

CP SERIES 2-WIRE TYPE DO TRANSMITTER

Models: DCP-20T

FEATURES

- Rigid aluminium enclosure with free angle mounting.
- Simple operation offers free range setting, auto-calibration, electrode self-diagnostics, using built-in microprocessor.
- Front operation and front wiring access.

SPECIFICATIONS

Product name and Model	: DCP-20T Dissolved Oxygen Analyzer /Transmitter
Measurement Object	: Dissolved Oxygen (DO).
Measurement Method	: Polarographic Method.
Measurement Range	
DO	: 0~50mg/L.
O ₂	: 0~25%.
SAT	: 0~100%.*
Temperature	: 0~100°C.
* SAT (Saturation Ratio) is expressed as a percentage value of actual dissolved oxygen content in sample versus saturated dissolved oxygen content at a given temperature.	
Display	: LCD digital indication.
Least displayed value	: DO; 0.01mg/L O ₂ ; 0.1%. SAT; 0.1% Temperature; 0.1°C.
Output	: 2-wire system, 4~20mA DC, isolated.
Output Ranges	
DO	: 0~1/2/5/10/15/20/25/30/50mg/L selectable.
O ₂	: None
SAT	: None
Temperature	: None. } display only
Max. Load Resistance	: 750Ω when power supply voltage is 24V DC (Max. load resistance (Ω) = 50x "Power Supply Voltage"-450).
Power Supply	: 24V DC (operational at 9~30V DC, depending on load resistance).
Power Consumption	: Max 0.6VA.
Repeatability	: Within ± 0.8%FS (minimum ± 0.04mg/L) (By equivalent input).
Linearity	: Within ± 1%FS (minimum ± 0.05mg/L) (By equivalent input).
Temp. Compensation Range	: 0~45°C.
Temperature sensor	: Thermistor 10kΩ at 25°C.
Ambient Temperature	: -20~55°C
Ambient Humidity	: Max. 99% RH.
Enclosure	: IP 65.
Mounting	: 50A (2 inches, 60.5mm O.D) pipe mount or wall mount.
Cable Entry	: 2-cable glands (Ø6~Ø12) 1-spare port (NPT 1/2"), adapter available on request.



Materials of Construction

Main body	: Aluminium alloy casting.
Window	: Glass.
Paint Colour	: Blue.
Weight	: Approx. 2kg.
Options	: Hood is available for protection from direct sunlight.

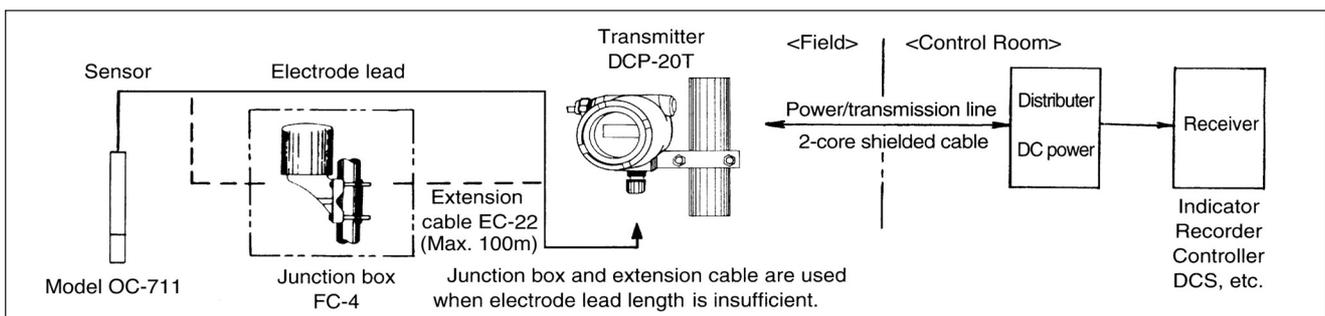
SPECIAL FUNCTIONS

- **DO Adjusting Function:**
The instrument has the ability to adjust to a laboratory test value and is able to compensate measurement value for saline solutions.
- **Burnout function (Alarm annunciation):**
When the sample temperature is outside the range of 0~50°C or when any abnormal memory data is detected the measurement is stopped. The output signal is shifted to the lower or upper limit to annunciate the abnormal conditions.
- **Measure/Maintenance Mode Selection:**
When in maintenance mode the display indicates an actual measured value, a measured sample value and the output is switched to a held value, this can be a dummy value or a true value based on the operator's selection.

