DO-16-HC for imc CRONOScompact (CRC)

16 digital outputs with enhanced current bearing capacity

The plug-in module DO-16-HC for imc CRONOS*compact* provides 16 isolated control signals with enhanced current bearing capacity. The signals' states can be generated by imc Online FAMOS as the result of calculation operations or influenced by imc CRONOS*compact*'s trigger mechanism. This makes it possible to create control commands by extremely easy-to-use means. This plug-in module can only be configured at factory.

Highlights:

- Configurable driver modes (Open Drain / Open Source / Totem Pole)
- Isolated 8 Bit groups

Terminals:

- 2x DSUB-15 connection terminals for each group of 8 inputs

Connection terminals:

- 15-pin DSUB plug for each 8-bit group
  ACC/DSUBM-DO8-HC

Power supply:

- Provided by imc CRONOS*compact*

Operating conditions:

- Separate operating conditions apply to the various module types (whether with or without extended temperature range) and are specified in the respective module instructions.

Software configuration:

- The module is fully supported by the imc CRONOS*compact* operation software, providing its entire functional scope of parameterizing, data-storage, and online computations functions.

Data storage

- Output channels cannot be saved by the software, but virtual channels used to compute the output data can be saved.

Remarks:

- If the output of data is not governed by triggers but rather in reaction to calculations or under program control, imc Online FAMOS is required.

Order code:

	Article number	Remarks
CRC/DO-16-HC	11700064	for installation in imc CRONOS*compact* occupying two slots
CRC/DO-16-HC-ET	11710038	version in extended temperature range
CRC/DO-16-HC-R	11700127	for installation in imc CRONOS*compact* RACK occupying two slots
CRC/DO-16-HC-R-ET	11710086	version in extended temperature range

Technical Specs - CRC/DO-16-HC

Parameter	Value		Remarks
Channels	16		groups of 8 Bit, isolated, common reference potential ("LCOM") for each group
Isolation strength	±50 V		to system ground (housing, CHASSIS, PE) and between groups of 8 Bit
Output configuration	Totem Pole (push-pull) Open Drain (LowSide) Open Source (HighSide)		configurable at DSUB with "OPDRN" - pin: "OPDRN": wire jumper to "LCOM" "OPDRN": open "OPDRN": 10 kΩ-resistor to “LCOM”
Output level	max. U_{ext} = 8 V to 28 V *or* TTL / CMOS 5 V *or* Open-Drain (max. 28 V)		connection of an external supply voltage U_{ext} to "HCOM", (Totem Pole or Open-Source) by means of internal isolated supply voltage and external pull-up-resistors (with 5 V, only Open-Drain configuration supported, no Totem-Pole / push-pull) external supply not required for Open-Drain operation
Max. output current (typ.) Totem Pole (8 V to 28 V) Open Source (8 V to 28 V) Open Drain (max. 28 V) open-drain with internal 5 V supply	<u>HIGH</u> 0.7 A 0.7 A ---	<u>LOW</u> 0.7 A --- 0.7 A 20 mA	no external clamping diode required for inductive load switching
Output impedance	0.5 Ω		sink and source
Output voltage	<u>HIGH</u> U_{ext} -0.5 Ω · I_{high}	<u>LOW</u> 0.5 Ω · I_{low}	with load current: I_{high} and I_{low} ≤0.7 A
Internal supply voltage, available at user pin "HCOM"	5 V, 160 mA isolated		per 8-bit group; VCC_int = 5 V, decoupled from U_{ext} by diodes on HCOM
Protection mechanisms	short circuit thermal overload capacitive load (surge) inductive load (load dump)		quick response current limiting: 1.4 A (typ.), 2 A (max.) unlimited duration current limiting voltage limiting
State upon system power-up Activation of the output stage Connection of internal 5 V supply to contacts	high impedance (High-Z) upon preparation of measurement upon preparation of measurement		Independent of output configuration with selectable initial states (High / Low) in the selected output configuration VCC_int = 5 V via diodes at HCOM
Switching time	<300 µs		
Additional system delay	typ. 400 µs ±100 µs		Delay, until the value (imc Online FAMOS) is available for output
Terminal connection	DSUB-15		ACC/DSUBM-DO-HC-8 with high current capacity wiring recommended (HCOM / LCOM!)