

STS320™



The first-in-class solution to address demanding tire tracking and traceability applications

Datalogic's STS320™ is the first-in-class solution of undisputed reliability for the Tire Industry, offering tire manufacturers complete traceability in all demanding applications along the tire production chain.

PERFORMANCE EXCELLENCE

STS320 delivers outstanding reading performance at the best price/performance ratio because of a superior 2MP sensor (1920 × 1080 pixels 16:9) combined with a powerful dual core processor. In a very compact solution, STS320 achieves an extra-large Field of View (FOV) up to 1250 mm (49") for large conveyor coverage and a high Depth of Field (DOF) even on high resolution codes of 0.25 mm (10 mils) for extreme application flexibility. STS320 works with conveyor speed up to 1.5 m/s and with reduced minimum gap among tires allowing an increase in overall productivity.

EASY & QUICK INSTALLATION

The STS320 is an out-of-the box solution fully pre-assembled, pre-configured and validated in the factory. Together with the self-contained, compact mechanical layout, it makes product handling extremely easy and dramatically reduces installation time. The product configuration is improved by the state-of-the-art DL.CODE™ software common to all Matrix series. The usability is enhanced and simplified by the new cross projection integrated aiming system, 'Green Spot' technology, and the X-Press HMI.

NEW INTUITIVE DIAGNOSTICS

The STS320 performance analysis is boosted by a new web interface and by the new web Mosaic view that allows the monitoring of all the readers at a glance for easy setup and monitoring through a complete suite of remote diagnostics. The new run-time unreadable code detection identifies the presence of damaged labels and the live high-speed image-saving based on the new generation FTP file transfer collects the information for post processing quality analysis aiming to optimize productivity. Performance diagnostics are intuitive and magnified from a distance because of the innovative configurable 360-degree multi-color read feedback for ease of use and operation.

EASY INTEGRATION, MAINTAINANCE AND USE FOR A REDUCED TOTAL COST OF OWNERSHIP

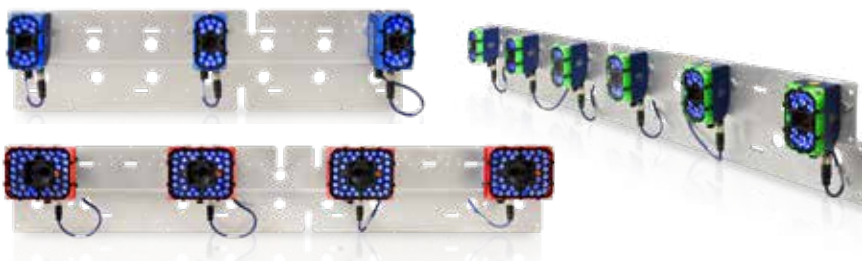
The STS320 is simple to fit and to integrate with its full industrial connectivity, compactness, and top industrial grade. Each single reader replacement is quick and easy for reduced system downtime. The new web Device Discovery simplifies the access and monitoring of all readers in the network. The Sulphur gas resistance allows safe installation of the STS320 in the most challenging environment (curing process). Its undisputed robustness offers unrivalled long-term reliability and life cycle, minimum wear and tear.

The STS320 embodies the full set of application requirements of the Tire Industry that makes it the best solution, once again confirming Datalogic's leadership in the market.



HIGHLIGHTS

- Outstanding reading performance
- Compact and out of the box solution for the quickest installation on the field
- New run time diagnostics and unreadable code classification to increase the overall productivity
- Live and high-speed image saving for post processing analysis
- New web interface and configurable 360-degree visual read feedback
- New web Mosaic view to monitor all the readers
- New web Device Discovery to quickly access all the readers in the network
- Completely new state of the art DL.CODE software
- Unmatched price/performance ratio



APPLICATIONS

Factory Automation / Manufacturing

Automotive, Tires Manufacturing and Tires Distribution Center

STS320

- Tire and Wheel identification
- Tire tracking and traceability both in Green Vulcanized Tires (curing press) and Finished Tires
- High speed sorting on omnidirectional conveyors
- Bottom (under belt) reading

ATS320

- Tires picking station
- Spinning Tires
- Tire building machine and tire assembly inspection
- Test machine
- Visual inspection machine
- Tire and Wheel identification

TECHNICAL DATA

OPTICAL FEATURES

| | |
|---------------------|--|
| Sensor Type | Image resolution 2.0 Mpixel (1920 x 1080) 16:9 form factor - 1/3" CMOS global shutter |
| Frame Rate | 40 to 60 frames/s, depending on application |
| Illumination | Internal illuminators colors: Blue Internal illuminators power: High Power 14 LEDs, Very High Power 36 LEDs |
| Pitch | ± 35° |
| Tilt | 0° - 360° |

