

# IC 901

single stage temperature controller



## Description

IC 901 controllers have one point of intervention only and can be used both for heating and cooling applications. These controllers also have an input for the PTC thermostatic probe (the NTC input can be selected with a parameter) and a relay output for management of the load. The values measured by the probes are displayed with two digits and sign. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory.

Probe	Measurement range (°C)	Display
NTC	-50...110,0	-50...99
PTC	-55...150,0	-50...99

Relay output	Amp. capacity*	Hp power
Regulation	8 (3)	1/2
Regulation	15	1
Regulation	20	2

\*Maximum rating varies according to the type of terminal block used and the applicability of standards.

## Technical Data

Front panel protection: IP65

Casing: plastic in PC+ABS UL94V-0 resin, polycarbonate glass, thermoplastic resin keys

Front panel dimensions: 32x74 mm, depth 60 mm

Mounting: panel-mounting, with 29x71 mm (+0.2/-0.1mm) drilling template

Connections: screw terminals for <2,5mm<sup>2</sup> (one lead per bracket, in compliance with VDE regulations)

Operating temperature: -5...55°C

Storage temperature: -30...85°C

Operating environment humidity: 10...90% RH (non condensing)

Storage environment humidity: 10...90% RH (non condensing)

Digital output: refer to attached table

Analogue input: refer to attached table

Serial: TTL port for Copy Card

Display: 2 digits plus sign

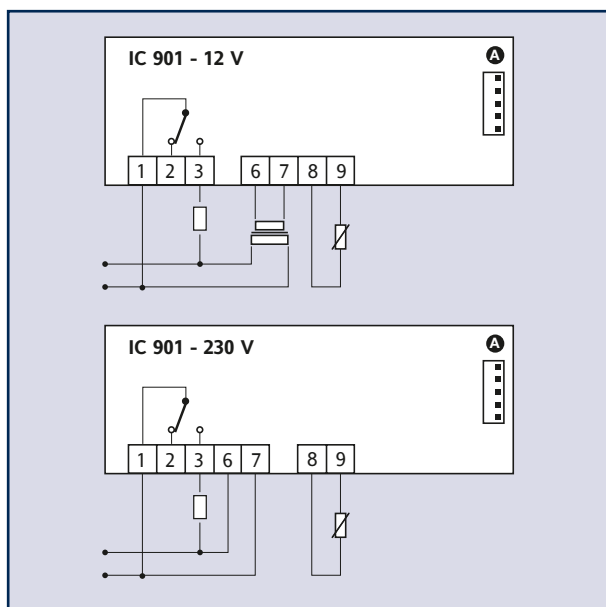
Resolution: 1°C (°F)

Accuracy: above 0.5% of bottom scale + 1 digit.

Consumption: 3 VA (115/230 V model), 1.5 VA (12 V model)

Power supply: 230, 115 V~, or 12 V~/= ±10%, 50/60 Hz.

## Wiring Diagram



## Description of Wiring Diagram

- 1-2 Relay N.C.
- 1-3 Relay N.O.
- 6-7 Power supply
- 8-9 Probe input
- A TTL input for Copy Card

Warning: check the power supply specified on the instrument label: contact the Sales Office for further information on relay capacity and power supply.



# IC 901/A

single stage temperature controller  
with alarm output



## Description

IC 901 controllers have one point of intervention only and can be used both for heating and cooling applications. These controllers also have an input for the PTC thermostatic probe (the NTC input can be selected with a parameter) and a relay output for management of the load. The values measured by the probes are displayed with two digits and sign. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory. The IC 901A model also has an output for the alarm relay and acoustic signal buzzer.

Probe	Measurement range (°C)	Display
NTC	-50...110,0	-50...99
PTC	-55...150,0	-50...99

Relay output	Amp. capacity*	Hp power
Regulation	8	1/2
Regulation	15	1
Regulation	20	2
Alarm	8	1/2

\*Maximum rating varies according to the type of terminal block used and the applicability of standards.

## Technical Data

Front panel protection: IP65.

Casing: plastic, PC+ABS UL94V-0 resin, polycarbonate glass, thermoplastic resin keys.

Front panel dimensions: 32x74 mm, depth 60 mm.

