



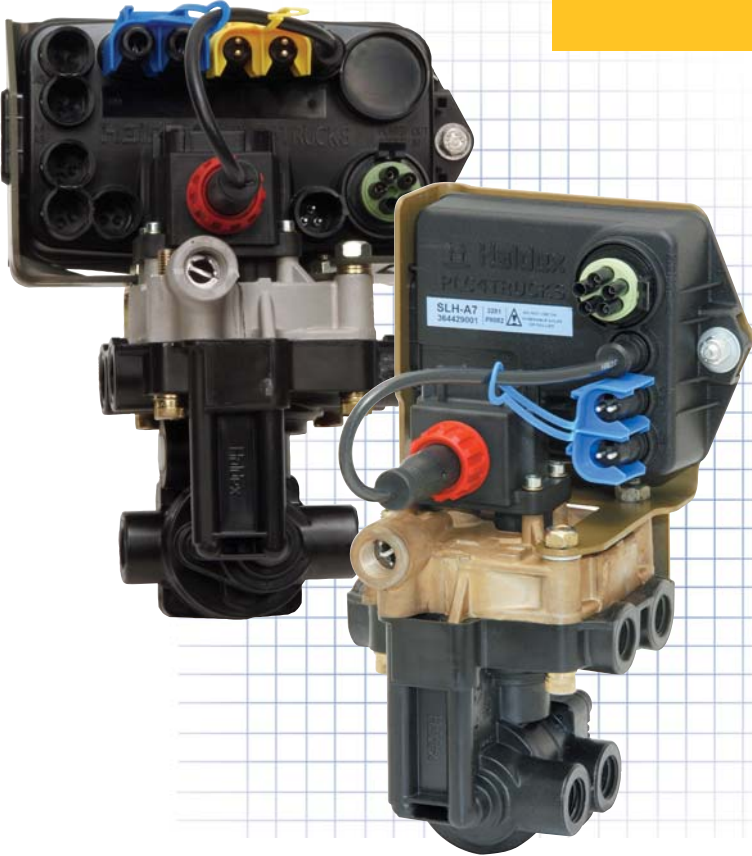
Haldex PLC Select Platform

L20337

Rev. 3/07



ABS/TRS



Haldex PLC Select Platform



ABS/TRS



The New Standard in Trailer ABS from the Leader in Air Brake Technology

When NHTSA regulations requiring trailer anti-lock braking systems went into effect in 1998, Haldex had already been producing trailer ABS systems for over 25 years. With more than half a million trailers worldwide equipped with Haldex ABS systems today, Haldex is outperforming all competitive trailer ABS systems.

Haldex has an expanded line of anti-lock Braking Systems that includes both basic ABS in its PLC Select ABS and Full Function ABS in its PLC Select FFABS. Whether you need a 2S/1M single channel or 4S/2M multi-channel, multi-trailer configurations, the PLC Select improves braking performance and vehicle control.

The PLC Select's multiplexing technology allows a single wire on the existing vehicle 7-Way to carry an unprecedented level of information between the tractor and the trailer. This technology has allowed Haldex to design more computer power into the ABS system, while still reducing system components and complexities. For your 2S/1M and 4S/2M applications, the PLC Select platform designed for communications and diagnostics without the costly second connector provides exclusive control logic for better control and stopping power at every wheel. And it's equipped with auxiliary capabilities and a complete diagnostic system.

With exclusive technologies like the Haldex Select Low/High protocol (SLH) to further enhance sensitivity and responsiveness, the Haldex PLC Select produces even better braking characteristics under all driving conditions.

Better Braking

Our exclusive control logic, SLH, allows the Haldex PLC Select to cycle deeper and recover faster for more responsive and precise braking control eliminating the need for more costly 2S/2M systems. The SLH system:

- Senses differences in wheel conditions
- Automatically adjusts the ABS system to maintain proper braking characteristics at each wheel
- Preserves vehicle stability and control as SLH manages the braking forces between wheels with the highest and lowest rates of deceleration— depending on the road surface conditions— maximizing stability while minimizing stopping distance



Reduces Installation & Service Costs

But better braking is just the beginning. Thanks to innovative technologies and its simple, robust design, the PLC Select reduces costs throughout the entire life cycle. With fewer components, the PLC Select costs less to install and maintain. The improved reliability built into the system minimizes the chance of costly, unplanned or on-highway downtime.

- Sealed ECU with potted enclosure to prevent contaminants and corrosion from entering the system
- Sensor and power connectors plug directly into the ECU with weather-pack connections

- Primary solenoid cable is part of the ECU, requires a second valve for 2S/1M and 4S/2M applications
- Pre-installed swivel-nipple design with locking nut for easy installation and servicing
- Second valve cable comes in various lengths, plugging directly into the ECU to customize installations

- Robust mounting bracket with a single fastener design



Two Levels of Performance

The latest generation of Haldex ABS, PLC Select platforms has the right configuration that will provide you reliable performance time after time, whether using the basic ABS Relay Valve model or the patented FFABS. Whether specified as original equipment or used to update older ABS systems, Haldex has the right system for trailer ABS.