DECODING CAPABILITY

| | |
|-----------------------------|--|
| Readable Symbologies | 1D Codes: all standard 1 dimensional symbologies 2D Codes: Data Matrix, QR Code, Micro QR, MAXICODE, Aztec, Dot code Postal Codes: Australia Post, Royal Mail, Kix code, Japan Post, PLANET, POSTNET (+BB), Intelligent Mail, Swedish Post and many more |
| Code Quality Metrics | 1D CQ Standard: ISO/IEC 15416 2D CQ Standard: ISO/IEC 16022/18004, ISO/IEC 29158 (AIM-DPM), ISO/IEC 15415 |

COMMUNICATIONS INTERFACE

| | |
|--|--|
| Embedded communication interfaces | - Ethernet 10/100/1000 Mbit/s: TCP/IP, UDP, FTP and Fieldbus PROFINET IO, Ethernet IP, Modbus TCP - Serial RS232/RS422FD up to 115.2 Kbit/s + Serial Aux RS232 up to 115.2 Kbit/s - OPC UA |
| Reader Networking | Datalogic ID-NET™ |
| Connectivity Modes | Pass Through, Master/Slave, Ethernet point to point |

INPUTS AND OUTPUTS

| | |
|------------------------|---|
| Digital Inputs | 2 inputs opto-coupled and polarity insensitive Max. Voltage 30 Vdc Max. Input Current 10 mA |
| Digital Outputs | 3 Outputs: configurable NPN, PNP and PP short-circuit protected VOUT (ILOAD = 0 mA) max. 24 Vdc VOUT (ILOAD = 100 mA) max. 3 Vdc ILOAD max. 100mA Using CBX connection box the first 2 outputs are opto-coupled |

USER INTERFACE AND PROGRAMMING

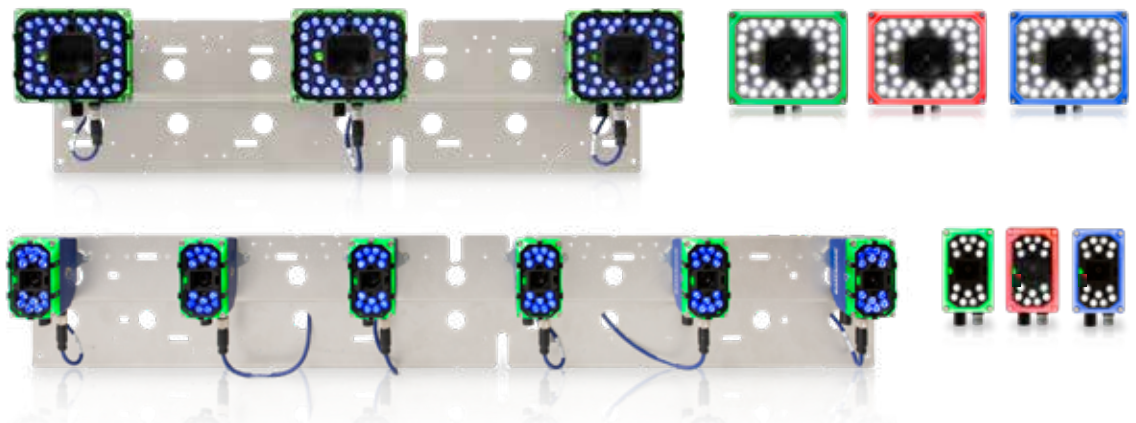
| | |
|---------------------------|--|
| Aiming System | Laser cross red projection aiming |
| User Interface | <ul style="list-style-type: none"> Configurable 360 degree multicolor visual feedback Green spot and Red spot LEDs X-PRESS™ Human Machine Interface Beeper X-PRESS™ Push Button 7 LEDs (Status, Communication, Trigger, Good Read, Ready, Power on, Network) Web Monitoring and Web Supervisory Interface |
| Device Programming | DL.CODE™ Windows-based software (programming via Ethernet or Serial Interface) with Javascript output formatter Serial Host Mode programming X-PRESS™ Human Machine Interface |

ELECTRICAL FEATURES

| | |
|------------------------------|--|
| Power Supply Voltage | 24 Vdc ± 10% |
| Max Power Consumption | STS320-XX3 3,1A Max STS320-XX4 4,1A Max STS320-XX5 5,1A Max STS320-XX6 6,0A Max |

360 DEGREE VISUAL FEEDBACK DEFAULT COLORS

| Default configuration | LEDs COLOR |
|-----------------------|------------|
| Good Read | Green |
| No Read | Red |
| Configuration | Blue |