Mounting: panel-mounting, with 29x71 mm (+0.2/-0.1mm) drilling template.

Connections: screw terminals for <2,5mm<sup>2</sup>

(one lead per bracket, in compliance with VDE regulations).

Operating temperature: -5...55°C;

Storage temperature: -30...85°C.

Operating environment humidity: 10...90% RH (non condensing).

Storage environment humidity: 10...90% RH (non condensing).

Digital output: refer to attached table.

Analogue input: refer to attached table.

Serial: TTL port for Copy Card.

Display: 2 digits plus a sign.

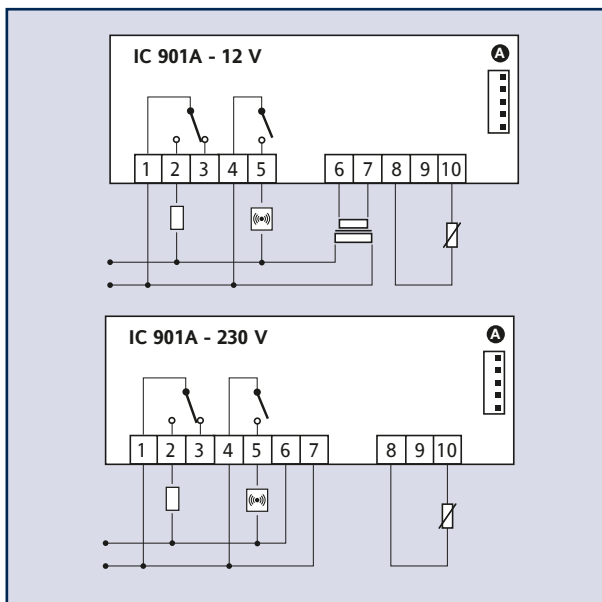
Resolution: 1°C (°F).

Accuracy: better of 0.5% than the end of scale + 1 digit.

Consumption: 3 VA (115/230 V model), 1.5 VA (12 V model).

Power supply: 230, 115 V~, or 12 V~/- ±10%, 50/60 Hz.

## Wiring Diagram



## Description of Wiring Diagram

- 1-2 Relay N.O.
- 1-3 Relay N.C.
- 4-5 Alarm relay
- 6-7 Power supply
- 8-10 Probe input
- A TTL input for Copy Card

Warning: check the power supply specified on the instrument label: contact the Sales Office for further information on relay capacity and power supply.



# IC 902

single stage temperature controller



## Description

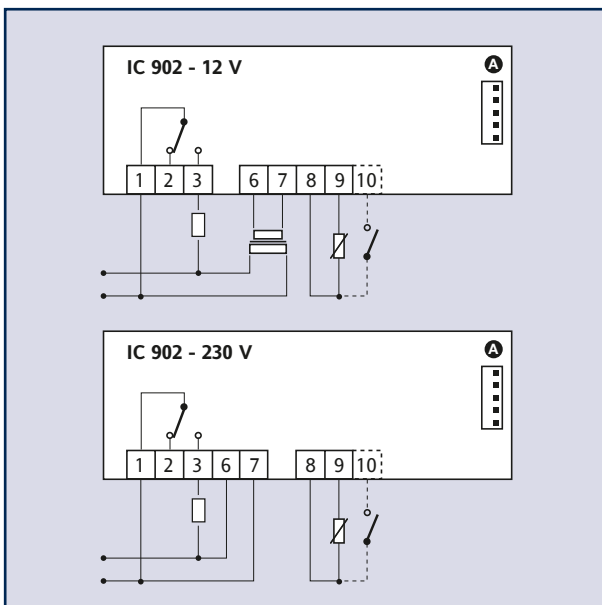
IC 902 controllers have one point of intervention only and can be used both for heating and cooling applications. These controllers also have an input for the PTC thermostatic probe (the NTC input can be selected with a parameter) and a relay output for management of the load. The values measured by the probes are displayed with three and a half digits and sign. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory.

Probe	Measurement range (°C)
NTC	-50...110,0
PTC	-50...140,0

Relay output	Amp. capacity*	Hp power
Regulation	8	1/2
Regulation	15	1
Regulation	20	2

\*Maximum rating varies according to the type of terminal block used and the applicability of standards.

