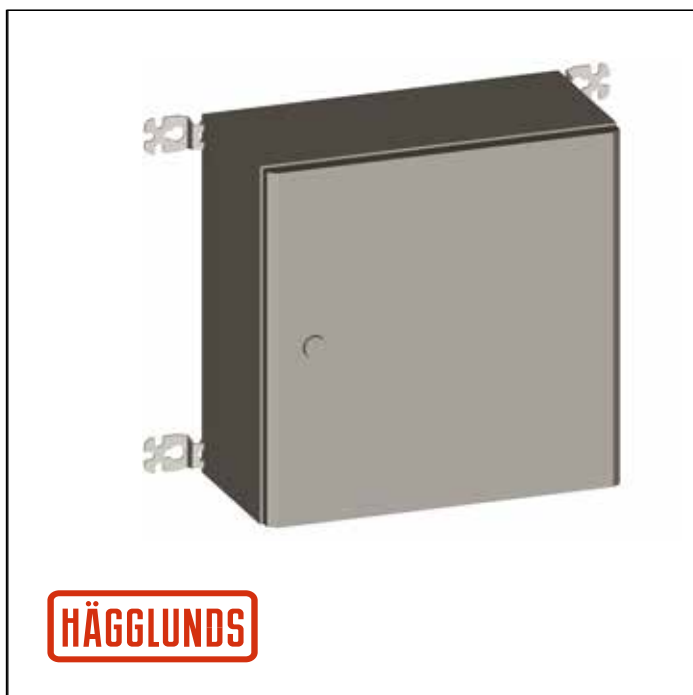


# Quick stop Electronic Control Hägglunds QECC



- ▶ Function for 2 VQCC valves

## Features

- ▶ Performance level PL d
- ▶ Safety integrity level SIL 2

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## 1 Ordering code

In order to identify Hägglunds equipment exactly, the following ordering code is used. These ordering codes should be stated in full in all correspondence e.g. when ordering spare parts.

### Example QECC:

<b>QEC</b>	<b>C</b>	<b>1</b>
<b>01</b>	<b>02</b>	<b>03</b>

01	<b>Quickstop electronic control</b>	<b>QEC</b>
02	<b>Version</b>	<b>C</b>
03	<b>Main voltage</b>	<b>1</b>
	Multi range, 1 phase AC 85-264 V/50-60 Hz (or 2 phase AC 176-550 V/50-60 Hz via selector switch)	

## 2 Functional description

The main blocks in the Quick stop box are two safety classified relays (one main safety relay with an extension module and one sub safety relay dedicated for the inductive sensors) and a power supply with 24 VDC output to give power to the Quick stop valves.

The Quick stop box can supply two Quick stop valves, each including two stop valve solenoids (with a sensor on each stop cartridge valve) and one bypass valve solenoid. A 2-channel quick stop actuator (actuator with two separate contacts/circuits) is to be connected to the Quick stop box. To enable the Quick stop box it must be reset, which is possible if all points below are fulfilled:

- both actuator circuits are closed (two-channel actuator)
- the inductive sensors indicate that all four stop cartridge valves are closed (deactivated)
- the main safety relays, incl the extension module, are ok

At normal drive (after drive started signal is received from control system) the outputs to the stop- and bypass solenoids of the Quick stop valves will be high (24 VDC) to have a closed hydraulic circuit.

If the actuator inputs are opened, the outputs to the Quick stop valve solenoids will be low (0 V) to stop the hydraulic flow through the hydraulic motors and bypass the pump flow via the valve.

Reset of quick stop function can be done after fully activated stop sequence if the sensors indicate that all four stop cartridge valves are closed (deactivated valves). Reset can be activated via the reset button on the Quick stop box front or via a closing contact to terminals. Outputs are available to indicate status and to interlock control system for hydraulic oil flow.

### Note!

Hägglunds QECC does not alone fulfill the requirements for category 3 according to DIN EN 1417.

