Product data sheet

Specifications

speed control relay, Harmony Control Relays, 5A, 1CO, 24...240V AC DC

RM35S0MW

Main

Range of product	Harmony Control Relays
Relay type	Speed control relays
Product or component type	Speed control relay
Relay name	RM35S
Relay monitored parameters	Overspeed Underspeed
Time delay range	0.6...60 s adjustable on energisation delay (tolerance: 0...10 % of the full scale value)
Switching capacity in VA	1250 VA
Minimum switching current	10 mA at 5 V DC
Maximum power consumption in VA	5 VA AC
Measurement range	0.05...0.5 s 0.5...5 min 1...10 min 1...10 s 0.5...5 s 0.1...1 s 0.1...1 min
Utilisation category	AC-12 conforming to IEC 60947-5-1 AC-13 conforming to IEC 60947-5-1 AC-14 conforming to IEC 60947-5-1 AC-15 conforming to IEC 60947-5-1 DC-12 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1 DC-14 conforming to IEC 60947-5-1
Measurement range	0.05...600 s
time delay	Adjustable 0.6...60 s Ti- inhibition time delay upon startup

Complementary

rest time in memory mode	50 ms contact S2 in memory mode on time delay 1 s supply Un in memory mode on time delay
Maximum switching voltage	250 V AC/DC
[Un] rated nominal voltage	24...240 V AC/DC 50/60 Hz, non self-powered
Supply voltage limits	20.4…264 V AC/DC
Maximum power consumption in W	3 W DC
Width	35 mm
Output contacts	1 C/O
Contacts material	Cadmium free
nominal output current	5 A

delay at power up	0.05 s
Hysteresis	5 % of threshold
Measurement accuracy	+/- 10 % of the full scale value
Repeat accuracy	+/- 0.5 % for input and measurement circuit +/- 0.5 % for time delay
Measurement error	+/- 0.1 %/°C with temperature variation < +/- 1 % over the whole range with voltage variation
Input frequency	0.0017…20 Hz
Response time	15 ms max (on crossing the threshold)
Polarity	Reversible polarity on DC supply
Threshold setting	10...100 %
supply voltage for sensor	11.5...12.5 V
Maximum supply current for sensors	40 mA for < 24 V AC at 25 °C 40 mA for < 24 V DC at 25 °C 50 mA for 24...240 V AC 50 mA for 24...240 V DC
Impulse duration	>= 5 ms high state >= 5 ms low state
Input compatibility	3-wire sensor (E1) PNP or NPN, 12 V, 50 mA NAMUR sensor (E2), 12 V, 1.5 kOhm Voltage input (E1), 0...30 V, 9.5 kOhm, high state >= 4.5 V low state <= 1 V Volt-free contact input (E1), 12 V, 9.5 kOhm
Marking	CE : EMC 89/336/EEC CE : 73/23/EEC
Overvoltage category	III conforming to IEC 60664-1
Insulation resistance	> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5 > 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60664-1
[Ui] rated insulation voltage	250 V conforming to IEC 60664-1
operating voltage tolerance	- 15 % + 10 % Un
Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without derating
Connections - terminals	Screw terminals, 1 x 0.5...1 x 4 mm² (AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) flexible with cable end
Tightening torque	0.6…1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	1 LED green for power ON 1 LED yellow for inhibit 1 LED yellow for relay (R)
Mounting support	35 mm symmetrical DIN rail conforming to IEC 60715
Electrical durability	100000 cycles
Mechanical durability	30000000 cycles