## Wiring Diagram



## Technical Data

Frontal protection: IP65.

Casing: plastic, PC+ABS UL94V-0 resin, polycarbonate glass, thermoplastic resin keys.

Front panel dimensions: 32x74, depth 60 mm.

Mounting: panel-mounting, with 29x71 mm (+0.2/-0.1mm) drilling template.

Connections: screw terminals for <math><2,5\text{mm}^2</math> (one lead per bracket, in compliance with VDE regulations).

Operating temperature: -5...55°C.

Storage temperature: -30...85 °C.

Operating environment humidity: 10...90% RH (non condensing).

Storage environment humidity: 10...90% RH (non condensing).

Digital output: refer to attached table.

Analogue input: refer to attached table.

Serial: TTL port for Copy Card and Televis.

Display: 3 and half digits plus sign.

Resolution: 1°C or 0.1°C (selectable with a parameter).

Accuracy: above 0.5% of bottom scale + 1 digit.

Consumption: 3 VA (115/230 V model), 1.5 VA (12 V model).

Power supply: 230, 115 V~, or 12 V~/= ±10%, 50/60 Hz.

## Description of Wiring Diagram

- 1-2 Relay N.C.
- 1-3 Relay N.O.
- 6-7 Power supply
- 8-9 Probe input
- A TTL input for Copy Card

Warning: check the power supply specified on the instrument label: contact the Sales Office for further information on relay capacity and power supply.



# IC 912, 912LX

one stage temperature, humidity and pressure controller



## Description

### IC 912, IC 912/R, IC 912/P, IC 912/V-I

IC 912 controllers have one point of intervention only and can be used for temperature (IC 912), relative humidity (IC 912/R) and pressure (IC 912/P) control, provided for ON-OFF operation.

Some models have an input for PTC/NTC thermostatic probes or for Pt100/Tcj/Tck probes,

EWHS280/300/310 humidity probes, for EWPA007/030 pressure transducers, for 0/4...20 mA, 0..1/5/10 V current and voltage signals (selectable with a parameter).

The values measured by the probes are displayed with three and a half digits and a minus sign. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory.

### IC 912LX

The IC 912LX version includes a connection for TelevisSystem, or alternatively for networks with ModBUS protocol.

Model	Analog input
IC 912	NTC/PTC/Pt100/Tcj/Tck
IC 912/P	EWPA 007/030
IC 912/R	EWHS 280/300/310
IC 912/V-I	0...1/5/10 V    0/4...20 mA

Relay output	Amp. capacity	Hp power
Regulation	8	1/2

## Technical Data

Front panel protection: IP65.

Casing: plastic, PC+ABS UL94V-0 resin, polycarbonate glass, thermoplastic resin keys.

Front panel dimensions: 32x74, depth 60 mm.

Mounting: panel-mounting, with 29x71 mm (+0.2/-0.1mm) drilling template.

Connections: screw terminals for <2,5mm<sup>2</sup> (one lead per bracket, in compliance with VDE regulations).

Operating temperature: -5...55°C.

Storage temperature: -30...85°C.

Operating and storage environment humidity: 10...90% RH\* (non condensing).

Digital output: refer to attached table.

Analogue input: refer to attached table.

Digital input: 1 free from voltage input (LX model).

Serial: TTL port for Copy Card and TelevisSystem (LX mod).

Display: 3 and half digits plus sign.

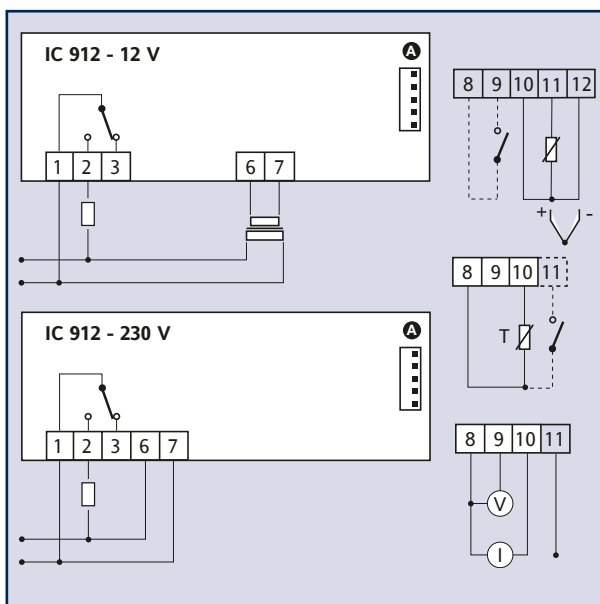
Resolution: 1 or 0.1.

