Underspeed control relay   DVLR2/LVLR2

- ■ **Detection and control of underspeed, stopping or jamming**
- ■ **Data collected by contact or voltage, or by three-wire or NAMUR sensor**
- ■ **Delay between input pulses adjustable between 0.1 seconds and 10 minutes in 4 sub-ranges**
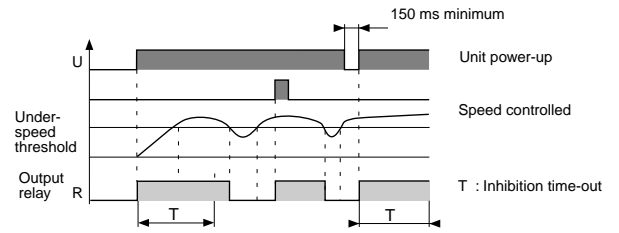- ■ **Delay on energisation adjustable from 0.2 to 20 s on front face**

Operating principle

1 - Underspeed control without latching ("Memory off") :
During normal operation, the time between two pulses should be less than the time displayed on the front face.
The delay is immediately reset each time a pulse is received and the output relay remains in the de-energised state.
When the time between two pulses transmitted by a sensor is greater than the time displayed on the front face, the output relay immediately changes and beats at the frequency of the duration between two pulses and for the duration of the displayed value. This can trigger an alarm or stop the machine.
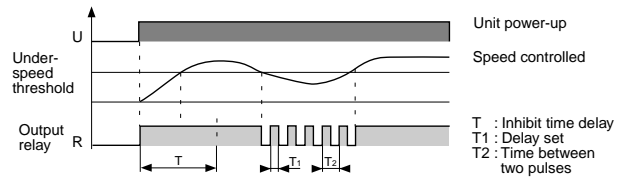
2 - Underspeed control with latching ("Memory on") :
When the time between two pulses transmitted by a sensor is greater than the time displayed on the front face, the output relay immediately de-energises and remains latched in fault mode.
To reset the relay, close external contact S_2 by connecting the +24 V and Y1 (5 and 8) terminals or cut the power supply to the unit for at least 150 ms.
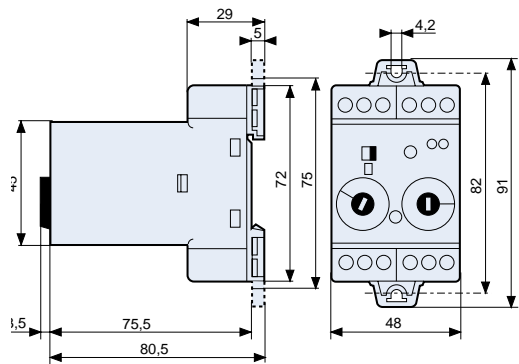

Note :
- The delay on energisation, adjustable from 0.2 to 20 s on the front face, allows the relay to be inhibited while the system comes up to speed. If a longer time is needed for start-up, close contact S2.
- One red LED indicates the state of the output relay : LED "ON" = Relay "ON".
- A green LED indicates presence of the power supply.

Type

	DVLR2	
DIN rail or face mounting	DVLR2	
11-pin plug-in		LVLR2

Part numbers (and voltages)

|		
24 V ⎓	84 894 213	84 894 223
24 V ∼	84 894 212	84 894 222
48 V ⎓	84 894 215	—
48 V ∼	84 894 214	84 894 224
110 V ∼	84 894 216	84 894 226
230 V ∼	84 894 217	84 894 227
240 V ∼	84 894 219	—

Technical specification

Supply voltage Un	Galvanic isolation by transformer, class II VDE 0551	230 V, 110 V, 48 V, 24 V ∼ - 50/60 Hz
	No galvanic isolation	24V ⎓
Supply tolerance		0.85 • 1.15 x Un
Maximum power consumption		3 VA
Repetition accuracy with constant parameters		± 0.5 %
Drift with temperature variations		± 0.1 % / °C
Delay on energisation		0.2 s • 20 s ± 30 %
Minimum reset time		200 ms
Time delay selection in 4 sub-ranges via selector switch on front face		●
Timing ranges	A	0.1 s - 1 s
	B	1 s - 10 s
	C	0.1 min - 1 min
	D	1 min - 10 min
With/without latching mode selectable by switch on front face		●
Input		PNP 24 V ⎓ / 20 mA max NAMUR 8.2 V ⎓ / 8 mA Voltage 30 V ⎓ max Contact
Input resistance		16 kΩ, except for NAMUR 1 kΩ
High level	min.	3 V
	max.	30 V
Low level	min.	0 V
	max.	1 V
Minimum pulse times		5 ms
Minimum time between 2 pulses		5 ms
External inhibit/reset contact S2 must be isolated from all other circuits		●
Operating voltage		24 V ⎓
Switched current		3 mA ⎓
Output relay (to meet AC1 requirements, resistive load)		1 AgCdO changeover, 10 A ∼ max
Temperature limits	Use	-10 • +60 °C
	Stored	-20 • +70 °C
Weight		200 g

- 1/2 -

Crouzet

Dimensions

D2 clip-on casing
Rear connections

L2 plug-in casing
for 11-pin socket
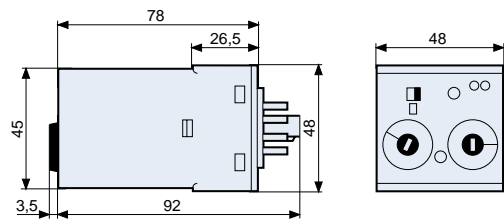
Wiring diagrams and applications

DVLR2 / LVLR2
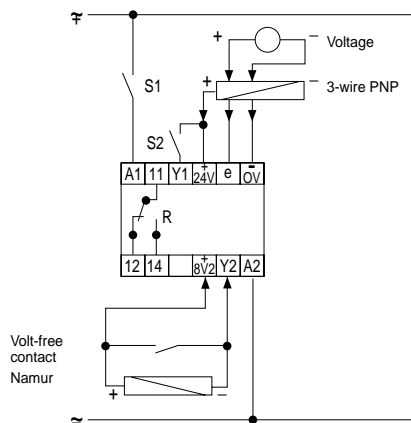
	A1	A2	11	12	14	Y1	Y2	+24 V	+8 V2	e	0
DVLR2	A1	A2	11	12	14	Y1	Y2	+24 V	+8 V2	e	0
LVLR2	2	10	1	4	3	8	11	5	9	6	7

Crouzet