Operating rate	<= 360 operations/hour full load
Control type	Without test button

Environment

Immunity to microbreaks	50 ms
Electromagnetic compatibility	Emission standard for industrial environments conforming to IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to IEC 61000-6-3 Immunity for industrial environments conforming to NF EN/IEC 61000-6-2
Standards	NF EN 60255-6 IEC 60255-6
Product certifications	C-Tick GOST UL GL CSA
Ambient air temperature for storage	-40…70 °C
Ambient air temperature for operation	-20…50 °C
Relative humidity	95 % at 55 °C conforming to IEC 60068-2-30
Vibration resistance	0.35 mm (f= 5…57.6 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1 1 gn (f= 57.6…150 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1
Shock resistance	15 gn for 11 ms conforming to IEC 60255-21-1
IP degree of protection	IP20 (terminals) conforming to IEC 60529 IP30 (casing) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1
Dielectric test voltage	2 kV AC 50 Hz
Non-dissipating shock wave	4 kV

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.4 cm
Package 1 Width	7.4 cm
Package 1 Length	9.4 cm
Package 1 Weight	130.0 g
Unit Type of Package 2	S03
Number of Units in Package 2	48
Package 2 Height	30.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	7.181 kg

Contractual warranty

Warranty	18 months

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	59
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	5e3fdf99-611b-4d07-ad17-6eba84ab488b
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Use Again

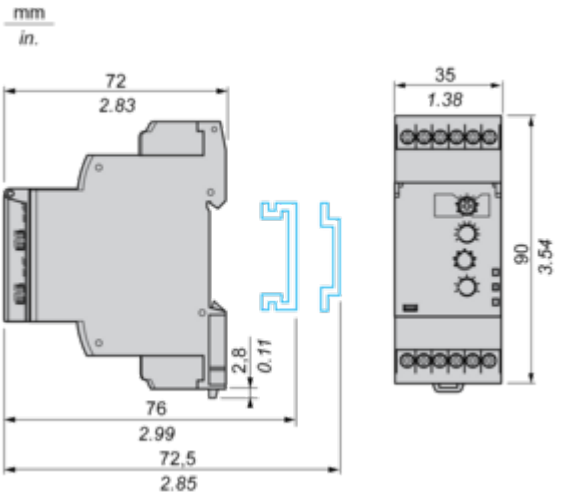
Repack and remanufacture

End of life manual availability	End of Life Information
Take-back	No

Dimensions Drawings

Speed Control Relays

Dimensions and Mounting

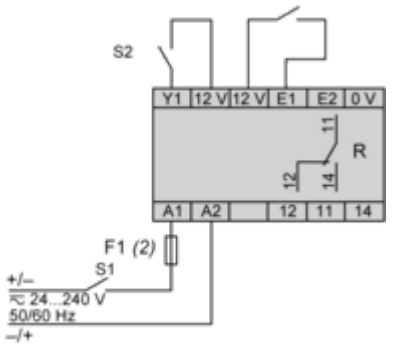


Connections and Schema

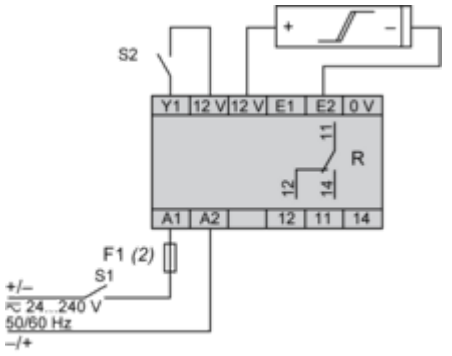
Speed Control Relays

Wiring Diagrams

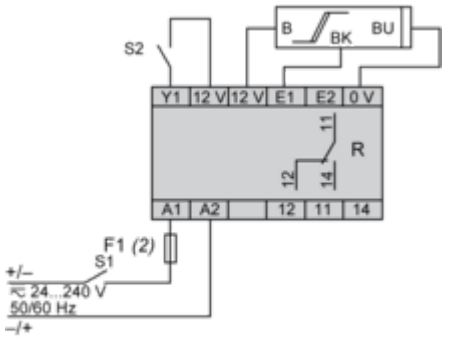
Contact input



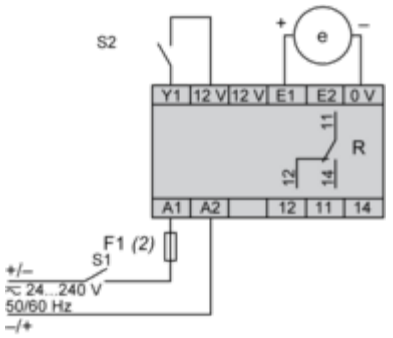
(2) A quick-blow fuse or circuit-breaker.
S2 Inhibit - Reset
Namur proximity sensor input