PHYSICAL FEATURES

| | | |
|----------------------|--|--|
| Dimensions | STS320-003, STS320-013, STS320-014, STS320-203 | 695 x 177 x 119.1 mm [27.36 x 6.97 x 4.69 in] |
| | STS320-113 | 695 x 181.5 x 133.9 mm [27.36 x 7.15 x 5.27 in] |
| | STS320-103, STS320-114 | 726 x 181.5 x 133.9 mm [28.58 x 7.15 x 5.27 in] |
| | STS320-204 | 815 x 177 x 119.5 mm [32.09 x 6.97 x 4.64 in] |
| | STS320-004, STS320-015, STS320-016, STS320-205 | 1095 x 177 x 119.1 mm [43.11 x 6.97 x 4.69 in] |
| Weight | STS320-104, STS320-115 | 1095 x 181.5 x 133.9 mm [43.11 x 7.15 x 5.27 in] |
| | STS320-116 | 1126 x 181.5 x 133.9 mm [44.33 x 7.15 x 5.27 in] |
| | STS320-003, STS320-013, STS320-203: | 4.84 Kg (10.67 lbs) |
| | STS320-103, STS320-113: | 5.68 Kg (12.52 lbs) |
| | STS320-014: | 5.54 Kg (12.21 lbs) |
| | STS320-114: | 6.68 Kg (14.73 lbs) |
| | STS320-204: | 6.16 Kg (13.58 lbs) |
| | STS320-004: | 7.44 Kg (16.40 lbs) |
| | STS320-104: | 8.58 kg (18.92 lbs) |
| | STS320-015, STS320-205: | 8.12 Kg (17.90 lbs) |
| STS320-115: | 9.55 Kg (21.04 lbs) | |
| STS320-016: | 8.80 Kg (19.40 lbs) | |
| STS320-116: | 10.51 Kg (23.17 lbs) | |
| Case Material | Aluminium case and plastic protective window cover | |

ENVIRONMENTAL FEATURES

| | |
|---------------------------------|---|
| Humidity | 90% non condensing |
| Protection Class EN60529 | IP65 and IP67 |
| Operating Temperature | -10 to 50°C (14 to 122°F) |
| Storage Temperature | -20 to 70 °C (-4 to 158 °F) |
| Sulfur gas resistance | Available for all the models according to ISO EN 60068-2-43 |

SAFETY & REGULATORY

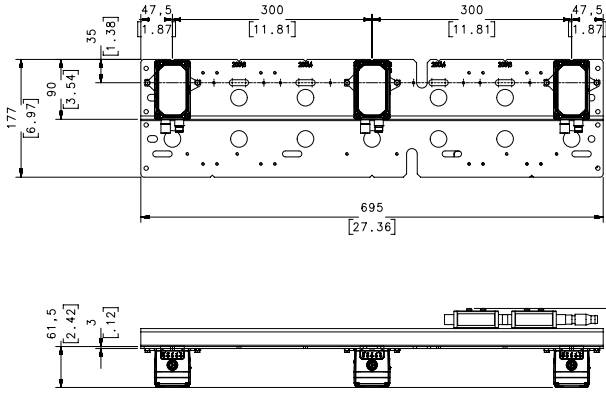
| | |
|---------------------------------|--|
| Agency approvals | The product meets necessary safety and regulatory approvals for its intended use. |
| Environmental compliance | Complies to EU RoHS |
| Regulatory | EN61000-6-2 Electromagnetic Immunity; EN61000-6-4 Electromagnetic Emissions Class A; FCC part 15 for Class A digital device; CSA listed product for Canada and U.S.; CE; KC |
| Laser Safety | Class 1 Laser Product but may be marked as Class 2 Laser Product as worse case as per IEC 60825-1 Complies with CDRH Requirements |
| LED Safety | LED Safety (Risk Group 1) as per EN 62471 |

WARRANTY

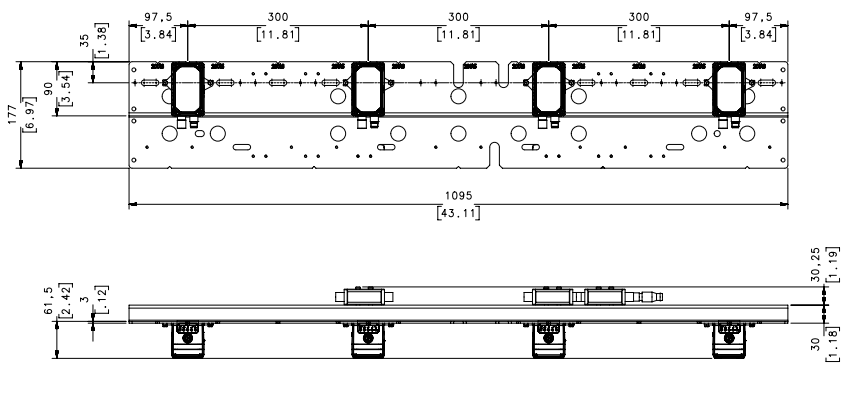
| | |
|-----------------|-------------------------|
| Warranty | 2-Year Factory Warranty |
|-----------------|-------------------------|