### 3 Technical description

**Table 1: Terminal/fuse overview**

404	404	410	410	F3	F4	F5	F6	F7	F8	F9	F10															
801	803	805	807	813	815	817	819	821	823	827	829	863	893	895	897	901	903	905	907	909	911	F1	F2	L	N	PE
802	804	806	808	814	816	818	820	822	824	828	830	864	894	896	898	902	904	906	908	910	912					

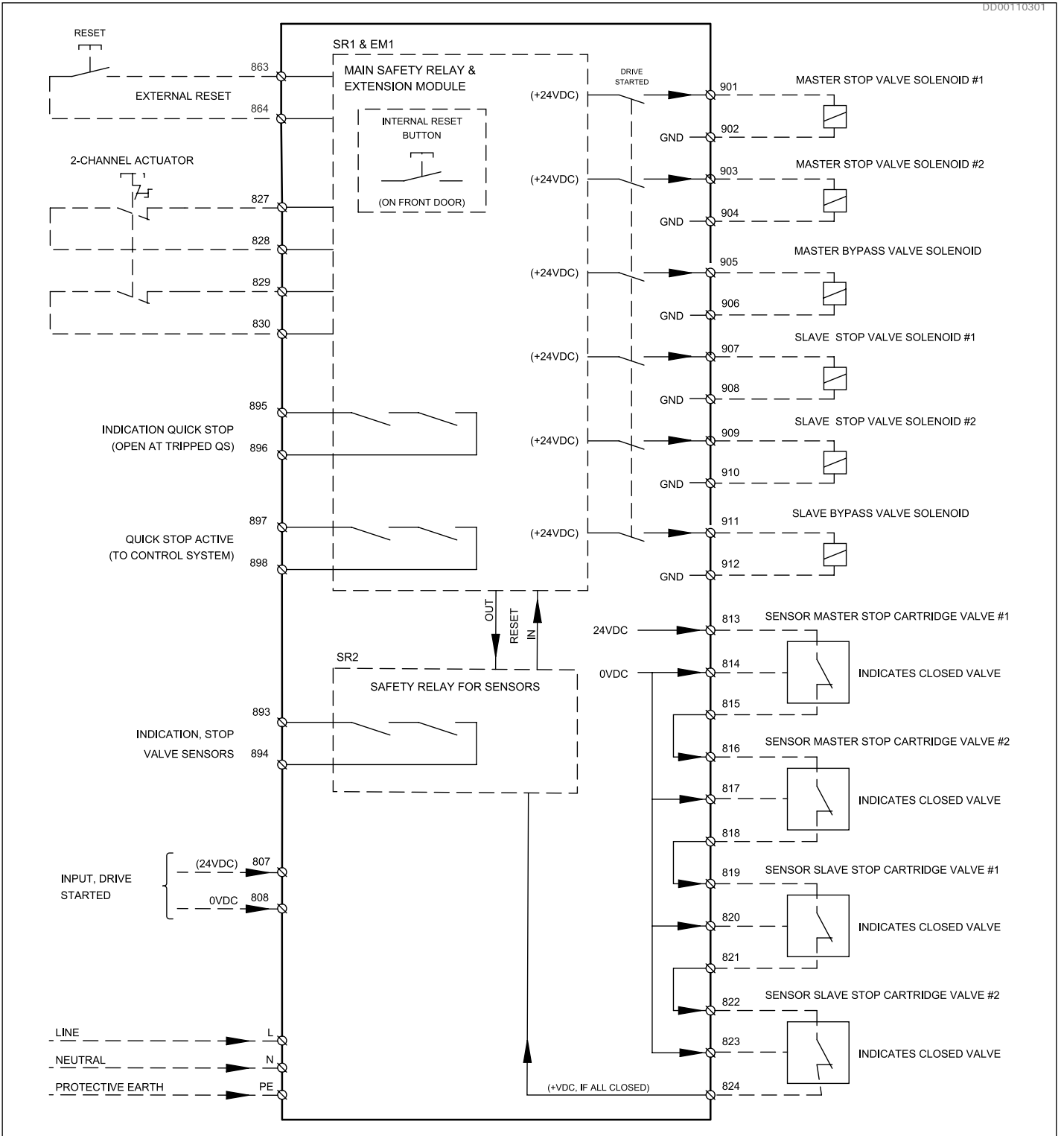
**Table 2: Fuse function**

Fuse	Function	Comment
F1	Main supply Line	4 A Slow blow
F2	Main supply Neutral	4 A Slow blow
F3	Main 24VDC supply	8 A Slow blow
F4	Control circuit supply	1 A Slow blow
F5	Master stop valve #1 supply	2 A Slow blow
F6	Master stop valve #2 supply	2 A Slow blow
F7	Master bypass valve supply	2 A Slow blow
F8	Slave stop valve #1 supply	2 A Slow blow
F9	Slave stop valve #2 supply	2 A Slow blow
F10	Slave bypass valve supply	2 A Slow blow

Table 3: Terminal description

Pin, TS1	Function	Comment
801	Spare terminals	
802		
803		
804		
805		
806		
807	Input Drive started (relay input)	+24 VDC in (1,3 W)
808	(Used by Spider control system, if any)	0 VDC
813	Inductive sensor Master stop cartridge valve #1	+24 VDC out, feeder to sensors
814		0 VDC
815	Inductive sensor Master stop cartridge valve #2	Signal in from sensor (forwarded to next sensor)
816		Feeder to sensor (from previous sensor)
817	Inductive sensor Slave stop cartridge valve #1	0 VDC
818		Signal in from sensor (forwarded to next sensor)
