

# QLS Pumps 301 and 311



The QLS301, 311 or 321 is a complete monitored lubrication system with low-level control for a maximum of 18 lubrication points. The 321 is specifically for trailers and semi-trailers. The QLS family includes pumps available with or without mounted SSV valves and are made for the standard high-pressure plastic tubing  $\varnothing 6 \times 1.5$ . The 1 liter reservoir pumps are available in 12 or 24 VDC and 120 and 230 VAC (not available on the 321 pumps). Refer to the pump identification codes for a complete listing of available pump configurations.



QLS 301

## Popular 301 Models for Grease Lubrication

Model No.	Valve Type	Valve Mount	Voltage	Cable
P30131211154	SSV6	back	12 DC	10 m (30 ft)
P30131411154	SSV6	back	24 DC	10 m (30 ft)
P30142611114	SSV8	bottom	120 AC	none
P30142811114	SSV8	bottom	230 AC	none
P30161211154	SSV12	back	12 DC	10 m (30 ft)
P30161411154	SSV12	back	24 DC	10 m (30 ft)
P30162611114	SSV12	bottom	120 AC	none
P30162811114	SSV12	bottom	230 AC	none
P30191211154	SSV18	back	12 DC	10 m (30 ft)
P30191411154	SSV18	back	24 DC	10 m (30 ft)
P30192611114	SSV18	bottom	120 AC	none
P30192811114	SSV18	bottom	230 AC	none

## Popular 311 Models for Oil Lubrication

Model No.	Valve Type	Valve Mount	Voltage	Cable
P31131211154	SSV6	back	12 DC	10 m (30 ft)
P31131411154	SSV6	back	24 DC	10 m (30 ft)
P31142611114	SSV8	bottom	120 AC	none
P31142811114	SSV8	bottom	230 AC	none
P31161211154	SSV12	back	12 DC	10 m (30 ft)
P31161411154	SSV12	back	24 DC	10 m (30 ft)
P31162611114	SSV12	bottom	120 AC	none
P31162811114	SSV12	bottom	230 AC	none
P31191211154	SSV18	back	12 DC	10 m (30 ft)
P31191411154	SSV18	back	24 DC	10 m (30 ft)
P31192611114	SSV18	bottom	120 AC	none
P31192811114	SSV18	bottom	230 AC	none

# QLS Pumps 301 and 311



QLS301, QLS311 with Remote Control

## Popular 301/311 Models for Remote Control

Model No.	Valve Type	Valve Mount	Voltage	Lubricant
P30131411110	SSV6	back	24 VDC	grease
P30161411110	SSV12	back	24 VDC	grease
P30191411110	SSV18	back	24 VDC	grease
P31131411110	SSV6	back	24 VDC	oil
P31161411110	SSV12	back	24 VDC	oil
P31191411110	SSV18	back	24 VDC	oil
650-40768-3	SSV8	bottom	120 VAC	grease
650-40768-4	SSV12	bottom	120 VAC	grease
650-40768-5	SSV18	bottom	120 VAC	grease
650-40765-4	SSV8	bottom	120 VAC	oil
650-40765-5	SSV12	bottom	120 VAC	oil
650-40765-6	SSV18	bottom	120 VAC	oil

# QLS Pumps 301 and 311



## QLS Technical Data

operating pressure QLS 301 QLS 311	205 bar (3000 psi) 80 bar (1160 psi)
reservoir	1 liter - clear plastic / (61 in <sup>3</sup> ) / 2 Lbs. with low-level control
output per outlet & cycle	approx. 0.2 cm <sup>3</sup> / 0.012 in <sup>3</sup>
operating voltage	24 and 12 VDC / 120 and 230 VAC, 50 / 60 Hz (not for QLS321)
operating current	12 VDC / 2.0 A, 24 VDC / 1.0 A, 120 VAC / 1.0 A, 230 VAC / 0.5 A
operating temperature	-25 to 70°C / -13 to 158°F
lubricants QLS 301 QLS 311	grease up to NLGI 2 oil
class of protection	NEMA 4, IP6K9K
number of outlets	1 up to 18 (depending on version)
number of cycles or run time QLS 301/311 remote control models	1 – 5 cycles for 12/24 VDC, for 120/230 VAC with SSV6/SSV8 1 – 3 cycles, for SSV12, SSV18 1 cycle max. 4 minutes run time
lubrication pause time QLS 301/311 remote control models	4 min. to 60 hours for VDC version, 20 min. to 60 hours for VAC version min. 4 minutes
timer memory	indefinite (EEPROM)