DIMENSIONS

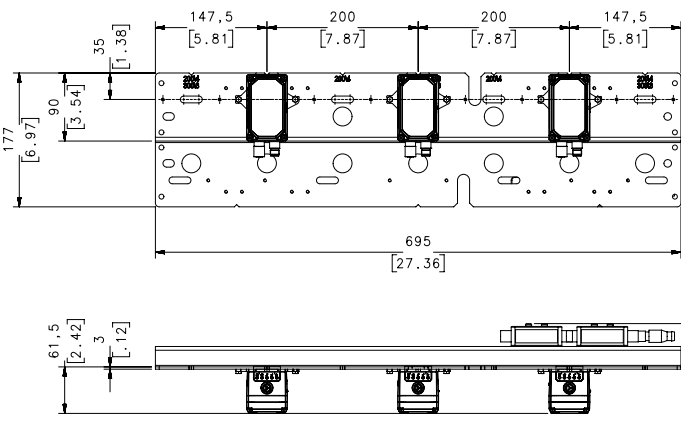
STS320-003



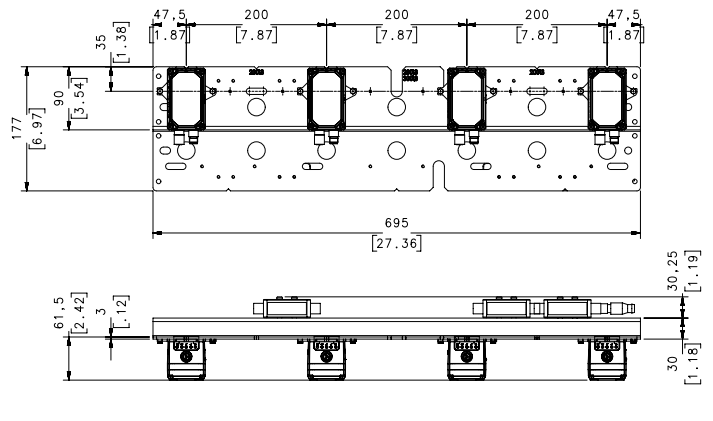
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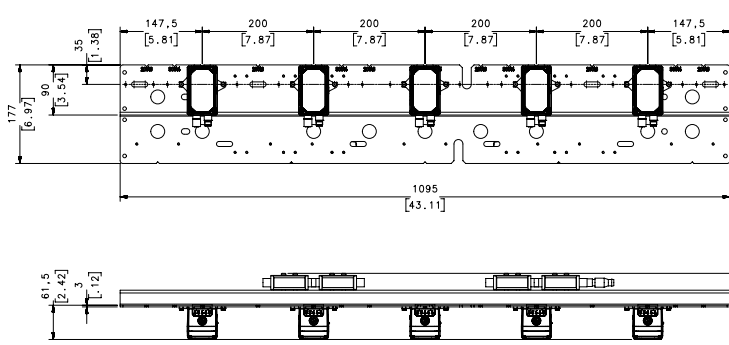
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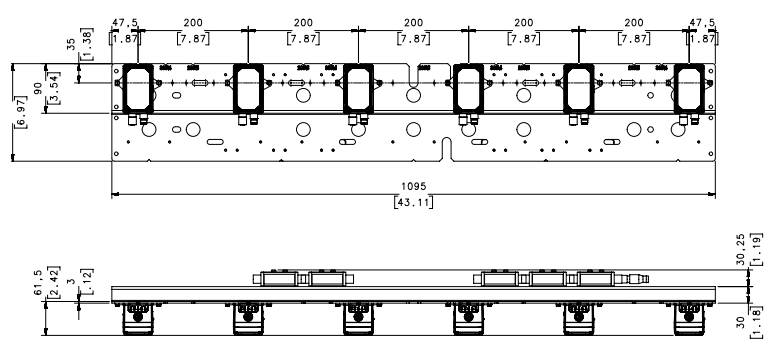