PLC Select ABS With Basic ABS Relay Valve

To separate the Haldex PLC Select ABS from the competition, Haldex uses its exclusive SLH protocol, which provides reliable performance stop after stop.



PLC Select 1M ABS With Basic ABS Relay Valve

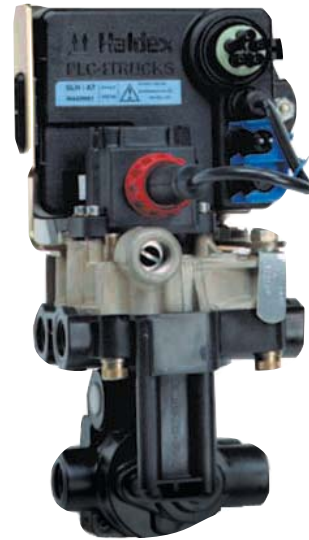
Its modular design makes system upgrades and competitive retrofits simple and economical. Predominantly for 2S/1M and 4S/2M applications, the PLC Select system only requires the addition of a separate spring brake control valve for a complete braking solution.

PLC Select Full Function ABS

The Haldex PLC Select Full Function ABS valve has an integrated control valve that performs all ABS control functions including service braking, spring brake control and anticomponenting. The single patented FFABS valve replaces up to three separate valves (including the spring brake control valve) to minimize parts, plumbing, system weight, installation time, potential failure points, maintenance



PLC Select Full Function ABS for 2S/2M and 4S/2M applications



PLC Select Full Function ABS for 2S/1M applications

requirements and troubleshooting procedures. The expandability of the PLC Select FFABS incorporates even more functions than previous trailer ABS systems. It can be configured to meet all future trailer braking, monitoring, communication needs and control.

Choose the level of performance that's right for your trailer application.

FEATURES	Haldex PLC Select 1M ABS	Haldex PLC Select 2M ABS	Haldex PLC Select PLUS ABS (2S/1M - 4S/2M)
Auxiliary Capability	X		X
Patented FFABS Valve Platform w/Service Brake Priority	X	X	X
w/Spring Brake Priority	X	X	X
Basic ABS Relay Valve w/Separate Spring Brake Control Valve	X	X	X

Diagnostic and Communication Tools

Handheld Info Center

The Haldex Info Center provides complete diagnostics using a digital display. It permits access to ABS fault codes, electronic odometer data and allows the setting of maintenance intervals. It also supports monitor and control of trailer auxiliary devices from the cab when used with a PLC Select ECU. This monitor and control of trailer auxiliary Systems can be used for preventive maintenance, warning and operational devices that improve productivity and lower cost of ownership. The Info Center's handheld portability offers a convenient addition as a toolbox diagnostic solution.



Haldex PC Diagnostic

The PLC PC Diagnostics is a computer-based program that allows you to diagnose the system's fault codes, odometer data and change trailer parameters. The program offers all the features of the Info Center plus an interface that enables the Notebook function, provides end-of-line tests with printouts and allows you to program the PLC Select ECU platforms.

Electronic Odometer Option

Operating in conjunction with either the PLC Select ECU or TRS ECU, Haldex has an alternative to conventional mechanical hub odometers, the new Electronic Odometer (e-ODOMETER). Its simple design allows access to trailer odometer readings at the press of a button. It's three tools in one compact, weatherproof package. Using the Haldex ABS to gather mileage information, it displays both total and trip mileage. In addition, the e-ODOMETER monitors and displays the ABS status so drivers can easily read and report a current active diagnostic code. With an



on-board battery, the e-ODOMETER operates without vehicle power. So, whether powered or not, you can check the odometer reading, easily access and/or reset the trip mileage or display an active diagnostic code with the press of the button. When the trailer is powered, the e-ODOMETER can also verify sensor readouts.

The economical tool mounts to the nose of the trailer for protection from damage, while the EGP cover adds protection with a level of data privacy. More accurate than conventional hub odometers, the e-ODOMETER restricts tampering since data is stored in the ECU.

Trailer Roll Stability System

Rollovers are costly and often result in serious injury and property damage. Reducing the possibility of rollovers is critical to driver safety and reduces costly expenses that are detrimental to the operation of your business. Now there is a way to reduce the potential for rollovers with the new Haldex Trailer Rollover Stability System (TRS).

The system, built on Haldex's newest 4S/2M ABS platform, provides the next

generation of high performance braking along with roll stability safety technology. TRS is designed for one to three or more axle trailers using an air suspension.

The system delivers superior braking performance by adjusting for the trailer conditions during normal and ABS braking events as well as reacting if conditions indicate a rollover is imminent.



For more information, see Trailer Rollover Stability Brochure L20578.

Haldex offers proprietary vehicle technology solutions to the global vehicle industry within specific niches. We focus on products to improve safety, the environment and vehicle dynamics.

We are enhancing our competitive capabilities and building long-term customer relationships through high performance, low total costs to the customer through the product's service life, ethical business practices and commitment to long-term partnerships. Haldex operations are divided into four business areas: Commercial Vehicle Systems, Hydraulic Systems, Garphyttan Wire and Traction Systems.

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