

SmartLine® VersaFlow TWC 9000 Coriolis Mass Flow Converter CM92 Fixed I/O

Model Selection Guide



- Modular family of converters for all applications
- Industry standard outputs including NAMUR
- Common hardware for all housings
- Highest Process Safety
- Advanced diagnostics functions
- Excellent long term stability
- Easy to install and configure

Instructions

Select the desired key number. The arrow to the right marks the selection available.
Make the desired selections from Tables I through VIII using the column below the proper arrow. A dot (•) denotes availability.

Table	I	II	III	IV	V	VI	VII
CM92	4	---	-	--	---	-----	--

KEY NUMBER	Description	Selection	Availabil
CM92		CM92	↓

TABLE I

No Selection	None	4	•
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TABLE II

Type	TWC 9000 C TWC 9000 F TWC 9000 R TWC 9000 W Spare Converter Insert (Provide full model and serial number of original converter)	4 __ • H __ • L __ i N __ c S __ g
Power supply	12 - 24 V DC (12 - 24 V DC) 24 V DC/AC (19 - 29 V) 100 - 230 V AC (85-250 V AC, 50/60 Hz)	_ 1 • _ 4 • _ A •
Hazardous Area Approvals	None - non Ex EEx zone 1 (terminal compartment "d" - C, F) EEx zone 1 (terminal compartment "e" - C, F) FM Class 1 DIV 1 CSA Class 1 Div 1 IEC Ex (terminal compartment "d" C,F) IEC Ex (terminal compartment "e" C,F) NEPSI (terminal compartment "d" C,F) NEPSI (terminal compartment "e" C,F)	-- 0 • -- 1 h -- 2 j -- 4 k -- B k -- F h -- G j -- N h -- P j

TABLE III

Cable Connection	Default (See Note 1) 3 x 1/2" NPT adaptors made of metal (standard for FM and CSA) 3 x PF 1/2" adaptors made of metal 3 x M20 x 1,5 cable glands. Standard for TWC 9000 W Plastic cable glands	0 • 4 • 5 • 6 • A f
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TABLE IV

Operating Manual/ Language	German Manual German Language English Manual English Language French Manual French Language Spanish Spanish Language English Russian Operating language	1 _ • 2 _ • 4 _ • 8 _ • S _ •
Custody transfer	None With CT lock facility See Note 2	_ 0 • _ A v

TABLE V

Process Diagnostics	Standard	0 __ •
Converter housing	Standard St. st. 1.4404 (for Compact) St. st. 1.4404 (for Field)	_ 1 • _ 2 a _ 3 b
No Selection	None	-- V •

TABLE VI

Outputs Base Module	Ex-i IO: CO act. + PO pas. (Cur. Out.-active + Pulse Out.-passive) Ex-i IO: CO pas. + PO pas. (Cur. Out.-passive+ Pulse Out.-passive) Fieldbus Ex-i IO: Profibus PA Fieldbus Ex-i IO: Foundation Fieldbus	2 ___ • 3 ___ • D ___ • E ___ •
Outputs 1st I/O Module	None, no module possible Ex-i IO: CO act. + PO / CI pas. (CO-active+PO/Current Input-pas.) Ex-i IO: CO pas. + PO / CI pas. (CO-pas.+ PO/Current Input-pas.)	_ 0 _ • _ 1 _ • _ 2 _ •
Outputs 2nd I/O Module	None, no module possible	_ _ 0 _ •
Measuring Functions	Standard (mass,density,temp.,vol.) Standard + Brix Standard + General concentration Standard + Baume 144.3 Standard + Baume 145 Standard + NaOH Standard + Plato Standard + API oil standard	_ _ _ 0 • _ _ _ 1 • _ _ _ 2 • _ _ _ 3 • _ _ _ 4 • _ _ _ 5 • _ _ _ 6 • _ _ _ A •

TABLE VII

Manuals	Standard on CD Paper manuals	0 _ • 1 _ •
Remote Option Signal Cable	None required 10m/30ft 25m/75ft Cable is automatically selected as grey or blue dependant on Ex or non Ex 50m/150ft	_ 0 • _ 1 m _ 2 m _ 3 m

Note 1: For cable gland option "0" - Default:

- For non Ex: 2x plastic M20 cable glands and 1 plastic blanking plug
- For ATEX/IECEX Ex d: 2 plastic transport plugs and 1 ATEX Ex d blanking plug made of metal
- For ATEX/IECEX Ex de: 2 metal M20 cable glands and 1 ATEX Ex d blanking plug made of metal

Note 2

Signal converter options (See Signal Converter MSG for applicable restrictions).

Only the TWC9000 converter is included in the test report, in compact and remote versions. Not Available with CM90 or CM93

To comply with the requirements of OIML R117-1, it is necessary that 2-phase shifted pulse or frequency outputs are provided.

2 Pulse/Frequency IO modules must be provided and programmed with a phase shift to each other, and these must be available on terminals B&D or B&A to permit

A limited number of options were tested for EMC effects and these are listed in the certificate.

The following output options are listed:

Modular I/O (CM91): 48C, 4AC, 4CC

Fixed I/O (CM92): 210, 220, 310, 320

This dual phase pulse is used in conjunction with CT approved batch counters accepting the same type of input. It is designed to prevent counting errors or pulse losses by

All power supply options are permitted.

In case of further queries, please contact Product Management

RESTRICTIONS

Restriction Letter	Available only with		Not available with	
	Table	Selection	Table	Selection
a	II	4 _ _		
b	II	H _ _		
c	II	_ _ 0	IV	_ A
	III	A		
f	II	N _ _		
g	III	0		
	V	_ 1 _		
	VII	0 0		
h	II	4 _ _ , H _ _ , S _ _		
	III	0		
i	II	_ _ 0	IV	_ A
	III	0		
j	II	4 _ _ , H _ _ , S _ _		
	III	0, 6		
k	II	4 _ _ , H _ _ , S _ _		
	III	4		
m	II	H _ _ , L _ _ , N _ _		
v	VI	2 1 0 _ , 2 2 0 _ , 3 1 0 _ , 3 2 0 _		