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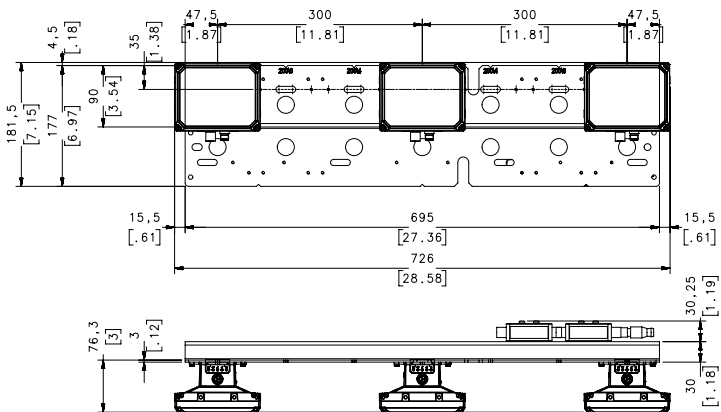
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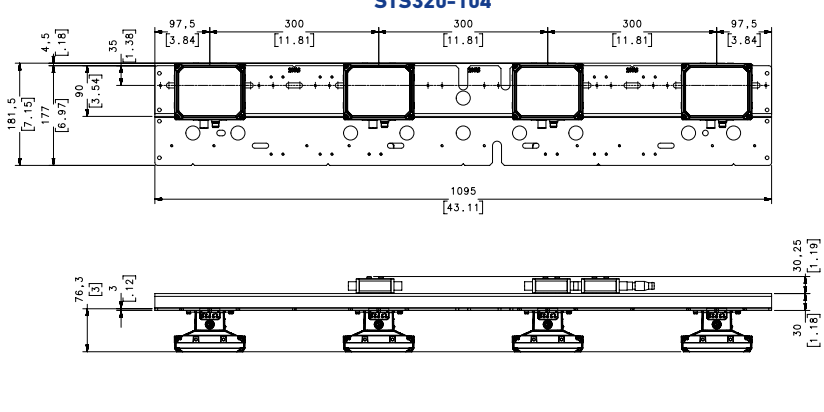
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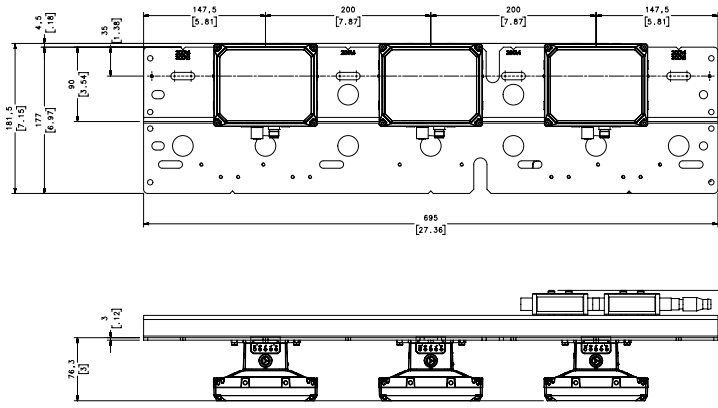
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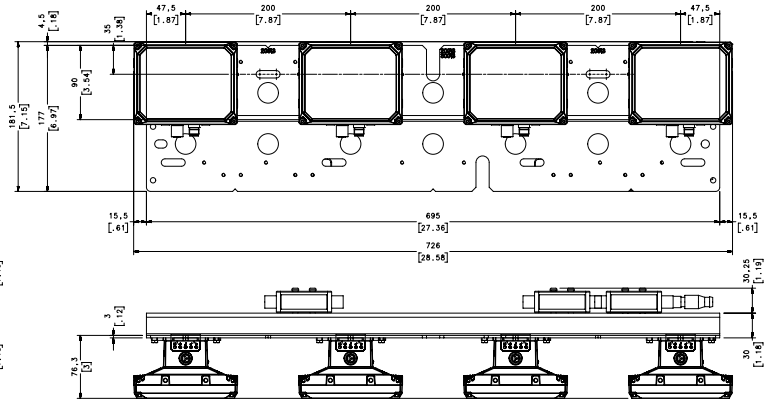
STS320-104