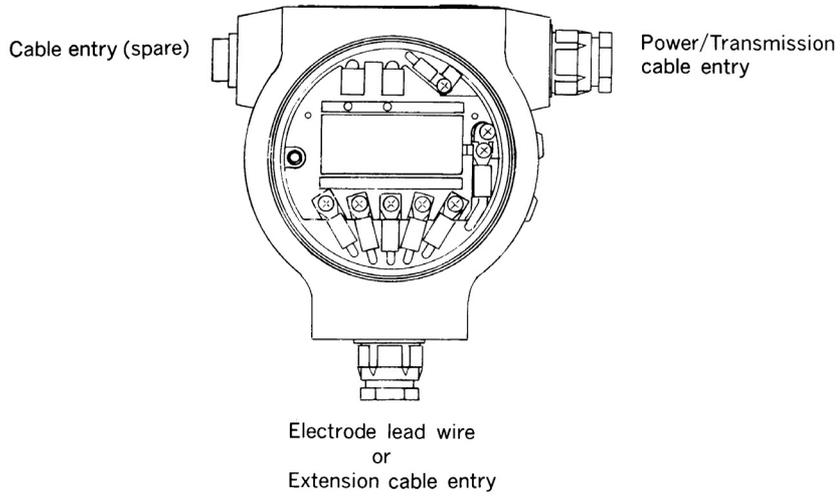
Note:

For extended distance between transmitter and electrode it is necessary to use an extension cable (model EC-22) and junction box (model FC-4).