Accuracy: above 0.5% of bottom scale + 1 digit.

Consumption: 3 VA (115/230 V model), 1.5 VA (12 V model).

Power supply: 12...24 V~/-; 230, 115 V~, or 12 V~/- ±10%, 50/60 Hz. Please contact the Sales Office for further information on relay and power supply ratings.

## Wiring Diagram



## Description of Wiring Diagram

### Common

1-2	Relay N.O.	9	"+" voltage input
1-3	Relay N.C.	10	"+" current input
6-7	Power supply	11	12 V= input
8	"-" current and voltage input	A	TTL input for Copy Card
		T	Temperature probe input

### IC 912 LX

A	TTL input for Copy Card and TelevisSystem
8-9	Digital Input (Pt100/TC model)
8-11	Digital Input (PTC/NTC model)



# IC 915, 915LX

two stage temperature, humidity and pressure controller



## Description

### IC 915, IC 915/R, IC 915/P, IC 915/V-I

IC 915 controllers have two points of intervention only and can be used for temperature (IC 915), relative humidity (IC 915/R) and pressure (IC 915/P) control, provided for ON-OFF operation.

Depending on models, they may have an input for PTC/NTC thermostatic probes or for Pt100/Tcj/Tck probes, EWHS280/300/310 humidity probes, for EWPA007/030 pressure transducers, for 0/4..20 mA, 0..1/5/10 V current and voltage signals (selectable with a parameter).

The values measured by the probes are displayed with three and a half digits and a minus sign. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory.

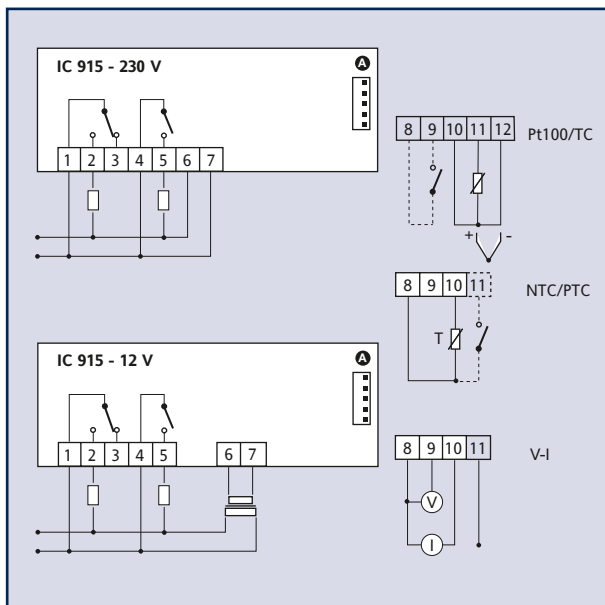
### IC 915LX

The IC 915LX version includes a connection for TelevisSystem, or alternatively for networks with ModBUS protocol.

Model	Analog input
IC 915	NTC/PTCpt100/Tcj/Tck
IC 915/P	EWPA 007/030
IC 915/R	EWHS 280/300/310
IC 915/V-I	0...1/5/10 V    0/4...20 mA

Relay output	Amp. capacity	Hp power
Out 1	8(3)	1/2
Out 2	8(3)	1/2

## Wiring Diagram



## Technical Data

Front panel protection: IP65.

Casing: plastic, PC+ABS UL94V-0 resin, polycarbonate glass, thermoplastic resin keys.

Front panel dimensions: 32x74, depth 60 mm.

Mounting: panel-mounting, with 29x71 mm (+0.2/-0.1mm) drilling template.

Connections: screw terminals for <math><2,5\text{mm}^2</math> (one lead per bracket, in compliance with VDE regulations).

