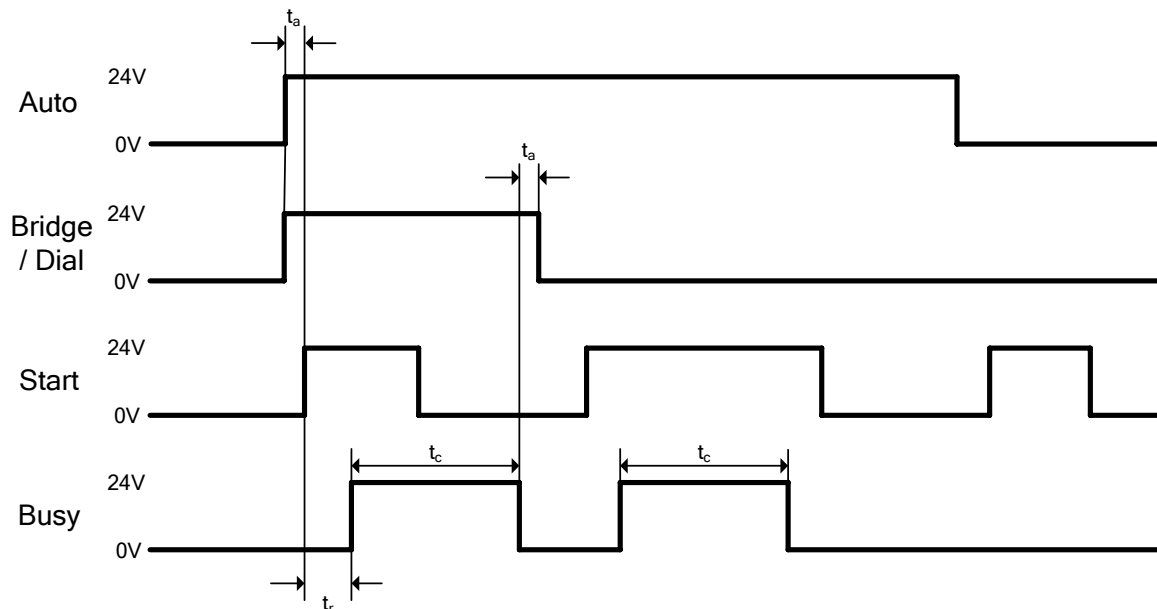


iDCM & iDCM-NC

Handshake Lines Description for external Host Control

Timing Diagram



t_a = acknowledge time ($t_{amin} = 0$ ms)
 t_r = response time (t_{rmax} : axes powered-on = 20 ms ; t_{rmax} : axes powered-off = 2 s)
 t_c = cycle time

Signal Description

Name	Type & Spec.	Signal Description
Auto	Output 24 Vdc / 150mA ¹	Indicates the current operating mode. Start signals are ignored in manual mode.
Bridge / Dial	Input 5-24 Vdc / 10mA	Selection for active side: GND -> Bridge (pont) 24Vdc -> Dial (platine)
Start ²	Input 5-24 Vdc / 10mA	A positive edge triggers the cycle to run. "Start" signals are considered only when: - operating mode is "Auto" - Busy is 0 (exception: error state)
Busy	Output 24 Vdc / 150mA ¹	Indicates a running cycle in auto mode. Remains high in error state (enabling the host to detect a time-out)

¹ Please, consider that outputs are **not** short-circuit proof.

² In iDCM applications with enabled external caliber selection the iDCM requests the caliber name from an external host immediately after reception of the start signal. See also the "External Caliber Selection" section in this document.

Connector mounted on rear panel of		iDCM (E/S Automation)	iDCM-NC (E/S Automation)
Pin			
1			GND
2			24V ¹
3		Start (left)	Start (left)
4		Busy (left)	Busy (left)
5		Start right ⁴	Start right ⁴
6		Busy right ⁴	Busy right ⁴
7		Bridge / Dial Selection ²	Bridge / Dial Selection ²
8		*	*
9		*	*
10		Lamp red ³	Lamp red ³
11		Lamp green ³	Lamp green ³
12		24V ¹	24V ¹
13		GND	GND
14			GND
15			24V ¹
16		*	*
17		Auto	Auto
18		*	*
19		*	*
20		Reservoir Warning left ⁵	Reservoir Warning left ⁵
21		Reservoir Warning right ⁵	Reservoir Warning right ⁵
22		*	*
23		Lamp yellow ³	Lamp yellow ³
24			24V ¹
25			GND
Connector Type		DSUB, female, 25 pol	DSUB, female, 25 pol
Distributor		Compona	Compona
Art. No.		329 176	329 176

* do not use

¹ 100mA in total (per connector, no over-current protection)

² optional feature, Bridge (pont, Brücke) = GND ; Dial (platine, Zifferblatt) = 24Vdc

³ optional feature, max. 150mA per lamp (no over-current protection)

⁴ optional feature

⁵ optional feature, Reservoir OK = GND, Reservoir Warning = 24Vdc



External Caliber Selection

Baudrate: 9600 Bd
Format: 8bit of data, 1 startbit, 1 stopbit, no parity

The following procedure runs after a start signal (see in "Signal Description" section of this document) has been given to the iDCM.

iDCM Request: "CN?<CR>"
where CN means Caliber Name

Host Response: "nnn<CR>"
where nnn is an ASCII string of 16 char. max. length

When the Host does not respond within a time-out of < 5s (< 2.5s with iDCM software version 4.21 and newer) a new start signal is required to start a new cycle. The "Busy" output remains high in such a case.

iDCM Confirmation: "OK<CR>" when ok or
"ERROR: xxx<CR>"
where xxx is an ASCII string of 80 char. max. length

A new start signal is required to start a new cycle. The "Busy" output remains high in such a case.

Caliber Selection Connector Diagram

Connector mounted on rear panel of	iDCM (ID)
Pin 1	*
2	TxD
3	RxD
4	*
5	GND
6	*
7	*
8	*
9	*
Connector Type	DSUB, female, 9 pol
Distributor	Compona
Art. No.	329 172

* do not use

iRMC Learning (optional)

Baudrate: 9600 Bd
Format: 8bit of data, 1 startbit, 1 stopbit, no parity

iDCM Message: "CN:nnn<CR>"
where nnn is an ASCII string of 16 char. max. length

No response is required from iRMC.

T. Kratt, 20. Juni 2012

DCM_iDCM Handshake Lines Description.doc