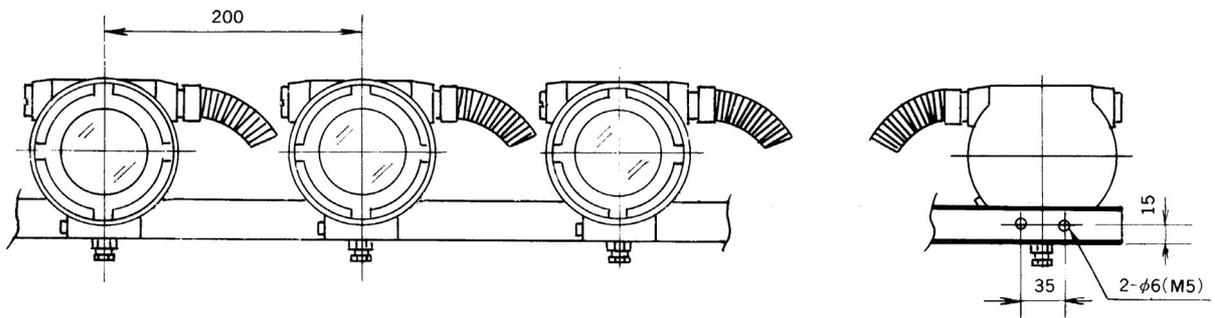
TERMINAL LAYOUT



TERMINAL LAYOUT

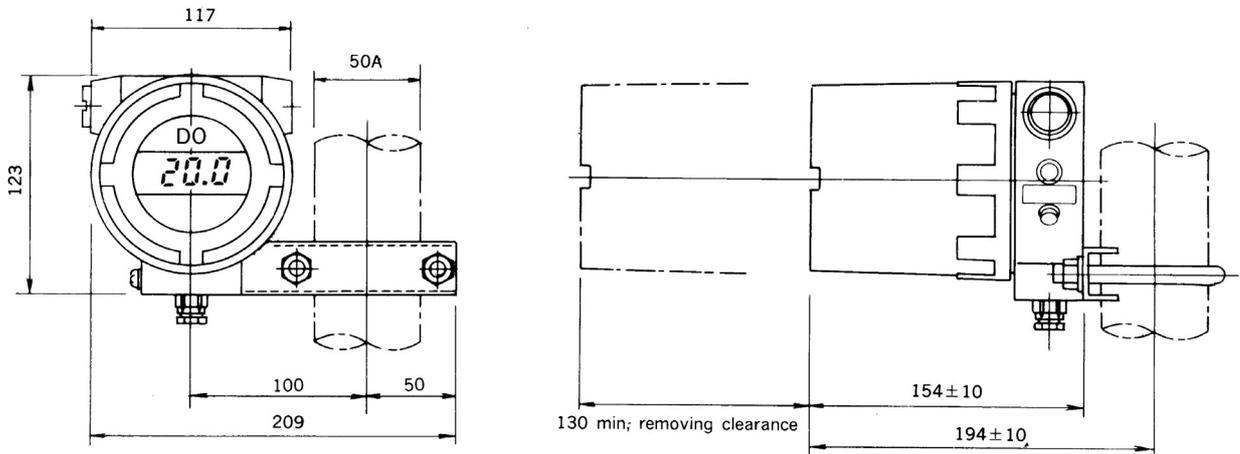


INSTALLATION



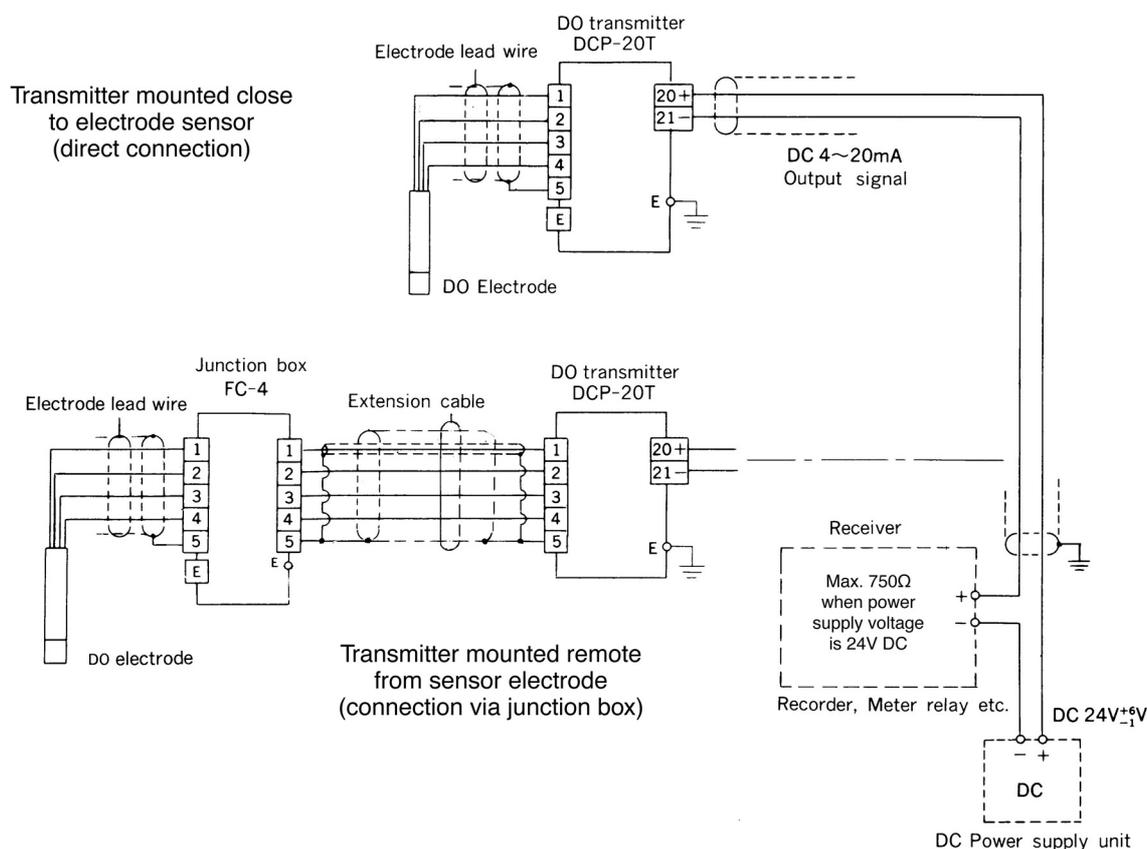
DIMENSIONS

Units: mm



WIRING DIAGRAM

DO Transmitter <DCP-20T>

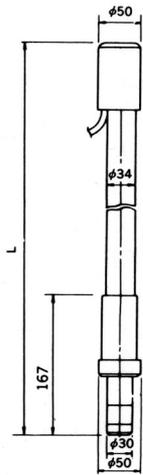


Product Name	Immersion type dissolved oxygen electrode holder	Flow through type dissolved oxygen electrode holder	Flow through type dissolved oxygen electrode holder	Drop in type dissolved oxygen electrode holder		Immersion type dissolved oxygen electrode holder with jet cleaning	Immersion type dissolved oxygen electrode holder with jet cleaning	Drop in type dissolved oxygen electrode holder with jet cleaning	
Model	OC-711	NOC-814	NOC-815	OC-991	OC-950	JOC-711B	JOC-811B	JOC-950A	
Cleaning	Nil					Included			
Cleaning Method	—					Air or water jet cleaning			
Cleaning water or air	Pressure		—					0.05~0.5MPaG (Sample pressure +0.5~0.1MPaG or more)	
	Consumption	Water	—					1.5~3.5L/min	
Air		—					6~10L/min		
Installation type	Immersion	Flow through		Drop in		Immersion	Flow through	Drop in	
Temp.	Sample	0~45°C (No freezing condition)							
Range	Ambient	-5~50°C				0~50°C			
Pressure range	Atmosphere	0.15MPaG or less	0.3MPaG or less	Atmosphere		Atmosphere	0.3MPaG or less	Atmosphere	
Weight	Approx. 1kg (1m)	Approx. 2kg	Approx. 5kg	Approx. 3kg (1m of PVC protection pipe)	Approx. 4kg (1m of SUS-316 protection pipe)	Approx. 3kg (1m)	Approx. 5kg	Approx. 5kg (1m)	
Combination electrode	Model 7540 (For sewage/with error signal sensor)								
Wetted Materials	PVC, PP			PVC, PP, SUS316					
Connection Standard	—	25A JIS 10K FF	25A JIS 10K RF	—	—	25A JIS 10K RF	—	—	
Cleaning Cycle	—					1~3 hrs (Max. 12hrs by request)			
Cleaning Time	—					0.6~4min/cycle			
Power Supply	—					AC 100V ± 10% 50/60Hz			
Power Consumption	—					Approx. 25VA			