## Accessories for all QLS Series Pumps

Part No.	Description	Kit Size	Lube Fittings Included
550-36791-1	SSV6/8	inch size kit	yes
550-36971-2	SSV12	inch size kit	yes
550-36971-3	SSV18	inch size kit	yes
550-36970-1	SSV6/8	metric size kit	no
550-36970-2	SSV12	metric size kit	no
550-36970-3	SSV18	metric size kit	no

# QLS 301 and 311 Identification Code



## Pump Models Examples for Part Numbers

P3010081114  
P3016241154

**Pump 301 for Grease, Pump 311 for oil** .....P 301  
**SSV Divider Block**

External SSV 6, SSV 8 (or SSV and 18 without PCB)<sup>2)</sup>..... 0  
External, SSV 12, SSV 18<sup>2)</sup>..... 1  
SSV 6 back mounted.....3  
SSV 8 bottom mounted .....4  
SSV 12 .....6  
SSV 18 .....9

<sup>2)</sup>Note: for external metering device applications use only the appropriate SSV...KNQLS units.

### SSV Divider Block Mounting, Orientation of Divider Outlets

Without divider block..... 0  
Back mounted (vertical orientation)..... 1  
Bottom mounted <sup>3)</sup> (horizontal orientation)..... 2

<sup>3)</sup> Not for use in mobile or machine applications exposed to vibrations - refer to the "safety instructions"

### Operating Voltage

12 VDC<sup>1)</sup> .....2  
24 VDC<sup>1)</sup> .....4  
120 VAC<sup>1)</sup> (only with PCB).....6  
230 VAC<sup>1)</sup> (only with PCB).....8

<sup>1)</sup> Note: Standard 120 & 230 VAC pumps for industrial applications are equipped without connection cable. Pumps for mobile applications (12/24 VDC) can be equipped with a 10 m cable.

### Reservoir with Low-Level Control

1 liter reservoir with low-level..... 1

### Number of Possible Connectors

1A=1 connection, left, supply voltage, VDC, VAC, square-type plug.... 0  
1A=1 connection (bayonet), left, supply voltage, VDC, low-level or fault indication..... 2  
2A=2 connections, (1 connection left, supply voltage, VDC, VAC, 1 connection right, low-level or fault indication) square-type plug..... 1

### Type of Plug Connector

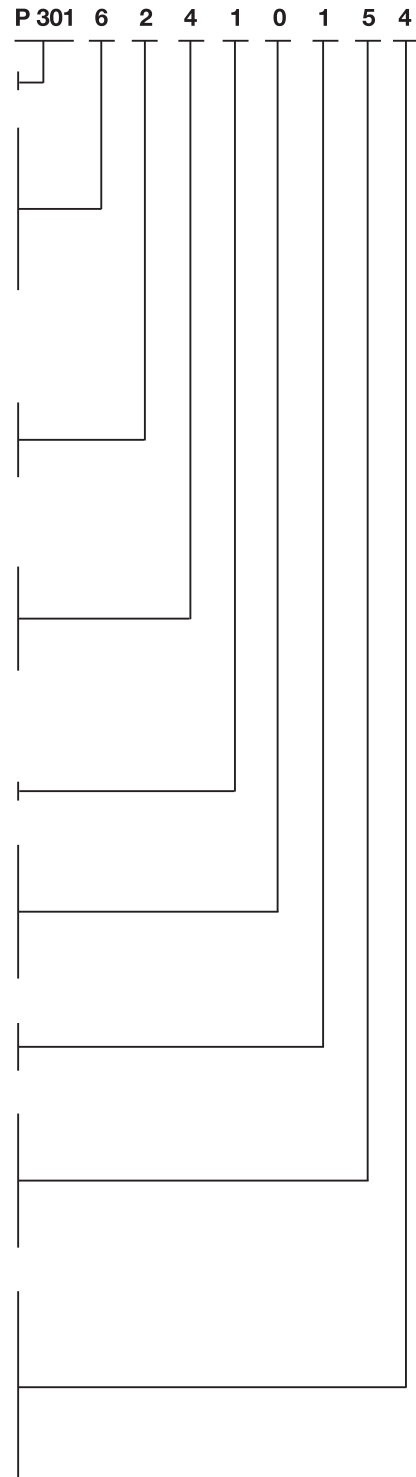
\* square-type plug acc. to DIN EN 175301-803 type A..... 1  
\*\* bayonet plug, DIN 72585-1, 4-pole..... 5

### Electrical Connections

with socket, without cable\* ..... 1  
with socket, with 10 m cable\* .....5  
with socket, with 10 m ADR cable\* ..... 6  
with socket (bayonet), with 10 m cable\*\* ..... 7  
with socket (bayonet), with 10 m ADR cable\*\* ..... 8