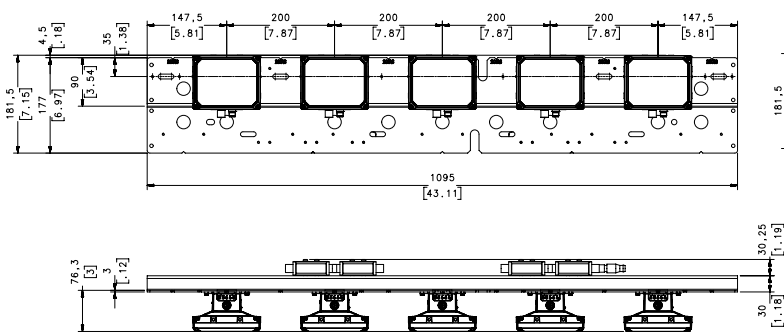
STS320-113



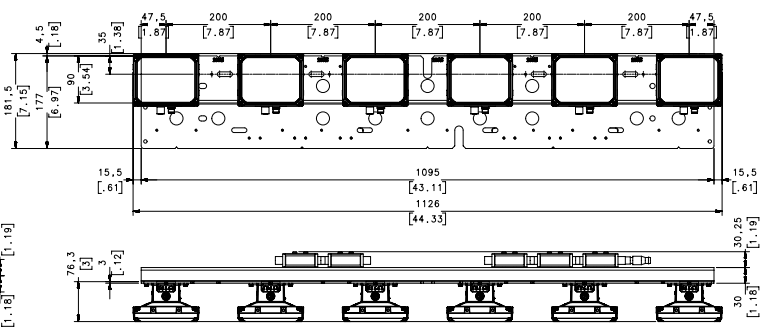
STS320-114



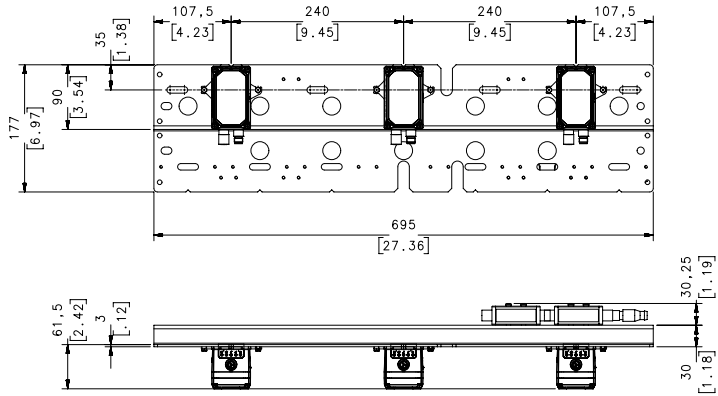
STS320-115



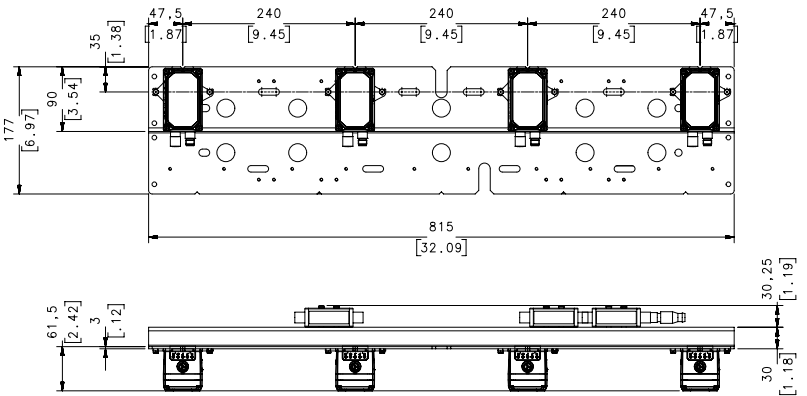
STS320-116



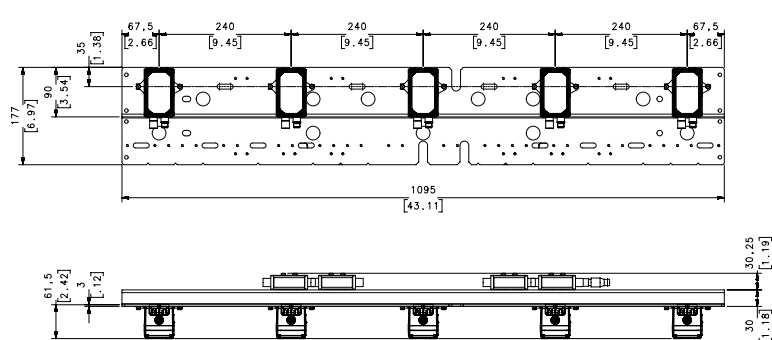
STS320-203



STS320-204



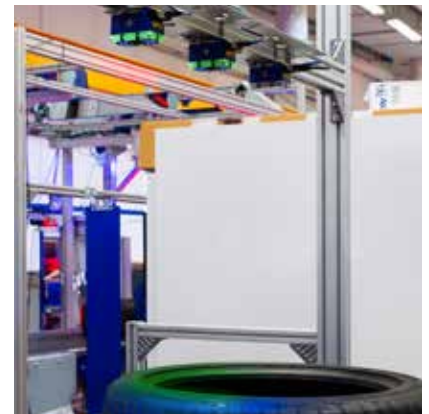
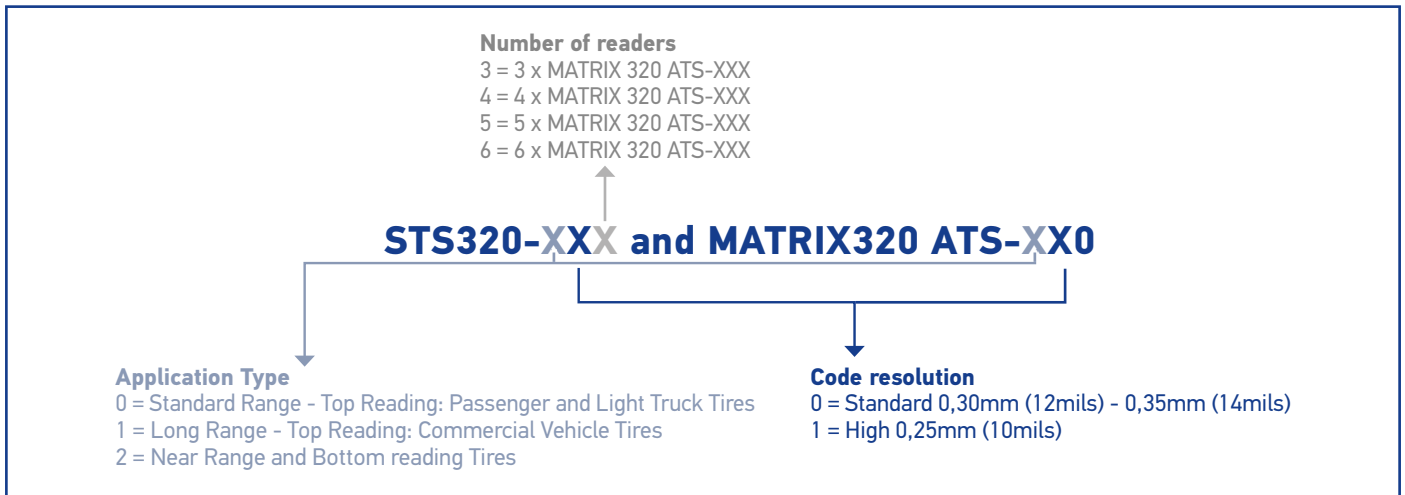
STS320-205



