton/Ephesus QR code will be 0.5"x0.5".

1.2 QR Format Information

QR codes consist of ASCII data that is formatted into a 2 dimensional digital array as shown in figure 1.



Figure 1: QR code example

Each QR code on Eaton/Ephesus products shall follow the following table for defining the content of the QR label.

The ';' shall be used as the delimiter between fields.

Within fields, the ',' shall be used as a delimiter.

For example, the DIM10-087-05 would be:

01;3;10021361;DIM10-087-05;;1234567890;;34;17;1340of2500;0A6C45,B

String Segment	Description	Max Character Size	Legend	Example
Label Version	Version of label that indicates internal or external usage	2	01: supplier 10: internal	01
Level/Tier	Hierarchy of part	1	0 – Outer Carton 1 – Finished Goods 2 – Subassembly 3 - Component	3
Plant Location/Vendor Code Number	Plant code number or Vendor number	8	Vendor specific: 00000000-99999999 Synapse = 10021361	10021361
Part/Material Number	Material Number for internal usage, Supplier provided part number is for external usage	18	Max 18 Characters Options include: SS420-003E DIM10-087-05	<Insert Synapse PN here>
Sales Order Number	EATON SAP sales order number	9	Optional for supplier This would be the Sales Order or PO number under which the parts are being built/provided. Can be left empty, but maintain the format of the document by adding a “,” character with no whitespace needed.	<Synapse to leave blank>
Production Order Number	EATON SAP Production Order Number	10	Production Order Number Can be left empty, but maintain the format of the document by adding a “,” character with no whitespace needed.	<Insert PO Number>
Quantity	Ordering Quantity	4	Optional for supplier Can be left empty, but maintain the format of the document by adding a “,” character with no whitespace needed.	<Synapse to leave blank>

Week	The current week of the current year	2	01-53	<Variable depending on the build date at Synapse>
Year	Current year	2	Last 2 digits of the current year	<Variable depending on the build date at Synapse>
Sequential # of Quantity	Unique number. This is the sequential code for that number of parts.	10	0001ofxxxx-9999ofxxxx. Starts at 0001ofxxxx and resets to 0001ofxxxx at the beginning of new order. Eaton's system is that this entire barcode serves as a serial number, so this number is a sequence number out of a given order/production number (as opposed to populating a globally unique number in this field)	<Variable per unit>
Product Information	Product critical information	61	For supplier usage only, includes customized information. The Ethernet MAC address will include all 12 characters. The SNAP MAC address will include only the last 6 characters. The User Password and the WiFi Password will be 12-20 characters each and not include ';' or ',' as valid characters.	For SS420-003E: EthMAC,SNAPMAC,UserPW,WiFiPW For DIM10-087-05: SNAPMAC,HW version