### PCB

none, only connection circuit board.....0  
PCB S4 for 12/24 VDC, programmable NO or NC contact, 1-5 cycles.. 4  
PCB S4 for 120 VAC, programmable NO or NC contact, 1-3 cycles for SSV 6/8, 1 cycle for SSV12/18..... 4  
PCB S4 for 230 VAC, programmable NO or NC contact, 1-3 cycles for SSV 6/8, 1 cycle for SSV12/18 ..... 4



### Accessory Kits:

#### Inch Size Kits

SSV6/8 Part No. 550-36971-1  
SSV12 Part No. 550-36971-2  
SSV18 Part No. 550-36971-3

#### Metric Size Kits

SSV6/8 Part No. 550-36970-1\*\*\*  
SSV12 Part No. 550-36972-2\*\*\*  
SSV18 Part No. 550-36973-3\*\*\*

\* together with square-type plug only

\*\* together with bayonet plug only

\*\*\* Lube fittings must be ordered separately

# Pump QLS 401



The QLS 401 is a complete monitored lubrication system with or without low-level control for up to 18 lubrication points. It is similar to the QLS 301, but incorporates a reservoir stirring paddle. The QLS family includes pumps available with or without a mounted SSV metering devices (valves) and are made for the standard high pressure plastic tubing. The 1 or 2 liter reservoir pumps are available in 12 or 24 VDC and 120 and 230 VAC. Refer to the pump selection guides for a complete listing of available pump configurations.

The pumps are available with integrated PCB for the control of pause and run times, or as an option without PCB.



QLS401

## Popular 401 Models for Lubrication *with low-level control*

Model No.	Valve Type	Valve Mount	Voltage	Cable
P40131201154	SSV6	back	12 DC	10 m (30 ft)
P40131401154	SSV6	back	24 DC	10 m (30 ft)
P40142601114	SSV8	bottom	120 AC	none
P40142801114	SSV8	bottom	230 AC	none
P40161201154	SSV12	back	12 DC	10 m (30 ft)
P40161401154	SSV12	back	24 DC	10 m (30 ft)
P40162601114	SSV12	bottom	120 AC	none
P40162801114	SSV12	bottom	230 AC	none
P40191201154	SSV18	back	12 DC	10 m (30 ft)
P40191401154	SSV18	back	24 DC	10 m (30 ft)
P40192601114	SSV18	bottom	120 AC	none
P40192801114	SSV18	bottom	230 AC	none

## Popular 401 Models for Lubrication *without low-level control*

back	Valve Type	Valve Mount	Voltage	Cable
P40131211154	SSV6	back	12 DC	10 m (30 ft)
P40131411154	SSV6	back	24 DC	10 m (30 ft)
P40142611114	SSV8	bottom	120 AC	none
P40142811114	SSV8	bottom	230 AC	none
P40161211154	SSV12	back	12 DC	10 m (30 ft)
P40161411154	SSV12	back	24 DC	10 m (30 ft)
P40162611114	SSV12	bottom	120 AC	none
P40162811114	SSV12	bottom	230 AC	none
P40191211154	SSV18	back	12 DC	10 m (30 ft)
P40191411154	SSV18	back	24 DC	10 m (30 ft)
P40192611114	SSV18	bottom	120 AC	none
P40192811114	SSV18	bottom	230 AC	none

# Pump QLS 421



The QLS 421 is a complete lubrication system for up to 18 lubrication points. The QLS 421 is especially designed for the lubrication of truck trailers. The pump is only available with a mounted SSV metering device (valve). The pumps are made for standard high pressure plastic tubing. The 1 liter reservoir pumps are available in 12 or 24 VDC. Refer to the pump selection guides for a complete listing of available pump configurations.



QLS421

## Popular QLS 421 Models for Grease Lubrication of Trailers

Model No.	Valve Type	Valve Mount	Voltage	Cable
P42131210531	SSV6	back	12 DC	6 m (9 ft)
P42131410531	SSV6	back	24 DC	6 m (9 ft)
P42161210531	SSV12	back	12 DC	6 m (9 ft)
P42161410531	SSV12	back	24 DC	6 m (9 ft)
P42191210531	SSV18	back	12 DC	6 m (9 ft)
P42191410531	SSV18	back	24 DC	6 m (9 ft)