Operating temperature:  $-5...55^{\circ}\text{C}$

Storage temperature:  $-30...85^{\circ}\text{C}$

Operating environment humidity: 10...90% RH\*

Storage environment humidity: 10...90% RH\*

\*(non condensing)

Digital output: refer to attached table

Analogue input: refer to attached table

Serial: TTL port for Copy Card and TelevisSystem (LX mod).

Display: 3 and half digits plus sign

Resolution: 1 or 0.1(selectable with a parameter)

Accuracy: above 0.5% of bottom scale + 1 digit

Consumption: 3 VA (115/230 V model), 1.5 VA (12 V model)

Power supply: 12...24 V $\sim$ ; 230, 115 V $\sim$ , or 12 V $\sim$   $\pm 10\%$ , 50/60 Hz. Please contact the Sales Office for further information on relay and power supply ratings.

## Description of Wiring Diagram

### Common

1-2	Relay 1 N.O.	9	"+" voltage input
1-3	Relay 1 N.C.	10	"+" current input
4-5	Relay 2 N.O.	11	12 V $\sim$ input
6-7	Power supply	A	TTL input for Copy Card
8	"-" current and voltage input	T	Temperature probe input

### IC 915 LX

A	TTL input for Copy Card and TelevisSystem
8-9	Digital Input (Pt100/TC model)
8-11	Digital Input (PTC/NTC model)



# IC 917, 917LX

two-stage temperature controller with PID function



## Description

### IC 917

IC 917 controllers have two points of intervention, dependent or independent, with ON-OFF, PD, PID action, and Soft Start function. They can be used for temperature control.

Depending on the model, they may have an input for PTC/NTC thermostatic probes (selectable with a parameter). The values measured by the probes are displayed with three and a half digits and a minus sign. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory.

### IC 917LX

The IC 917LX version includes a connection for TelevisSystem and a digital input that can be selected with a parameter.

Probe	Measurement range (°C)
NTC	-50...110,0
PTC	-55...150,0
Pt100	-50...650
Tc/TcK	-40...750/-40...1350

Relay output	Amp. capacity	Hp power
Output 1	8(3)	1/2
Output 2	8(3)	1/2

## Technical Data

Front pane protection: IP65.

Casing: plastic, PC+ABS UL94V-0 resin, polycarbonate glass, thermoplastic resin keys.

Front panel dimensions: 32x74, depth 60 mm.

Mounting: panel-mounting, with 29x71 mm (+0.2/-0.1mm) drilling template.

Connections: screw terminals for <math><2.5\text{mm}^2</math> (one lead per bracket, in compliance with VDE regulations).

Operating temperature: -5...55°C.

Storage temperature: -30...85°C.

Operating environment humidity: 10...90% RH\*.

Storage environment humidity: 10...90% RH\*

\*(non condensing).

Digital output: refer to attached table.

Analogue input: refer to attached table.

Serial: TTL port for Copy Card and TelevisSystem (LX mod).

Display: 3 and half digits plus sign

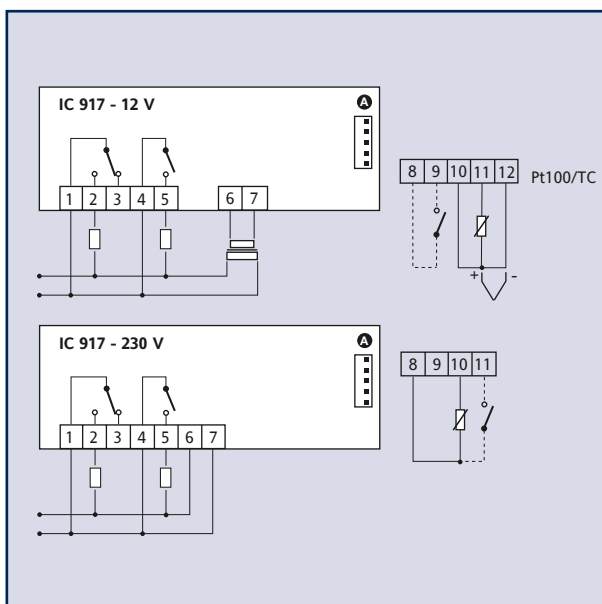
Resolution: 1 or 0.1(selectable with a parameter)

Accuracy: above 0.5% of bottom scale + 1 digit

Consumption: 3 VA (115/230 V model), 1.5 VA (12 V model).

