Function and con f guration

Type WE valves are solenoid operated directional spool valves. They control the start, stop and direction of f ow.

The directional control valves consist of housing (1), one or two solenoids (2), the control spool (3), and one or two return springs (4).

In the de-energized condition the control spool (3) is held in the neutral or initial position by means of return springs (4) (except for impulse spools).

The control spool (3) is actuated via wet pin solenoids (2).

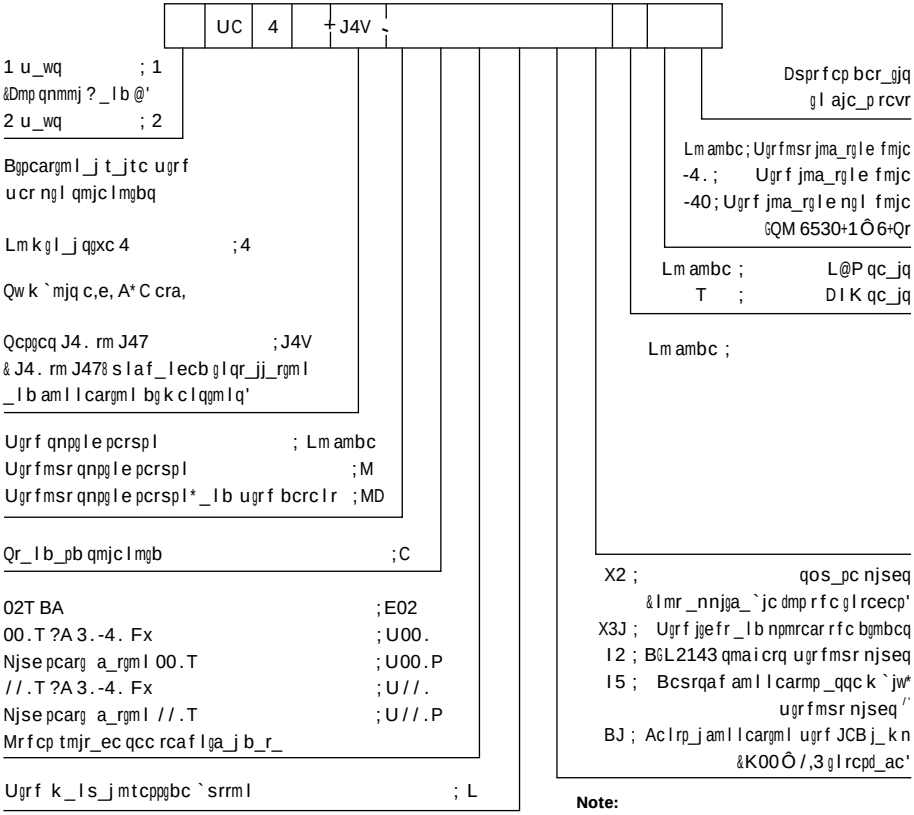
To ensure proper operation, care must be taken that the pressure chamber of the solenoid is f lled with oil.

The control spool(3) is moved to the expected position by solenoid(2) and pushing rod(5). This gives free-f ow from P to A and B to T or P to B and A to T.

When solenoid (2) is de-energized, the control spool (3) is returned to its initial position by means of the return springs (4).

The solenoids may also control the control spool (3) by an optional override button(6) under the

Ordering code



Note:
/' I5 Bcsrqaf aml l carmp _qqc k `jw
Mljw dmp /0T _lb 02T,

Technical data

Dgvg l e nmqgrgm l			Mnrgm l _j
C l tgpm l k c l r rc k ncp_rspc p_ l ec		,	+1 . rm) 3 . &L@P qc_j'
			+0 . rm) 3 . &D l K qc_j'
Ucgefr	Qg l ejc qmjc l mgb	ie	/,3
	Bms `jc qmjc l mgbq	ie	0,.
K_v,mncp_rg l e npcqqspc	Nmpr ?*@*N	`_p	13 .
	Nmpr R	`_p	0/ . &BA'*/4 . &?A'* u fc l r fc mncp_rg l e npcqqspc cvaccb r fc ncp k gqqgm l t_jsc* nmpr R k sqr `c sqcb _q bp_g l nmpr dmp qnmmj qw k `mj ? _ l b @
K_v, mu+p_rc		J-k g l	6 . &BA'* 4 . &?A'
Djmu apmqq qcargm l &qugrafg l e l csrp_j nmqgrgm l '		k k°	dmp qw k `mj O 4 # md l m k g l _j apmqq qcargm l
		k k°	dmp qw k `mj U 1 # md l m k g l _j apmqq qcargm l
Djsgb			K g l cp_j mgj qsgr_`jc dmp L@P _ l b D l K qc_j
			N f mqn f_rc cqrcp dmp D l K qc_j
Djsgb rc k ncp_rspc p_ l ec		,	+1 . rm) 6 . &L@P qc_j'
			+0 . rm) 6 . &D l K qc_j'
Tgqamqgrw p_ l ec		k k°-q	0,6 rm 3 . .
Bcepcc md am l r_k g l _rgm l			K_vg k s k ncp k gqqg`jc bcepcc md sgb am l r_k g l _rgm l 8 Aj_qq 7, L?Q /416 mp 0 . -/6-/3* GQM22 . 4

