200Hz High Speed Measurement Mode (MM,4)
Target Modes Available for TruSense S2xx series

Purpose:
The document provides additional information on the 200Hz high speed mode of the S200 series laser sensor, as referenced on pages 5, 8, 13 and 18 of the TruSense S200 User's Manual 7th Edition.

Overview:
The following will cover the Targeting modes available for the TruSense S2xx series when in **200HZ High Speed mode** ($MM,4). A valuable feature in the TruSense S series is the ability to detect and differentiate multiple targets. By leveraging the Display Mode, the user can identify the type of target to report in the ASCII data string.

There are 2 ASCII data formats that can be sent from the instrument.
1. Distance information with Time Stamp
2. Distance information with Time Stamp and Signal Strength

- In the High Speed mode, the signal strength reporting is controlled by the $DI command.
- Time stamp will reset to zero every 9.999 seconds intervals

It is important to note that the Targeting mode ($DM) differs from the Standard Measurement modes $MM,(0-3). The first two ASCII characters, after the leading <$>, identifies which target mode is being sent in the data string followed by <*CRC16 LF Return>. *Note: CRC16 is calculated between the <$> and <*>.*
*For example: data sent **$DF,9.930,6.709,9*CA3D** CRC16= DF,9.930,6.709,9 with result of 0xCA3D*

High Speed 200Hz mode intensity setting

$DI - Output format setting: Show or not show intensity in 200Hz mode
Note: This setting only applies in 200Hz High speed mode
Input format: $DI,<0 or none zero>
- 0: No display of intensity information
- None zero: including intensity information
The data format scale is <0**>** (maximum return "Strong Target") to <2000> (minimum return "Week Target").

High Speed 200Hz Target modes

Display Mode 5: 200Hz output mode (first target detected only)
Display Mode Assignment- $DM,5
Output format with **$DI, 0**: $DF,<distance>,<millisecond> *CRC16

Example
$DF,3.523,1.592*62A8
$DF,3.524,1.598*A55E
Output format with **$DI,1** : $DF,<distance>,<millisecond>,<intensity>*CRC16
Example
$DF,3.521,8.255,9*CAA5
$DF,3.523,8.258,9*692D

Display Mode 6: 200Hz output mode (strong target detected only)
Display Mode Assignment- $DM,6
Output format with **$DI,0**: $DS,<distance>,<millisecond> *CRC16
Example
$DS,3.519,M,3.382*CD57
$DS,3.521,M,3.388*0540
Output format with **$DI,1**: $DS,<distance>,<millisecond>,<intensity>*CRC16
Example
$DS,3.528,9.775,9*EDC7
$DS,3.521,9.778,9*&E3C

$DM,7-Display Mode 7: 200Hz output mode (last target detected only)
Display Mode Assignment-$DM,7
Output format with **$DI,0**: $DL,<distance>,<millisecond> *CRC16
Example
$DL,3.523,M,3.552*FB62
$DL,3.523,M,3.558*FCE2
Output format with **$DI,1**: $DL,<distance>,<millisecond>,<intensity>*CRC16
Example
$DL,3.526,9.948,9*C32C
$DL,3.524,9.955,9*9CA5

$DM,8-Display Mode 8: 200Hz output mode (best candidate)
Display Mode Assignment-$DM,8
Output format with**$DI,0**: $DB,<distance>,<millisecond> *CRC16
Example
$DB,3.526,3.742*762F
$DB,3.527,3.748*B1BF
Output format with **DI,1**: $DB,<distance>,<millisecond>,<intensity>*CRC16
Example
$DB,3.523,0.114,9*9925
$DB,3.524,0.118,9*AAC3