Power supply: 12...24 V~/-; 230, 115 V~, or 12 V~/- ±10%, 50/60 Hz. Please contact the Sales Office for further information on relay and power supply ratings.

## Wiring Diagram



## Description of Wiring Diagram

### Common

1-2	Relay 1 N.O.
1-3	Relay 1 N.C.
4-5	Relay 2 N.O.
6-7	Power supply
8-10	Probe input
A	TTL input for Copy Card

### IC 917 LX

8-9	Digital Input (Pt100/TC model)
8-11	Digital Input (PTC/NTC model)
A	TTL input for Copy Card and TelevisSystem



# IC 974, 974 LX

two-stage temperature controller with digifrost functions



## Description

### IC 974

IC974 controllers have two analogue inputs for NTC temperature probes (the PTC input can be selected with a parameter) and four digital relay outputs, free from voltage, for the management of heating and cooling functions inside the cell, for defrost functions and for the control the evaporator fans.

**The defrost cycle can be timed or controlled by the evaporator probe using the cycle end temperature.**

The values measured by the probes are displayed with three and a half digits and a minus sign. The decimal point can be programmed with a parameter. The buzzer is optional. All models have TTL connections that enable the controllers to be used with Copy Card, the quick programming accessory.

### IC 974 LX

LX models can also be connected to TelevisSystem. The input of this model can also be used to select the operating mode (manual changeover).

All models have a 12 V power supply.

Probe	Display range (°C)
NTC	-50...110,0
PTC	-55...150,0

Relay output	Rating (amp)	Power (hp)
Out A	8 (3)	1/2
Out B	8 (3)	1/2
Out C	8 (3)	1/2
Out D	5 (3)	1/4

## Technical Data

Front panel protection: IP65.

Casing: plastic, PC+ABS UL94 V-0, polycarbonate glass, thermoplastic resin keys.

Dimensions: front panel 74x32 mm, depth 59 mm (without terminals).

Mounting: panel-mounting, with 71x29 mm (+0,2/-0,1 mm) drilling template.

Operating temperature: -5...55°C.

Storage temperature: -30...85°C.

Operating and storage humidity: 10...90 % RH (non condensing).

Display: 3 digits and a half + sign.

Analogue input: one PTC or NTC input (selectable with a parameter).

Digital input: 1 free from voltage digital input, selectable with a parameter.

Serial: TTL for Copy Card and TelevisSystem.

Digital output: 4 relay outputs (see table).

See the label on the instrument for information on the capacity of relays.

Buzzer output: only for models with this feature.

Measuring range: -55 a 140°C.

Accuracy: above 0.5% of bottom scale + 1 digit.

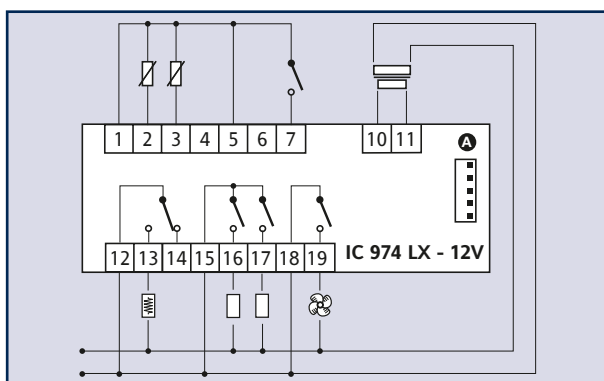
Resolution: 0.1°C (0.1°F) (selectable with a parameter).

Consumption:

- 230V model: 3 VA max.
- 12/24V model: 1,5 VA max.

Power supply: 12/24 V~/± ±10% or 230V~ ±10% 50/60 Hz.

## Wiring Diagram



## Description of Wiring Diagram

- 1 - 2 Input probe 1 (temperature control)
- 1 - 3 Input probe 2 (evaporator)
- 5 - 7 Digital input 1
- 10 - 11 12V~ power supply
- 12 - 13 13 Relay A N.O.
- 12 - 14 14 Relay A N.C.
- 15 - 16 16 Relay B N.O.
- 15 - 17 17 Relay C N.O.
- 18 - 19 19 Relay D N.O.
- A A TTL input for Copy Card and TelevisSystem