# QLS 401 and 421 Pumps



## QLS 401 and 421 Technical Data

operating pressure QLS 401 / 421	max. 205 bar
reservoir size	1 and 2 liter - clear plastic - with stirring paddle
output per outlet & cycle	approx. 0.2 cm <sup>3</sup> (0.012 in <sup>3</sup> )
operating voltage	12 & 24 VDC / 120 & 230 VAC, 50 / 60 Hz (not for QLS 421)
operating current	12 VDC / 2.0 A, 24 VDC / 1.0 A, 120 VAC / 1.0 A, 230 VAC / 0.5 A
operating temperature	-25 to 70 °C
lubricants QLS 401 / 421	grease up to NLGI 2
class of protection	IP 6K9K, NEMA 4
number of outlets	1 to 18
number of cycles or run time QLS 401	1-5 cycles for 12/24 VDC; 1-3 cycles for 120/230 VAC with SSV6 & 8
QLS 421	1 cycle for SSV12 & 18
QLS external control	1 to 32 minutes max. 4 minutes
pause times QLS 401	4 minutes to 60 hours for VDC versions; 20 minutes to 60 hours for VAC
QLS 421	1 hour to 16 hours
QLS external control	min. 4 minutes
timer memory	indefinite (EEPROM)

## Accessory Kits for QLS Systems

Part No.	Description	Type of Kit	Lube Fittings Included
550-36791-1	SSV6/8	inch	yes
550-36971-2	SSV12	inch	yes
550-36971-3	SSV18	inch	yes
550-36970-1	SSV6/8	metric	no
550-36970-2	SSV12	metric	no
550-36970-3	SSV18	metric	no

# QLS 401 Identification Code



## Pump Models Examples for Part Numbers

P40100800114  
P40162412574

	P	4	0	1	6	2	4	1	1	1	5	4
<b>Pump 401 for Grease</b> .....	P	4	0	1								
<b>SSV Divider Block</b>												
External SSV 6, SSV 8 (or SSV and 18 without PCB) <sup>2)</sup> .....					0							
External, SSV 12, SSV 18 <sup>2)</sup> .....					1							
SSV 6 back mounted.....					3							
SSV 8 bottom mounted.....					4							
SSV 12 .....					6							
SSV 18 .....					9							
<sup>2)</sup> Note: for external metering device applications use only the appropriate SSV...KNQLS units.												
<b>SSV Divider Block Mounting, Orientation of Divider Outlets</b>												
Without divider block.....					0							
Back mounted (vertical orientation).....					1							
Bottom mounted <sup>3)</sup> (horizontal orientation) .....					2							
<sup>3)</sup> Not for use in mobile or machine applications exposed to vibrations - refer to the "safety instructions"												
<b>Operating Voltage</b>												
12 VDC <sup>1)</sup> .....					2							
24 VDC <sup>1)</sup> .....					4							
120 VAC <sup>1)</sup> (only with PCB).....					6							
230 VAC <sup>1)</sup> (only with PCB).....					8							
<sup>1)</sup> Note: Standard 120 & 230 VAC pumps for industrial applications are equipped without connection cable. Pumps for mobile applications (12/24 VDC) can be equipped with a 10 m cable.												
<b>Reservoir with &amp; without Low-Level Control</b>												
1 liter reservoir without low-level control.....					0							
1 liter reservoir with low-level control .....					1							
2 liter reservoir without low-level control.....					2							
2 liter reservoir with low-level control .....					3							
<b>Number of Possible Connectors</b>												
1A=1 connection, left, supply voltage, VDC, VAC, square-type plug.....					0							
1A=1 connection (bayonet), left, supply voltage, VDC, low-level or fault indication.....					2							
2A=2 connections, (1 connection left, supply voltage, VDC, VAC, 1 connection right, low-level or fault indication) square-type plug.....					1							
<b>Type of Plug Connector</b>												
* square-type plug acc. to DIN EN 175301-803 type A.....					1							
** bayonet plug, DIN 72585-1, 4-pole.....					5							
<b>Electrical Connections</b>												
with socket, without cable*.....					1							
with socket, with 10 m cable*.....					5							
with socket, with 10 m ADR cable*.....					6							
with socket (bayonet), with 10 m cable*.....					7							
with socket (bayonet), with 10 m ADR cable*.....					8							
<b>PCB</b>												
none, only connection circuit board.....					0							
PCB S4 for 12/24 VDC, programmable NO or NC contact, 1-5 cycles.....					4							
PCB S4 for 120 VAC, programmable NO or NC contact, 1-3 cycles for SSV 6/8, 1 cycle for SSV12/18.....					4							
PCB S4 for 230 VAC, programmable NO or NC contact, 1-3 cycles for SSV 6/8, 1 cycle for SSV12/18 .....					4							

\* together with square-type plug only

\*\* together with bayonet plug only

Subject to change



# QLS 421 Identification Code



**Pump Models**  
**Examples for Part Numbers**

**P42131402531**  
**P42162402531**