Electric data

Rwnc md tmjr_ec			BA	?A
Sq_`jc tmjr_ec		T	/0*02*06'*26*74*/ / . *0 . 3*00 .	/ / . * /05* 00 .
Ncp k gqqg`jc tmjr_ec &bctg_rgm l '		#	Qr_ l b_pb qmjc l mgb8) / . | +/3	
Nmucp am l qs k nrgm l		U	Qr_ l b_pb qmjc l mgb8 1 .	
Fmjbg l e nmucp		T?	+	3 .
K_ig l e a_n_agrw		T?	+	00 .
Bsrw			Am l rg l smsq umpig l e	
Qugrafg l e rg k c rm GQM 42 . 1	ML	k q	03 rm 23	/ . rm 0 .
	MDD	k q	/ . rm 03	/3 rm 2 .
Qugrafcb dpcosc l aw		rg k cq-f	rm /3 . . .	rm 50 . .
Rwnc md npmrcargm l rm BGL 2 . . 3 .			GN43 &X2* X3J njse'* GN45 &I 5 Bcsrqaf'	
K_v, amgjq rc k ncp_rspc		,	) /3 .	) /6 .

Caution: U fc l am l l car g l e ugpcq* npmncpjw am l l car r fc NC am l bsarmp &NC ',

& Dmp mr fcp rwnc tmjr_ec njc_qc am l qsjr sq, '

Performance limits (Measured at ϑ_{oil}=40 ± 5 , using HLP46)

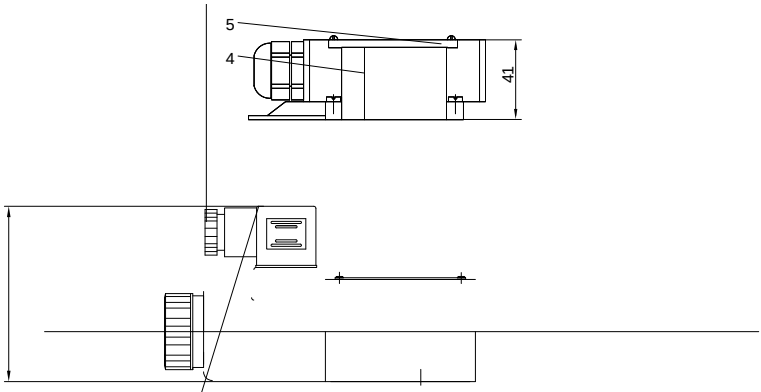
The specified switching performance limits are valid with two directions of flow (e.g. from P to A and simultaneous return flow from B to T).
Due to the flow forces acting within the valve, the permissible switching performance limit can be significantly lower with only one direction of flow (e.g. from P to A, with port B being closed)!
The switching performance limit was determined with the solenoid at operating temperature, at 15 % under-voltage and without tank pre-loading.

Solenoid DC		Solenoid AC-50Hz		Solenoid AC-60Hz	
Curve	Spool symbol	Curve	Spool symbol	Curve	Spool symbol
1	A, $B_{1)}$	11	A, $B_{1)}$	19	A, $B_{1)}$
2	V	12	V	20	V
3	A, B	13	A, B	21	A, B
4	F, P	14	F, P	22	

Notes: [1)] With manual override; [2)] Return flow from actuator to tank.

Solenoid DC	
Curve	Solenoid voltage(V)
1 to 10	12, 24, 48, 96, 205

Solenoid AC		
Curve	Solenoid voltage	
11 to 18	W110	110V, 50Hz
	W127	127V, 50Hz
	W230	230V, 50Hz


5
4
41