RS232 • Ethernet • Wireless 802.11B Ethernet • USB • 4-20mA • RS485 • Fiber Optic

Ethernet Option

OVERVIEW

Ethernet is now available on all Doran Excel Series Indicators. Implementation of Doran's Ethernet option results in an efficient flow of information directly from the plant floor to any computer on your network. Once installed, this option enables efficient acquisition of quality control data, production monitoring and systems control. Leveraging your existing network hardware, allows for a cost effective data link to any PC on your network.
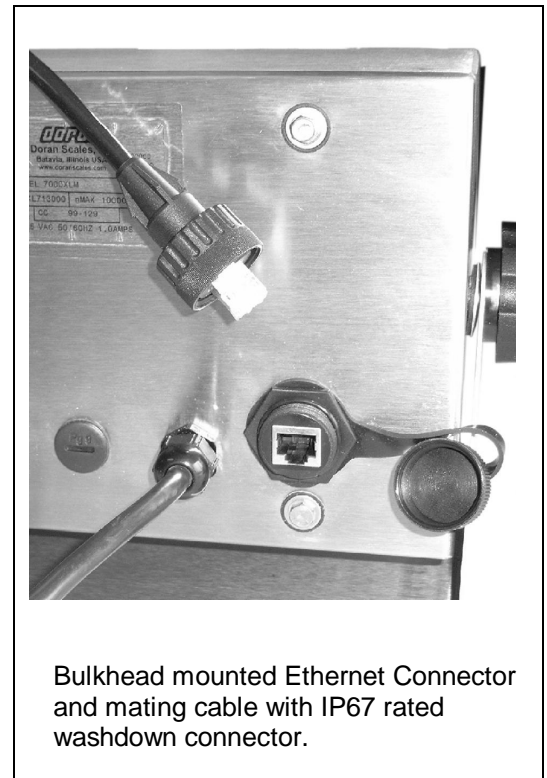
ETHERNET BACKGROUND

Doran's Ethernet option seamlessly connects directly to your Ethernet network. This option is fully compliant with the 10/100Base-T Ethernet network standard, transferring data up to 100Mbps. Once the Doran Indicator is connected, you can collect data, remotely configure, or monitor the indicator from any computer on the network, or even make data available over a remote Internet connection.

As with all Excel Series communications options, the Wired Ethernet option exceeds the NEMA 4X and IP67 washdown standards. A bulkhead mounted RJ-45 connector at the rear of the scale allows for a reliable, industrial strength connection to be made. A protective IP67 cap is included to provide washdown protection when the mating cable is disconnected. An optional IP67 field installable mating cap installs onto the Ethernet cable and screws into place, which seals and securely holds the Ethernet connection (see photo below).

To communicate to the scale through your network, Ethernet utilizes the TCP/IP Protocol that is available on all current operating systems and computers. TCP defines how messages are formatted and delivered, provides error detection, data flow control, message prioritization, and coordinating the timing of message events. With Ethernet, you can be assured your data will reach its destination, without errors or data loss.

Every Ethernet device has an assigned IP address, which is like a mailing address. This address, allows for direct communication with the scale through any computer on your network. An example of an IP address would be 192.168.254.109. Doran's Ethernet option supports both Static and Dynamic IP addresses.

Bulkhead mounted Ethernet Connector and mating cable with IP67 rated washdown connector.

APPLICATION DESCRIPTION

Quality Control Data Collection

A manufacturing plant wants to station a 50 lb capacity scale on the production floor and transmit all weighments to a PC located in the Quality Control Supervisor's office. All weight data collected from the scale needs to be transferred directly into an Excel Spreadsheet for later statistical analysis. This is a food application and a washdown safe scale is required. Solution: A Doran APS7050XLP/15 with the Wired Ethernet Option installed. Once configured, the scale will communicate via Ethernet to the Quality Control Supervisor's PC. Once an hour, the operator will randomly choose and weigh ten samples from the production line. Each stable weight will trigger an automatic transmission of the weight data to a computer with Doran's Excelerator Data Collection program installed. Doran's Excelerator Data Collection program will insert the weight data automatically into an Excel spreadsheet for later analysis.

Data Collection From Multiple Scales

A manufacturing plant needs to monitor weight activity on 20 scales simultaneously. Weight data from all 20 scales needs to be sent directly into an Excel spreadsheet. If possible, the customer would like to use existing scales. Solution: All existing scales are outfitted with new Doran 7000XL Indicators with Wired Ethernet installed. Ethernet cables will be run from each scale to the existing network switch in the production area. Once configured, Doran's Excelerator Data Collection program collects data from all 20 scales, inserting data directly into the Excel spreadsheet, with each scale sending data to its own spreadsheet within the workbook. Since Excelerator automatically sends data into Microsoft Excel, the data can be immediately analyzed to determine the precision of the QC sample from the manufacturing line. The customer now controls his line process with an hourly sample from his line and makes equipment control adjustments based upon accurate, real time production data.

AVAILABILITY AND ORDERING INSTRUCTIONS

Doran is able to provide the following options for Wired Ethernet, these can also be found in the Option Section of all Excel Series Scales:

EXOPT101: Wired Ethernet – Includes: Internal Ethernet interface board with 8 open collector outputs and sealed RJ45 connector bulkhead mounted on the back of the meter with NEMA 4X sealing cap.

EXOPT150: Washdown Safe RJ45 Ethernet Connector Field Install Kit – Includes: One NEMA 4X connector to mate to the connector on the back of the scale – installs on customer supplied cable. Requires a standard RJ45 cable crimping tool.

SFT001: Excelerator Data Collection Software – A powerful, easy to use, and cost effective software solution designed to collect data from any Doran Scale and transfer it to a Microsoft Excel spreadsheet. **Visit http://www.doranscales.com/data-collection-software.htm for more information on Doran's Excelerator Data Collection Software.**

ETHERNET OPTION SPECIFICATIONS

Standard	802.3
Data Rate	Auto sensing 10 / 100 Mbps
Connector	RJ-45 bulkhead mount with protective cap
LEDs	Network Link Integrity - Yellow Network Activity - Green
IP Address Assignment	DHCP, Auto IP, Static IP