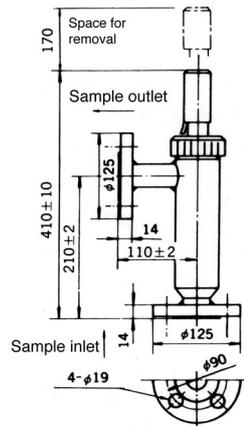
COMBINATION SENSOR

<without cleaning>

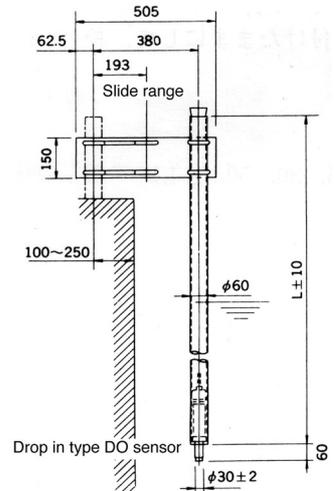
●OC-711



●NOC-815

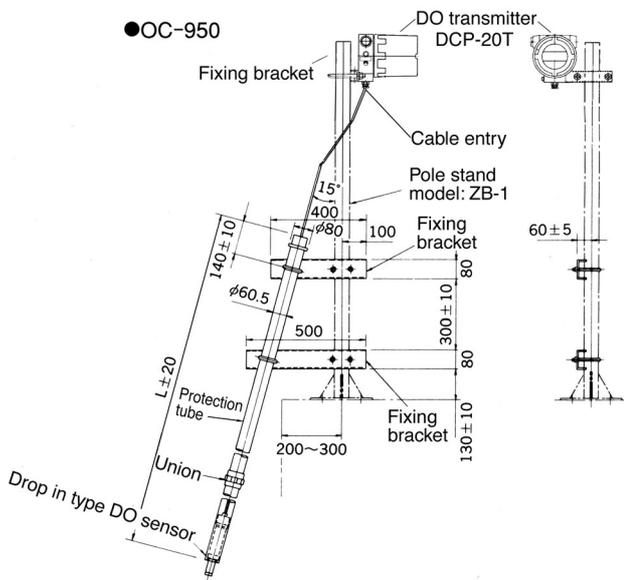


●OC-991

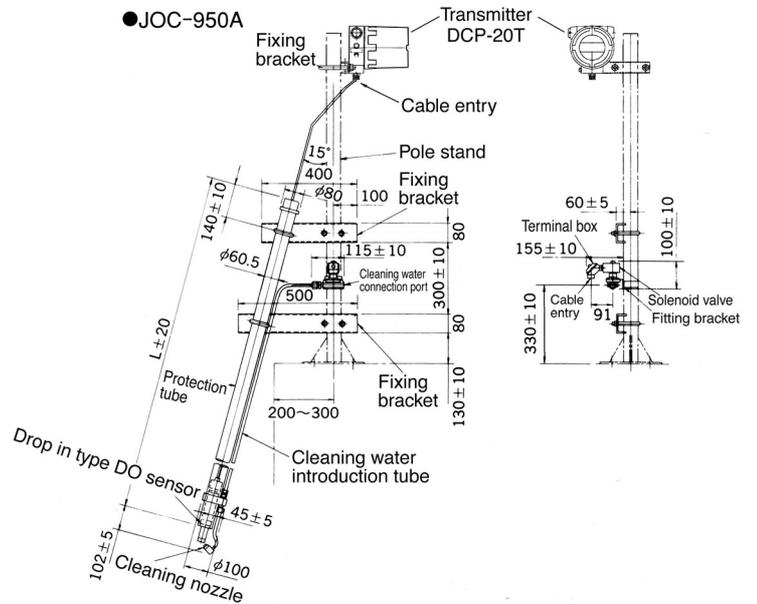


<with cleaning>

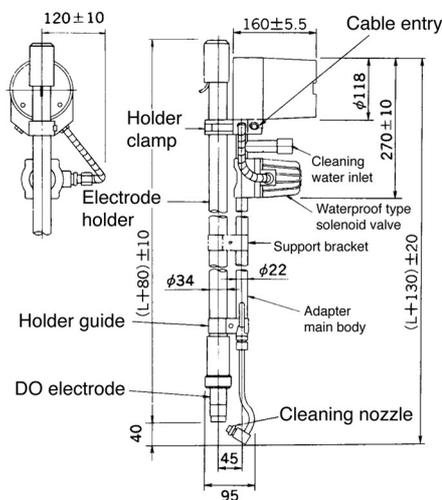
●OC-950



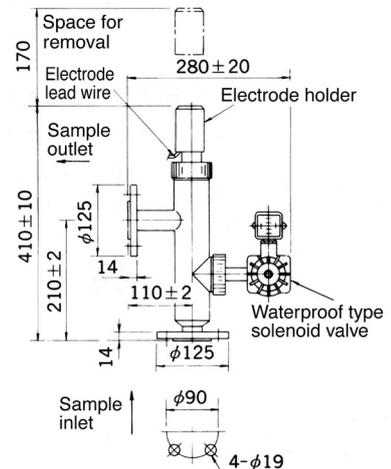
●JOC-950A



●JOC-711B



●JOC-811B



OPTIONAL ACCESSORIES

Power units and combined meter-relays / power units are available from DKK-TOA. To be specified when placing order.

• **Power Unit**

- Model** : PA-24
- Output Voltage Rating** : 24V DC +3V,-1V
- Output Current Rating** : 2~22mA (not suitable for parallel connection of two instruments).
- Power Requirements** : 100V AC ±10% 50/60Hz