819	Inductive sensor Slave stop cartridge valve #2	Feeder to sensor (from previous sensor)
820		0 VDC
821	Inductive sensor Slave stop cartridge valve #2	Signal in from sensor (forwarded to next sensor)
822		Feeder to sensor (from previous sensor)
823	Quick stop actuator channel #1	0 VDC
824		+V in from sensor, if all sensors closed (ctrols SR2)
827	Quick stop actuator channel #2	Input for a 2-channel stop actuator (one actuator with two separate contacts/circuits)
828		
829		
830	External reset	Dry contact input (close to reset)
863		
864	Indication, stop cartridge valve sensors (contact closed if all sensors are closed)	Safety contact (potential-free)
893		
894	Indication, Quick stop (contact open at tripped quick stop)	Safety contact (potential-free)
895		
896	Quick stop active (contact open at tripped quick stop)	Safety contact (potential-free) (Used by Spider control system, if any)
897		
898	Mater stop valve solenoid #1	+24 VDC out
901		0 VDC
902	Mater stop valve solenoid #2	+24 VDC out
903		0 VDC
904	Master bypass valve solenoid	+24 VDC
905		0 VDC
906	Slave stop valve solenoid #1	+24 VDC out
907		0 VDC
908	Slave stop valve solenoid #2	+24 VDC out
909		0 VDC
910	Slave bypass valve solenoid	+24 VDC out
911		0 VDC
912	Main supply input :	Line
L		Neutral
N		Protective Earth
PE		

Pin, TS2	Function	Comment
404	Supply for internal use	0 VDC
404		
410		+24 VDC
410		