(2) A quick-blow fuse or circuit-breaker.
S2 Inhibit - Reset
NPN/PNP sensor input



(2) A quick-blow fuse or circuit-breaker.
S2 Inhibit - Reset
0-30 V voltage input



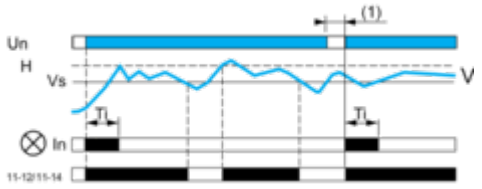
(2) A quick-blow fuse or circuit-breaker.
S2 Inhibit - Reset

Technical Description

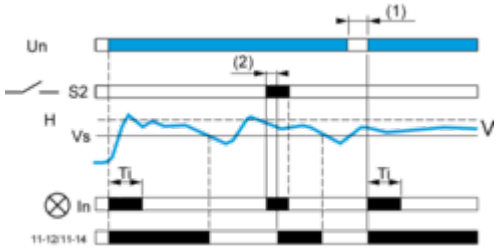
Function Diagrams

Underspeed Control

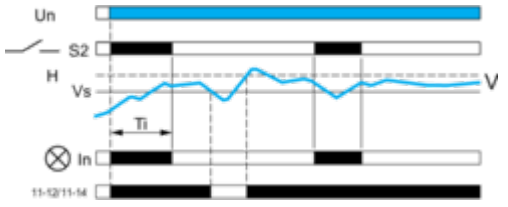
Without memory ("No Memory" mode)



With memory ("Memory" mode)

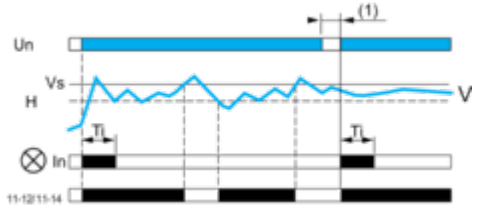


With inhibition by S2 (“Inhib./S2” mode)

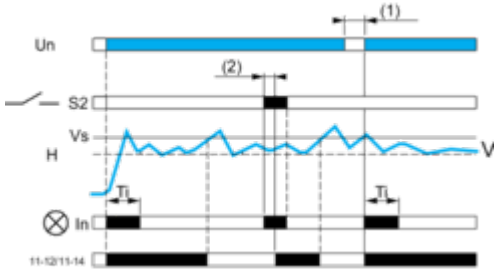


Overspeed Control

Without memory ("No Memory" mode)



With memory ("Memory" mode)



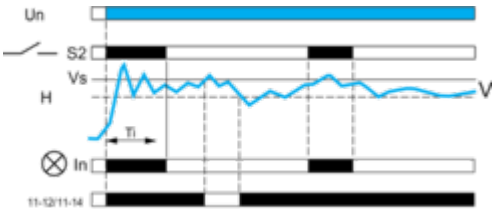
Legend

Ti Starting inhibition time delay

Un Supply voltage
V Monitored speed
H Hysteresis
Vs Overspeed threshold
S2 Inhibition external contact
In LED indicating the inhibition status
(1) Power break to reset the output relay
(2) S2 contact closure to make the output relay return to normal state
11-12/11-14 Output relay connections
Relay status: black color = energized.

NOTE: In "Memory" mode, the relay opens after the time delay and stays in that position when crossing of the threshold is detected. The power supply voltage must be switched off to reset the product.