- Ambient Temperature** : -5~55°C.
- Construction** : Indoor use, plug in type.
- Weight** : Approx. 300g.

* A 4~20mA DC output signal is available from the terminal block.

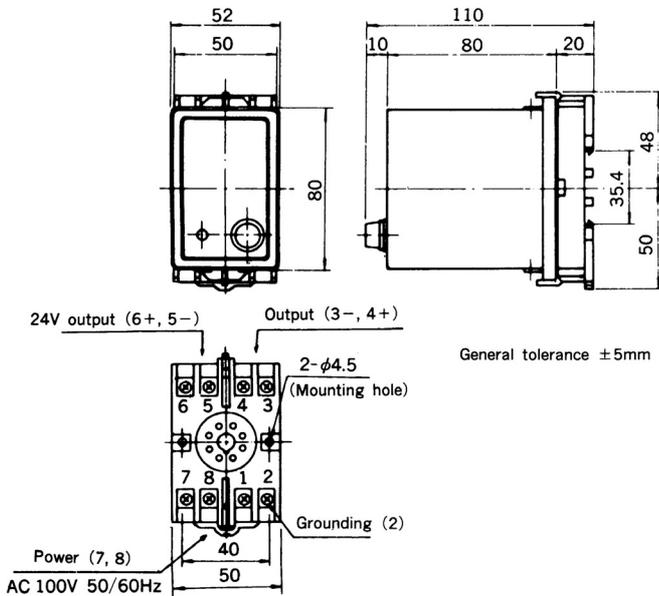
• **Bar Graph Meter-relay with 24V Power Supply**

- Model** : BMR-24
- Output Voltage** : 24V DC ±1V.
- Alarms** : Four contacts of High-high, High, Low and Low-low limits.
- Contact rating** : 125V, 0.5A.
- Scale** : To be specified when placing order.
- Scale Length** : 100mm.
- Indication Element** : Red colour LED, 101 dots.
- Power Requirements** : 85~264V AC, 50/60Hz.
- Power Consumption** : Approx. 7VA
- Ambient Conditions** : 0~45°C, 40~80%RH.
- Weight** : Approx. 450g.