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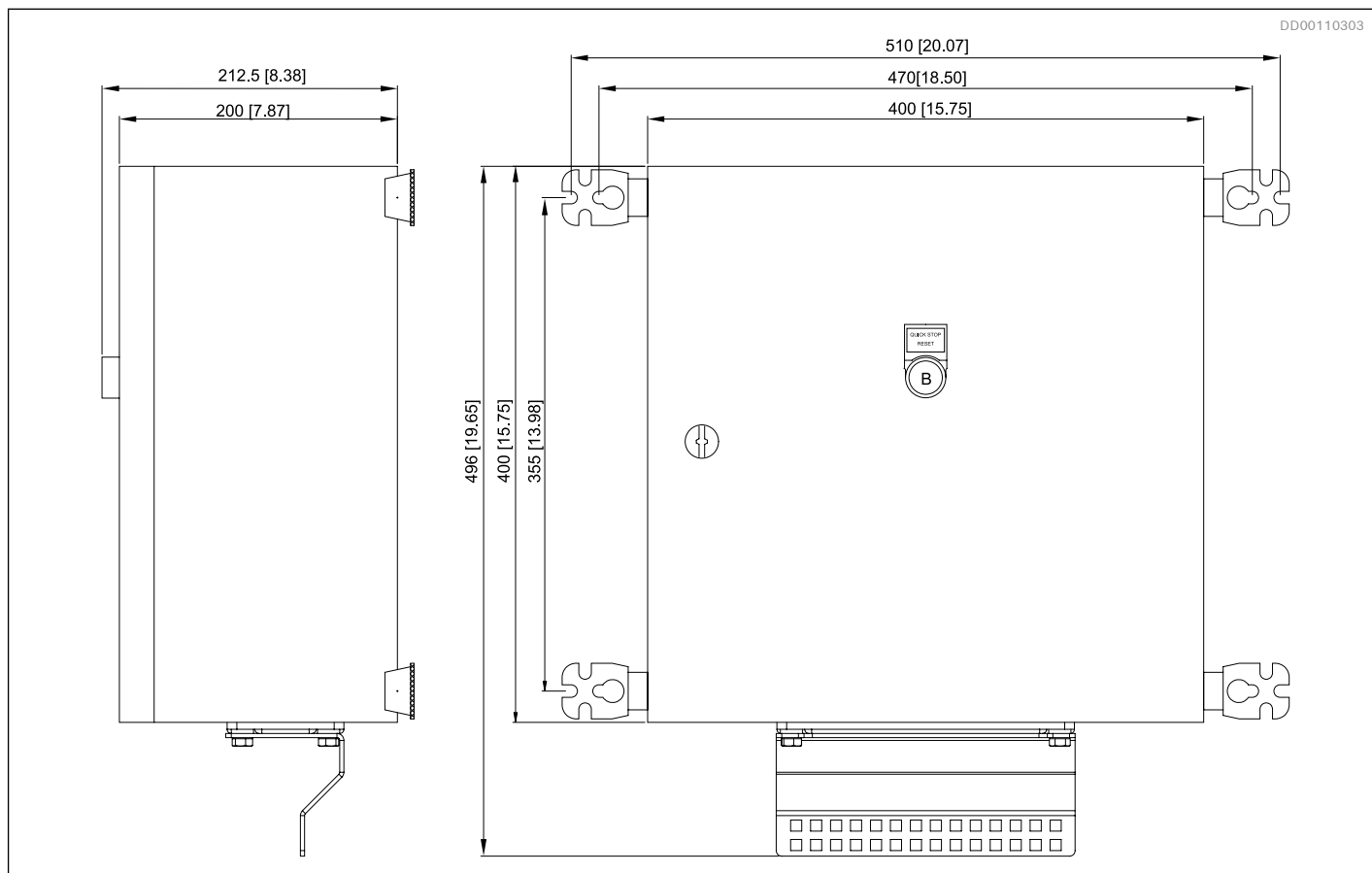
Fig. 1: Connections

## 4 Operating data

**Table 4: Operating data**

Supply voltage	Multi range input: - 1-phase voltage range: 85-264 VAC/50-60Hz - 2-phase voltage range: 176-550 VAC/50-60Hz	
Temp area	-10...+50 °C	14 ... + 122 °F
Protection	IP65	
Max load:		
Valve outputs	2A each	
Indication outputs	2A	
Safety	PLd or SIL2	







## 5 Unit dimensions



**Fig. 2: Dimensions**

## 6 Required and additional documentation

Table 5: Required and additional documentation

 Title	Document no	Document type
 Installation and maintenance manual, Hägglunds CA	<a href="#">RE 15305-WA</a>	Installation & Maintenance manual
 Installation and maintenance manual, Hägglunds CB	<a href="#">RE 15302-WA</a>	Installation & Maintenance manual
 Installation and maintenance manual, Hägglunds CBm	<a href="#">RE 15300-WA</a>	Installation & Maintenance manual
 Data sheet, Hägglunds VQCC 800/ QECC	<a href="#">RE 15365</a>	Data sheet
 Data sheet, Hägglunds VQCC 800	<a href="#">RE 15374</a>	Data sheet

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