Dimensions in mm

MODELS

| P/N | DESCRIPTION | READER QTY | CODE RESOLUTION | READING WIDTH | DOF | MIN READING DISTANCE | MAX READING DISTANCE | FOCUS DISTANCE | VERTICAL FOV @MIN DISTANCE |
|--|--|------------|------------------|----------------|----------------|----------------------|----------------------|----------------|----------------------------|
| STS320-00X AND STS320-01X STANDARD RANGE TOP READING PASSENGER LIGHT TRUCK TIRES | | | | | | | | | |
| STS320 | | | mm (mils) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) |
| 938100001 | STS320-003 TIRE SORT 3_HEAD ST RES | 3 | 0.30 (12) | 950 (37.40) | 250 (9.84) | 830 (32.68) | 1080 (42.52) | 940 (37.01) | 202 (7.95) |
| 938100002 | STS320-004 TIRE SORT 4_HEAD ST RES | 4 | | 1250 (49.21) | | | | | |
| 938100004 | STS320-013 TIRE SORT 3_HEAD HI RES | 3 | 0.25 (10) | 650 (25.59) | | 620 (24.41) | 870 (34.25) | 730 (28.74) | 152 (5.98) |
| 938100005 | STS320-014 TIRE SORT 4_HEAD HI RES | 4 | | 850 (33.46) | | | | | |
| 938100006 | STS320-015 TIRE SORT 5_HEAD HI RES | 5 | | 1050 (41.34) | | | | | |
| 938100007 | STS320-016 TIRE SORT 6_HEAD HI RES | 6 | | 1250 (49.21) | | | | | |
| MATRIX 320 ATS ASSEMBLY FOR TIRES SOLUTIONS | | | mm (mils) | mm (in) | | mm (in) | mm (in) | mm (in) | mm (in) |
| 938100036 | MATRIX 320 ATS-000 ASSY FOR STS320-00X | - | 0.30 (12) | 359 (14.13) | 250 (9.84) | 830 (32.68) | 1080 (42.52) | 940 (37.01) | 202 (7.95) |
| 938100037 | MATRIX 320 ATS-010 ASSY FOR STS320-01X | - | 0.25 (10) | 270 (10.63) | | 620 (24.41) | 870 (34.25) | 730 (28.74) | 152 (5.98) |
| STS320-10X AND STS320-11X LONG RANGE TOP READING COMMERCIAL VEHICLE TIRES | | | | | | | | | |
| STS320 | | | mm (mils) | mm(in) | mm(in) | mm(in) | mm(in) | mm(in) | mm(in) |
| 938100008 | STS320-103 TIRE SORT 3_HEAD ST RES LR | 3 | 0.35 (14) | 950 (37.40) | 400 (15.75) | 850 (33.46) | 1250 (49.21) | 1000 (39.37) | 211 (8.31) |
| 938100009 | STS320-104 TIRE SORT 4_HEAD ST RES LR | 4 | | 1250 (49.21) | | | | | |
| 938100010 | STS320-113 TIRE SORT 3_HEAD HI RES LR | 3 | 0.25 (10) | 650 (25.59) | | 830 (32.68) | 1230 (48.43) | 970 (38.19) | 145 (5.71) |
| 938100011 | STS320-114 TIRE SORT 4_HEAD HI RES LR | 4 | | 850 (33.46) | | | | | |
| 938100012 | STS320-115 TIRE SORT 5_HEAD HI RES LR | 5 | | 1050 (41.34) | | | | | |
| 938100013 | STS320-116 TIRE SORT 6_HEAD HI RES LR | 6 | | 1250 (49.21) | | | | | |
| MATRIX 320 ATS ASSEMBLY FOR TIRES SOLUTIONS | | | mm (mils) | mm(in) | | mm(in) | mm(in) | mm(in) | mm(in) |
| 938100038 | MATRIX 320 ATS-100 ASSY FOR STS320-10X | - | 0.35 (14) | 375 (14.76) | 400 | 850 (33.46) | 1250 (49.21) | 1000 (39.37) | 211 (8.31) |
| 938100039 | MATRIX 320 ATS-110 ASSY FOR STS320-11X | - | 0.25 (10) | 258 (10.16) | (15.75) | 830 (32.68) | 1230 (38.19) | 970 (38.19) | 145 (5.71) |
| STS32-20X - NEAR RANGE AND BOTTOM READING TIRES | | | | | | | | | |
| 938100014 | STS320-203 TIRE SORT 3_HEAD ST RES NR | 3 | 0.30 (12) | 770 (30.31) | 170 (6.69) | 280 (11.02) | 450 (17.72) | 330 (12.99) | 157 (6.18) |
| 938100015 | STS320-204 TIRE SORT 4_HEAD ST RES NR | 4 | | 1010 (39.76) | | | | | |
| 938100016 | STS320-205 TIRE SORT 5_HEAD ST RES NR | 5 | | 1250 (49.21) | | | | | |
| MATRIX 320 ATS ASSEMBLY FOR TIRES SOLUTIONS | | | mm (mils) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) |
| 938100040 | MATRIX 320 ATS-200 ASSY FOR STS320-20X | - | 0.30 (12) | 300 (11.81) | 170 (6.69) | 280 (11.02) | 450 (17.72) | 330 (12.99) | 157 (6.18) |