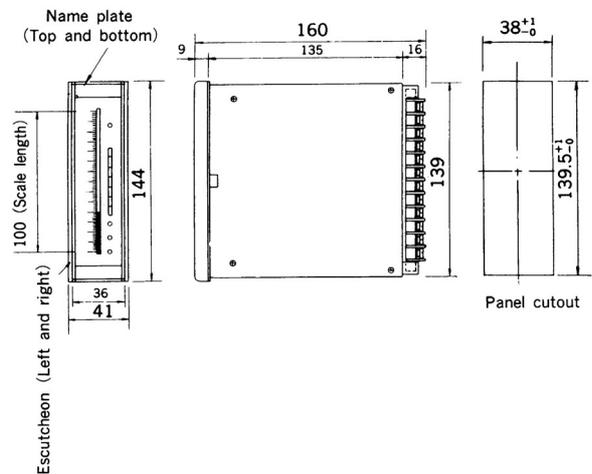
DIMENSIONS

Units: mm

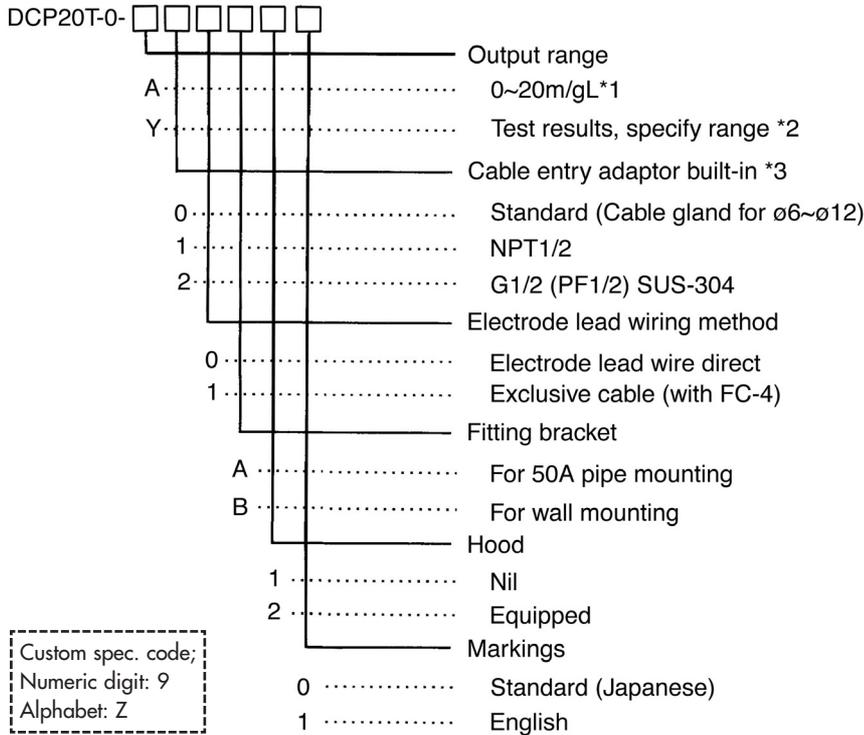
<PA-24>



<BMR-24>



PRODUCT CODE



Product Code Notes:

- *1) If factory testing certificate is required please specify "other range" even if 0~20 mg/L range is required.
- *2) Please specify range from the following: 0~1, 0~2, 0~5, 0~10, 0~15, 0~20, 0~25, 0~30, 0~50 mg/L
- *3) The instrument will ship with standard cable gland installed even if other cable-entry type has been selected. The standard cable glands act as dust seals during shipment and storage. The following cable entry options are available:-

Standard: Cable gland ($\phi 6\sim\phi 12$), 2 ports. Additional cable entry (NPT1/2"), 1 port.

NPT1/2 inch: remove the cable gland or dust seal of conduit piping entry and use NPT1/2 inch threaded entry.

G1/2 inch : remove the cable gland or dust seal of the conduit piping entry and insert the G1/2 inch adapter included.

Cable entry ports that do not have conduit attached should be left with factory installed glands which will act as seal protection for the unused cable entries.

Additional Notes:

Note 1:
Temperature compensation resistance of applicable DO electrode is 10K Ω (at 25°C)

Note 2:
Measurement ranges are:
DO: 0~50 mg/L (0~1, 2, 5, 10, 15, 20, 25, 30, 50, mg/L)
O₂: 0~25%
SAT: 0~100%
Temperature: 0~100°C } display only

Note 3:
If the unit is required to be combined with a cleaning system that requires a "hold" output during cleaning (for example; Model JOC series), please use our Model ODM-135A DO transmitter instead.

DKK-TOA CORPORATION



CAUTION

Do not operate products before consulting instruction manual.

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Information and specifications are for a typical system and are subject to change without notice.