With inhibition by S2 (“Inhib./S2” mode)



Technical Illustration

Dimensions

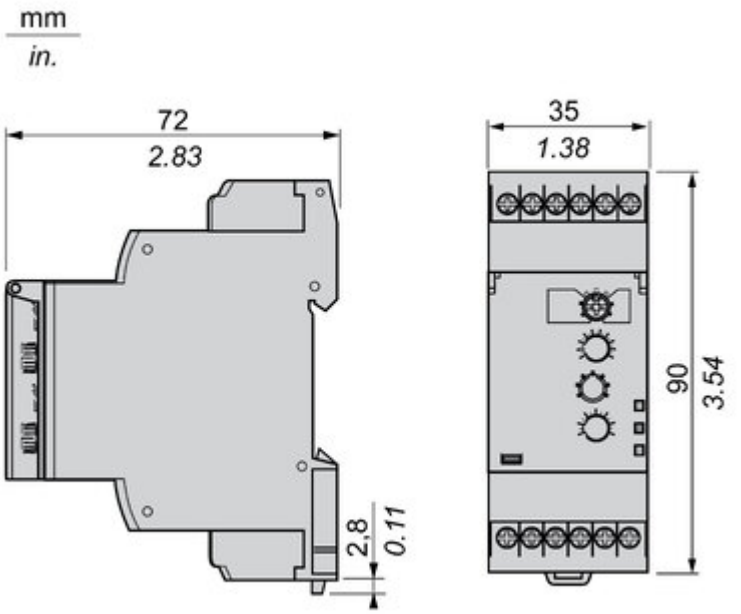
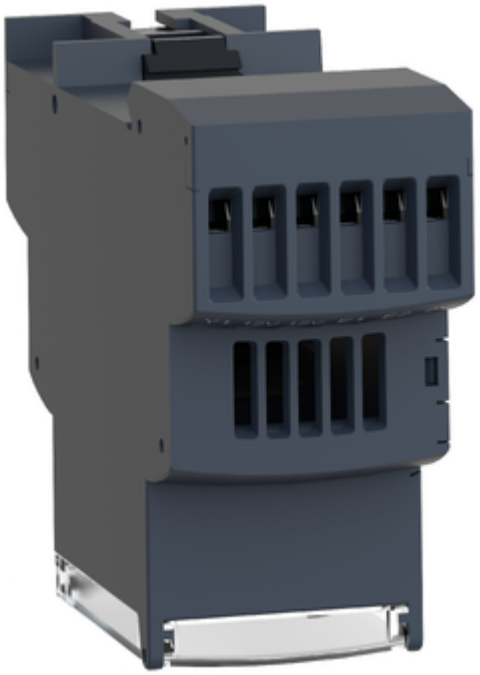
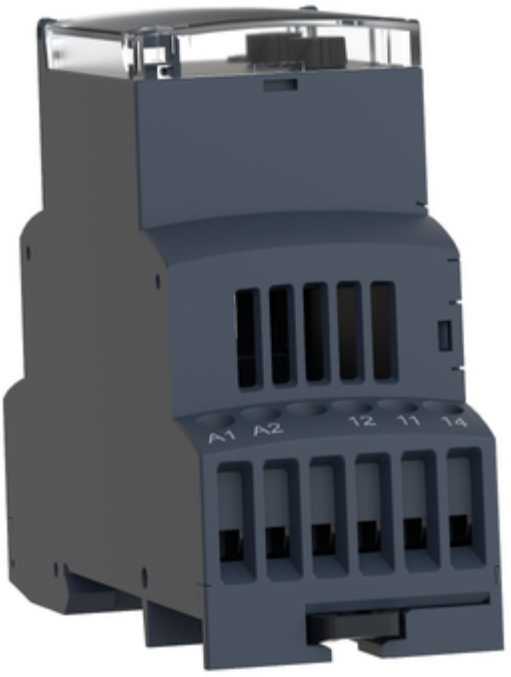


Image of product / Alternate images

Alternative




RM35TM250MW
T1 T2 Y1 L1 L2 L3
PTC DIN 44081
A1 A2 11 14 21 24
Use copper conductors only


A1
A2
12
11
14