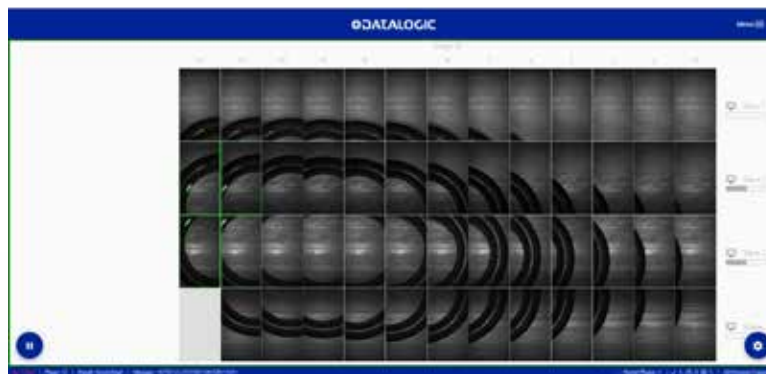


ACCESSORIES

| CATEGORY | P/N | DESCRIPTION |
|---------------------|-----------|--|
| Power Supply | 93ACC0264 | PWR-240 POWER UNIT 110/230VAC 24V 240 W |
| Cover | 93ACC0323 | Cover LT 14L STS320/ATS320 |
| | 93ACC0324 | Cover LT 36L STS320/ATS320 |
| Cables | 93A050058 | M12-IP67 Cable To CBX or QL (1M) |
| | 93A050059 | M12-IP67 Cable To CBX or QL (3M) |
| | 93A050060 | M12-IP67 Cable To CBX or QL (5M) |
| | 93A051390 | M12-IP67 Cable To CBX or QL (10M) |
| | 93A050122 | M12-IP67 GIGA Ethernet Cable X-Coded (1M) |
| | 93A050123 | M12-IP67 GIGA Ethernet Cable X-Coded (3M) |
| | 93A050124 | M12-IP67 GIGA Ethernet Cable X-Coded (5M) |
| | 93A050124 | M12-IP67 GIGA Ethernet Cable X-Coded (5M) |
| Ethernet Switch | 93ACC1842 | ETH GB SWITCH 8 CH 24Vdc |
| Software Management | 93A101027 | WEBSSENTINEL PLUS LICENSE IMAGES 5 ARRAYS |
| | 93A101028 | WEBSSENTINEL PLUS LICENSE IMAGES 10 ARRAYS |
| | 93A101029 | WEBSSENTINEL PLUS LICENSE IMAGES 20 ARRAYS |
| | 93A101030 | WEBSSENTINEL PLUS LICENSE IMAGES 32 ARRAYS |
| | 93A101031 | WEBSSENTINEL PLUS LICENSE IMAGES 64 ARRAYS |



WebSentinel Plus



Mosaic view

DATALOGIC PRODUCT OFFERING



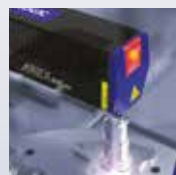
Sensors



Hand Held scanners



Mobile Computers



Laser Marking Systems



Safety Laser Scanner



Vision Systems



Stationary Industrial Scanners



Safety Light Curtains

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